National Association of County Agricultural Agents

Proceedings

107th Annual Meeting and
Professional Improvement Conference

July 17-22, 2022 **West Palm Beach, FL**

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2021-2022 NACAA Report to the Membership

President

Bill Burdine

Mississippi

President, I am required to provide a report to the membership. The past year has flown by yet at the same time, seemed to have lasted for years. When I was sworn in as the 107th President of NACAA, we were completing our second virtual conference. Zoom-lag was in full effect, but we pushed through and now we are back face-to-face. This year like every other has seen its challenges but progress was made. It is my pleasure in reporting that NACAA is in sound financial shape and our association is strong.

Serving as President has been a great honor, but I only guided the ship. It was the Officers and Directors, the committee chairs and vice-chairs, and the Florida Association, that made things happen. They deserve all the credit. I thank each of you for the time and effort you put into helping NACAA fulfill its purpose of providing professional development and networking to our members. The training and networking, in turn, helps us develop into better Extension agents to serve the people in our respective states and counties. Another purpose is acknowledging the excellent programming that you provide back home. Winning communication, poster, Search for Excellence, and other awards should boost your dossier for bigger and better promotions.

Your NACAA Board is constantly looking for potential issues or for better ways to host an AM-PIC. I strongly believe in honoring traditions, but we should ask ourselves, why is this a tradition? We must evolve to stay solvent and relevant to all agents. Since I joined the Board, I have asked myself and others, why we do things this way and is there a better way. You probably noticed the 4-H Talent Revue is missing. It is a nice event, but costs exceed $35,000 so we looked at other opportunities. In its place is the Beach Party. We are trying something new, and I hope you enjoy the family-friendly environment, catching up with friends, walking along the beach, playing games and the local foods. We also dropped a few expensive meals like the President/Vice-President Luncheon and combined some award functions. There are other changes, but you get the point. I charged an ad-hoc committee to review the AM-PIC program to possibly improve the format, simplify the program, and/or reduce expenses. I hope future Presidents see the need to review and modify the AM-PIC program annually to increase value to our members.

One issue all Boards deal with is finding and maintaining sponsors and donors. These donors see a value in partnering with us and their support keeps registration fees as low as possible. We can all help identify potential donors and visit the exhibit booths to network with the donors. President-Elect Durst will tell you more about this in his report.

For several years, we used the Slido app to evaluate our presenters. The app was great for presenters but was a distraction for attendees trying to find the correct time, room, and speaker. In 2022, presenters needing an evaluation will provide paper copies. We hope this reduces confusion so you can focus on the next presentation.

The National Board sets the AM-PIC format, but it is the committees that make the meeting function. Additionally, committees bring many new ideas to the Board for consideration. As we look for ways to improve, we need your involvement. We need your thoughts, and we need individuals willing to step up and provide committee leadership.

In 2022, we had more Super Seminar proposals submitted than ever before. I did not have space to accept them all, but the 7 highest ranked proposals will be offered on Wednesday. Committees stepped up to offer professional development. It's now your turn to attend and learn from these focused activities.

This spring we certified the 2022 membership at 3,084 members nationwide. This is quite positive considering how Covid upset every facet of our lives. I will recognize the states with the highest membership increases during the Wednesday general session. Speaking of general sessions, I ask that you attend both sessions this week. On Monday, Deputy Secretary of Agriculture, Dr. Bronaugh brings to us updates from USDA,

and we will recognize several award winners. On Wednesday, we will recognize more winning programs plus receive great leadership comments from General Huffman. I will close the session with my thoughts on a wide range of topics concerning NACAA and our AM-PIC format. I plan to take questions from any members who wish to ask about our association.

It has been an honor and privilege to serve as your NACAA President this year. I consider this the pinnacle of my career and I thank you for the opportunity and your support.

The year as President-elect is one of preparation. I am thankful for the opportunity to work with this board and Executive Director. I have learned much during this time. This is a large association with big responsibilities. It takes a team to do them.

One responsibility of this year is developing new sponsors. This is a difficult job and frankly, one that needs every NACAA member's involvement. I've had conversations with 12 companies about sponsorship, some of whom may come on next year. We did revise the partner form and categories, updating it to be current with our AM/PIC and our needs. I am convinced that NACAA partnership is a great opportunity for businesses and organizations by providing access to our > 3300 members, not only through our annual conference but also through our NACAA 365 webinar series.

Having had a role in the establishment of the DEI Advisory Group, I have been pleased to sit in on many of their monthly meetings. They share a passion to reach all potential NACAA members and to serve all members, helping them to feel "at home" within our association. This is a responsibility of every NACAA member, to reach out to colleagues who have not joined and to share why you are a member and how you benefit from that. We also need to be aware of those who may feel marginalized and involve them. I am particularly interested in reaching out to our Extension colleagues in the most remote places, especially the island territories. There are obvious obstacles to full participation, but I believe that their involvement would be mutually beneficial. I had a great Zoom conversation with Extension Agents in Puerto Rico and am excited by their membership.

The first in-person AM/PIC in three years means that many will be 1st Timers this year at West Palm Beach – some because they will receive an award; some because they are from or near the host state; and some because they were invited by a fellow member. We welcome each one and want them to benefit from attending and then decide they want to return! As you see members with a 1st Timer's ribbon on their name tag, be sure to introduce yourself and welcome them!

Looking ahead to 2023, it has been great to visit and work with the Iowa team as they plan a great AM/PIC. Iowa has much to offer all of our members, so I want to encourage you to talk it up in your state and send a large delegation to Des Moines!

As we begin this next phase, leading this great association, I invite you to contact me and work together to make this association even better!

It seems such a distant memory now, just a blur hoping it was all a bad dream but it wasn't. Who could have ever imagined what March of 2020 would behold, that not only The United States of America but the whole world would come to almost a screeching halt caused by a pandemic that most of us have ever witnessed? We know this pandemic not only as a health crisis but also as a social and an economic one as well. Unfortunately, we have all felt the repercussions with many of us losing family members, friends, and colleagues to the perils of this virus. Our association was not immune either, our 2020 and 2021 annual meetings and professional improvement conferences felt the evil perils of this pandemic by being forced into a virtual format.

Who could have ever imagined our 2020 and 2021 annual meetings and professional improvement conferences would go virtual, certainly not me? A big thank you to Gene McAvoy and the University of Florida's Extension I.T. gurus who turned a once seldom heard of program Microsoft Teams into a platform for the past two annual meetings.

During the planning of our 2020 meeting, we experienced three schedule redoes. The first one, planning for our normal meeting in July, the second was a date change to September, and the third was to a virtual format in September. The miraculous part of all this was the movement to the Teams platform which was accomplished in what seemed to be just a few hours by our new best friends, the Florida I.T. team.

I can picture it in my mind, each member locked themselves in a darkened haze fill room, with the latest Bluetooth gaming headset atop their noggin, connected to the most powerful computing machine this side of the Microsoft headquarters,

surrounded by a 365-degree array of monitors chugging down Mountain Dews and chasing it with a Red Bull. I picture sticky notes stuck all over the edges of the monitor, empty Mountain Dew/Red Bull cans, and pizza boxes piling up. Simply amazing what this team accomplished in such a short time. Two years later I can proudly say we survived and made it through very difficult times to emerge as a better organization to once again meet face to face in 2022.

This has been a year of personal growth and awesome opportunities to interact with and learn from many dedicated leaders within NACAA.

It is an honor and a privilege to serve on the National Board as your Vice-President. This year has been a year of personal and professional growth for me chocked full of opportunities to interact and learn from fellow board members. As Vice President, my main role has been to provide leadership for our three councils and 17 national committees. The Vice President also chairs the Executive Program Committee (EPC,) which is made up of the three council chairs whom with it's been a pleasure to work with. Your three council chairs are hardworking, dedicated Extension professionals who believe in the mission of NACAA and Extension.

The three council chairs along with your Vice-President are responsible for directing, filling, and maintaining committee positions, our numerous awards programs, opportunities to present a professional presentation and/or poster during the annual meeting, along with numerous other functions spelled out in the NACAA Committee Handbook which can be found on the NACAA website at: https://www.nacaa.com/committee-members-handbook

I cannot thank them enough for the many, many hours spent on association activities over the past 12 months along with having to tolerate meeting with me monthly. First, I wish to thank our senior council chair David Marrison, Program Recognition Council from Ohio, next Scott Jensen, Extension Development Council from Idaho, and last but not least the rookie from the state of Arkansas Sherry Beaty-Sullivan, Professional Improvement Council, and together we make up the EPC team.

However, I would be very amiss if I forgot to thank our 18 National Committee Chairs and the 68 Regional Vice Chairs for the countless hours they have spent carrying out our awards and professional improvement programs; without them, this task would be impossible.

Committee work and related activities are the essences of what it takes to achieve NACAA's mission. This year as every year there is an opportunity for you to expand and share your leadership and professional improvement skills by applying for a committee position when the time comes. Should you have the desire to serve on a committee, let your state president and/or your regional director/vice-director know. This is the first step toward becoming more active. By becoming active and serving on a committee you will be awarded a wonderful opportunity for both professional and personal growth. Please, if you have an interest seriously consider applying for a committee position next year.

So, what's new in 2022

First. Our Early Career Development Committee chaired by Danny Lauderdale from North Carolina along with the regional vice-chairs and Council Chair Scott Jensen the criteria were crafted for a new awards program available only to members with 10 years or less Extension service time. This award is the Dan Kluchinski Memorial Scholarship Award.

Dan was known for his strong belief and support for the early career development of young professionals. Dan was a Professor at Rutgers University for 29 years with his career progressing from Mercer County Agricultural Agent, to Agriculture and Natural Resources Department Chair and Associate Director of Extension. During his career, he served in many State and National roles with NACAA including the State Chair, Regional Vice-Chair, and National Chair of several committees including the Futuring Committee and the Early Career Development Committee. In addition, he served as the Northeast Regional Vice Director (2002-2003) and Director and the National Extension Development Council Chair (2004-2005.) Dan was awarded the Distinguished Service Award in 2004 and 2018 received the Hall of Fame Award posthumously.

The award is two $500 scholarships available each year with one applicant being selected from the Northeast Region and one from our other three regions. During our general session on Monday, July 18th the first recipient of the Dan Kluchinski Memorial Award will be presented by NACAA President Bill Burdine. The award is made possible by a generous donation made to the NACAA Educational Foundation in memory of Dan Kluchinski.

Second: Submission deadlines, for some reason there has always been some confusion hovering around what the deadlines were when applying for committee positions, presenting professional presentations and/or posters, etc. The reason for this confusion was easy to diagnose, we have too many different deadline dates. The EPC made a recommendation to the board that the deadline for committee positions, awards, professional presentations, and/or posters shall be unified to one date and that new date is **March 15th.**

Third: Well, not so new but it's been a while since our last face-to-face meeting. During our professional improvement conference, you will have the opportunity to choose from over 130 professional presentations being presented on Tuesday, July 19 starting at 8:30 am. In addition, there will be over 120 professional posters available for your viewing pleasure starting on Sunday, July 17th, and running through Tuesday, July 19th. Should you wish to learn more about a particular poster, that opportunity will be available during our breaks from 10:00 am to 10:30 am on Monday, July 18th, and Tuesday, July 19th.

I encourage everyone, be it a first-timer, fifth-timer, tenth-timer, or even some old-timer to find the opportunity awaiting you. Maybe that's a breakfast or luncheon, sitting in on a professional presentation, visiting a hospitality room, making a new friend, or just hanging out in a common area, you never know who you just might see, especially down here in South Florida.

Most importantly though, please don't go back to your hotel room and work. It is OK to have fun and enjoy the time away from the office. Rumors are floating around that past-president J. Craig Williams has brought his mini-bike with him and will be jumping over a pool filled with hungry gators, some time and somewhere during the conference. You don't want to miss it…

Ending on a serious note, I want to thank my state association (GACAA,) and University of Georgia Extension Administration for supporting my campaign for vice-president, and the voting delegates for electing me last July, allowing me to sever as your vice-president. It has been an honor to do so, and should I be elected as president-elect this year I promise to give my all to our association, The National Association of County Agricultural Agents.

It has been both an honor and a privilege to serve the past three years as your NACAA National Secretary. I have taken great pride in accurately detailing each set of board meeting minutes. After each meeting, I found myself digging into policy and reviewing past secretary minutes to ensure the board was following the association by-laws and making decisions in the best interest of our membership. Each set of minutes recorded not only reflects the actions of today but will serve as part of our history, adding to our association's story for future members. All approved minutes have been uploaded onto the NACAA website for membership viewing.

As Secretary I am responsible for chairing the Publications Committee. In addition to ensuring the quarterly publication of *The County Agent Magazine* this committee was responsible for our new NACAA website. The new website was launched just in time for the award and oral abstract submissions process. The site has a clean, modern look with working coding! We expected a few bumps along the way (error messages) as we interacted and utilized the website and have addressed them as they have arisen. We appreciate your patience with this as we worked through them. I would personally like to thank our Executive Director Scott Hawbaker for the time and dedication he has put toward ensuring our website runs smoothly and addressing every error message and member concern regarding the website. The development of the new NACAA Website has been one of the biggest investments and undertakings in this committee's history! In addition to the website, this committee was responsible for was selecting the new editor of the Journal of NACAA.

I served on the Future AM/PIC Request for Proposal (RFP) Format Committee which reviews the current RFP and makes recommendations for changes to future RFPs. I feel strongly this conversation needs to be made a priority for the long-term health of our Association. Continued discussions about the future of our Association (what we offer to our members, what our members want from NACAA, and how we get there) is vitally important. As Max DePree states, "We cannot become what we need to be by remaining what we are."

For our NACAA Association to grow and stay relevant we must be willing to try new things and accept that change is needed. This change starts with each and every one of us; we need you! We need all NACAA members to step out of their comfort zone and participate. Whether this is by attending our national meeting (AM/PIC) and pre-tours, submitting an abstract for a presentation or poster, applying for communication or search for excellence awards, serving on the many different NACAA committees whether on the state or national level, utilizing those scholarship funds, writing an article for the Journal of NACAA, or running for State or National office, you get out of this organization what you put into it. It's time to invest in yourself and better our Association, so what's stopping you?

I would be remiss if I did not take the time to thank those who love, support, and encourage me to follow my heart and my passions. I need to extend a huge thank you to my husband David who has been holding down the home-front and doing a wonderful job while I have been gone! I also want to thank my children, Benjamin, Ada, Gunnar, Cora, Weston, and Zachary for their understanding and patience with me. In addition, I would like to express my gratitude to the South Dakota Association of Agricultural Extension Professionals and SDSU Extension for allowing me this wonderful, once-in-a-career opportunity. Thank you for instilling your trust in me to serve as your NACAA National Secretary and for your support, encouragement, and friendship. I have thoroughly enjoyed my time on the board and did my best to bring your ideas, suggestions, and concerns forward. If you have any questions about serving in a NACAA leadership position, please do not hesitate to ask. I am happy to visit with you about this or any other questions you may have about NACAA.

Treasurer
Keith Perkins
Arkansas

Hello from Arkansas! This is Keith Perkins, your national treasurer. It has truly been an honor and pleasure to serve you as treasurer for the past two years. I would like to extend a sincere thank you to the ACAAA, University of Arkansas administrators, my county staff, and my family for all of their support in this role.

As your treasurer, I am happy to report that the NACAA remains in a sound financial position. Throughout the past year, the board of directors has worked to continually evaluate our investments, budgets, and sponsorships. One of my favorite duties as treasurer is signing the checks to formally recognize our award winners. I look forward to congratulating this year's award winners.

I can't wait to see you all in July in West Palm Beach! It feels like we are all planning for a long-awaited family reunion with our extended NACAA family. It will be great to finally be back in person and exchange friendly greetings with one another from around the nation- as it's hard to shake hands and hug one another on virtual platforms. I am looking forward to serving you in my third and final term as national treasurer.

Past President
J. Craig Williams
Pennsylvania

As that famous AC/DC song, "It's a long way to the top, (If You Wanna Rock n' Roll)".

We started this journey many years ago thru the Committee structure, several AM/PIC committees, Assistant Regional Director, Regional Director and then my turn on the officer's tenure. All along it has been a great ride with may successes.

The last few years, we have had many changes and we are excited to be back to what could be the new Face to Face normal. The NACAA board looked early on to make decisions for the 2022 AM/PIC to be as close to a semi-normal year. At the same time everything is new again.

I have the great pleasure to serve on the JCEP board with our other 7 Extension Professional Associations. NACAA, ANREP, NACDEP, NAE4-HA, NEAFCS, NAEPSDP and ESP Each Association is different, but what they all have in common is to foster leadership, provide professional development for members and advocate for Extension.

Many of these JCEP board meetings are virtual and we have started to bring the Extension Leadership Conference (ELC) and the Public Issues and Leadership Development Conference (PILD) back in person.

As the Past President of NACAA, we are honored to attend the Outstanding Young Farmers (OYF) conference. This is a special treat to visit with so many outstanding young successful farmers and their alumni from across the country. We all work with successful farms across the country. At the OYF conference, it is amazing to hear their farm story on how their individual farm has expanded or evolved to where it is today. I encourage all NACAA members to nominate farmers that you know in your state to apply for this program.

I want to thank the PACAA Agents and the NE agents for all their support during my officer time. I thank Ellen Williams for her support of my officer time and the support of our NACAA activities. NACAA has been a special opportunity for our family, and we are blessed to be involved.

As that Kenny Chesney song title goes "Don't Blink" and so goes your time on the NACAA board.

Pennsylvania has had several NACAA officers. I am honored to serve as the 9th PACAA agent to serve on the board. So, it comes to the end of my opportunity to serve and to give encouragement to the next generation of officers to take their turn in the game. There are many opportunities for ag agents to serve in NACAA leadership. Just raise your hand and say, "I will".

Tradition:

As I sit back and reflect on my first year as the North Central Region Director, I ask "Where has the time gone?" It does not seem like a year has gone by since our last AM/PIC when Jerry Clark (Wisconsin) passed the gavel to me to become Director. There have been so many changes that have made for challenging times at so many different levels – personal, local, regional, national, and international. The "reemergence" of Extension after the lockdowns has presented all Educators with challenges like we have never seen, but we have persevered, overcame, and conquered most, if not all, the post lockdown challenges.

I had the opportunity and privilege to visit with many North Central Region members. I was able to attend in person the membership meetings and professional development opportunities in Kansas, Missouri, Ohio, South Dakota, and virtual meetings held in Indiana, Iowa, Minnesota, Nebraska, North Dakota, and Wisconsin. I want to thank North Central Regional Vice-Director Scott Gabbard (Indiana) for filling in for me at Illinois' fall and Minnesota's spring meetings because of scheduling conflicts. I must thank all states for being very accommodating when I was not able to attend in person. I will try harder for a face-to-face visit this year.

Each state visit was unique, exciting, and immensely rewarding. The experiences at the visits were as diverse as the states themselves - 17,000 dairy cow farm, a research station, Jorgensen Ranches in South Dakota, and a chestnut farm. These are but just a few of the outstanding visits offered by the state associations. Seeing combines, planters, forests, vegetables (mainly pumpkins), and countless livestock and other agricultural operations across our region proved how much agriculture means to our country. Each state's association meeting showcased how agriculture is adapting to meet and persevere in changing and challenging times. Although the region is very diverse agriculturally, there is one underlying tenet from this region – Extension is strong and agriculture still seeks Extension for unbiased information.

During each visit, I discussed issues, ideas, and concerns the NACAA Board of Directors was addressing. I encouraged ideas and suggestions from the state memberships to continue to improve our national association and get involved at the regional and national level. Any association is only as strong as its individual members and we need NACAA members to continue to suggest changes and encourage NACAA to explore new ways. It is how we stay relevant and attract new members to get and stay involved. NACAA provides many avenues for you to get involved at the state, regional, and national level. The professional development and leadership opportunities are numerous. Please consider submitting an article to the Journal of NACAA or presenting at a national AM/PIC or serving on a committee at the regional or national level. We need you to get involved to continue to strengthen NACAA.

I attended the Joint Council of Extension Professionals Leadership Conference (JCEP) in February and Public Issues Leadership Development Conference (PILD) in April. The interaction of many state association leaders and familiar faces was a good to see. I am confident communication and networking within and among state associations will stay strong on the backs of good state association leadership.

In closing, I need to thank my husband Dan for supporting me as I continue to serve in this role. He has been a rock while I have been away. Thank you to the Illinois association (IEAA) membership for this wonderful opportunity and the Illinois Extension administration for supporting me in this role.

Thanks to all of my Northeast colleagues for their vote of confidence in me as I began this new journey! I'll never forget how I found out about my nomination, at a dinner in San Antonio (and you all know who you are!). Want to say a huge thank you to the Co-Chairs of our Northeast Virtual AMPIC in 2021 – Ginny Rosenkranz and Peter Nitzsche – they lead a great team of agents from across the NE as we virtually hosted the meeting for what would have been an amazing July 4th in Philadelphia. I am so blessed to have worked with you on this vast undertaking.

Thank you to New Jersey and Nick Polanin for stepping up to the plate to be the new Vice Director for the NE. To start my visits, I was virtually hosted by Maine and New York and attended in person meetings in Pennsylvania and Maryland. Nick was able to attend the meeting in NJ on my behalf. Happy to share the good news of increases in scholarship money, potential changes in the national meeting schedule, and local recognees for awards and scholarships at the national level.

We also look forward to potentially welcome new members/chapter in the Northeast as we discuss some returning chapters and possible "combinations" or support for chapters that would like a little help.

Please reach out to me with any suggestions for how to make NACAA valuable to all members, whether or not they attend

AMPIC. I think we learned the value of virtual meetings that provide more opportunities for more members. See you all in West Palm Beach!

As I reach the end of my term as Southern Region Director, I am truly amazed at the time I got to spend as director. As with anything in Extension there was nothing typical about my term. Covid changed the way we conducted not only our jobs but our association as well. Then as Covid lessened we tried to go back to what we thought would be normal, but it was a new normal. We are still adjusting to this new normal, but I have no doubts that we as an association will be able to make the necessary adjustments and be as strong as ever.

State meetings started to be back in person. The main theme to each of these meetings was 'Good to be back together." Although we were successful in the zoom era, it is clear that we are better in the face-to-face world. We were able to reconnect with co-workers in a way hard to do digitally. Another common goings-on at these meetings was the large increase in new faces attending there first state meeting. I hope that these new extension members will embrace their state and national association. Take advantage of the professional development opportunities and the chance to make some of the best friends you could possibly have.

So, as I close my final report this is not a goodbye, but a thank you. Thanks for the opportunity to serve as the Southern Region Director. Thanks for the hospitality shown to me during my visits to the Southern Region states. Thanks for being my friends.

Well, y'all…what a year it has been! I have thoroughly enjoyed my first year as Director serving YOU in the Southern Region. What a joy it has been to travel around the southeast interacting with all of you personally and your associations by learning about agriculture in the places each of you call home. I am honored and humbled to learn and grow with each of you, especially in the midst of such great change we have all experienced as a result of a global pandemic in the last two years.

As I have often said when I visit your state association meetings, I truly believe the people are what make our organization so special! We gain so much professionally, but ten-fold personally via the phenomenal relationships we make as we visit and learn from and with one another at various professional development and learning opportunities across this great nation. Extension is a "calling" of sorts, and the older I get, the more I appreciate this great occupation bestowed on so many of us as we educate constituents across a deep breadth of experience and expertise by instilling in others (and amongst colleagues) the value of cooperative Extension work. We are in a time of change, but what a positive difference we all make, and what a relevant difference Extension makes in so many lives on a daily basis!

As I reflect on the past year, I challenge each of you to engage with young professionals as they begin their careers within Extension. Reach out and get to know them and empower them to be involved at all levels of our organization. My encouragement is extended to all the young professionals throughout our NACAA family; learn and grow with your peers, create a culture of inclusiveness, yield honest results, communicate transparently, and remain steadfast in your vocation as an educator. Get involved with this organization and be a part of the future growth of NACAA. All it takes is passion to see our organization succeed! As our job responsibilities change and constraints on time continue to dominate the ever-present landscape, remember the benefits of being a NACAA member far outweigh the negatives. We truly get out of NACAA what we put into NACAA!

As I reflect on my journey in NACAA, many thanks are extended to the Tennessee Association of County Agriculture Agents and Specialists, as well as the University of Tennessee Extension administration. They had enough confidence in me to nominate me, and I will forever be grateful for the opportunity. What a privilege it is to be able to represent the NACAA members of my home state and the Southern Region by serving all NACAA on this Board. I truly appreciate the privilege and only hope I can live up to the expectations.

In addition, special thanks are extended to our Senior Southern Director, JJ Jones for his guidance and for setting the example of how to serve (as well as several laughs along the way). Thanks to our Southern Region Vice-Directors, Brian Beer and Paula Burke. Y'all are rock stars, and I look so forward to working with both of you in 2023! I would also be remiss to not extend thanks to some very special mentors over the years; Larry Moorehead, Cynthia Gregg, Lenny Rogers, Alan Galloway, David Yates, Gene McAvoy, Stephen Brown, Keith Mickler, and the entire 2022 NACAA BOD (that includes you, Hawbaker). They inspired, encouraged, motivated, and/or nudged…and for this, I will forever be grateful! Thank you for your diligence in serving, your steadfast leadership, and faithful friendship over the years.

As we move toward a post-pandemic phase of Extension, it is my hope we recognize we are ALL part of cooperative Extension, and thus be deliberate in our efforts to remain America's most trusted, relevant, and reliable source of non-biased research information to clientele via collaboration, partnerships, friendships, and encouragement amongst one another in every facet of our organization.

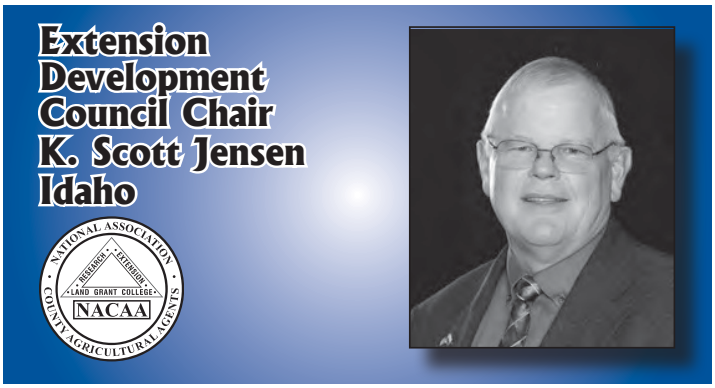
Greetings from Colorado and the Western Region! It has been my honor to serve as the Western Region Director for the past two years, and what a year it has been for all of us and the clientele we serve. The need for food and fiber continues, home gardening interest is exploding, and extension professionals are needed now more than ever.

Your national board has worked countless hours on your behalf. What has never been lost in this board work is the need for professional development in everything we do. We are anxiously anticipating being together again in person in West Palm Beach for our AMPIC. This year is also the West's turn to put forth candidates for vice president and we have two outstanding candidates who have stepped forward so far.

Arizona is pleased to host the 2022 Chad Reid Memorial Western Region PIC this October 12-13, 2022 in Tucson, AZ. If you are looking for an excuse to travel west, I invite you to join us in Tucson!

One of the key roles for the Directors in our association is our relationship with state associations. Your national board invests its resources to allow for Directors to join state association meetings in order for the board to hear feedback directly from members. I also utilize these meetings to encourage members to participate in sometimes underutilized opportunities in our association. Be sure to share your state meeting dates with your directors so we can block this time in our calendars early. The cost of us to attend is covered by your national board, and we are pleased to join your state associations.

Special thanks for my fellow members of the Colorado County Agents Association for their support as I serve in this important role and for their encouragement when I agreed to seek this position. I appreciate your support and friendship, and look forward to our next GOTO outing!



The Extension Development Council's (EDC) committees – Leadership and Administrative Skills, Agricultural Issues, Early Career Development, and Teaching and Educational Technologies – help members improve their skills related to the art and science of extension practice. This focus on skills and methodologies to conduct extension work effectively makes NACAA unique from other subject-specific professional organizations.

The Council's efforts for the 2022 AM/PIC include informational seminars on Tuesday, July 19th. The presentations are part of four concurrent sessions featuring 22 hours of training on a diverse set of topics. Teaching and Educational Technologies has planned a hands-on super seminar titled "Equipment Needs for Professional Extension Videos". Agricultural Issues will conduct a super seminar titled "Adapting Agriculture to a Changing Climate". Leadership and Administrative Skills will present a super seminar titled "Comprehending Your Leadership Style to Enhance Personal and Professional Growth". In addition to that, the Leadership and Administrative Skills committee will have a DEI-related presentation and panel discussion as part of their presentations session. We hope you will join us!

Please consider getting involved the Extension Development Council's seminars and activities to help further your Extension career. Please let us know if there is training or education that we can provide to assist you. Please share any ideas with your State Committee Chair or Regional Committee Vice-Chair.

My personal thanks to our committee chairs, regional vice-chairs and state chairs as well as Vice President Mickler for their individual and collective leadership and guidance during the past year.

Agricultural Issues Chair

Katie Wantoch
Wisconsin

Agricultural issues continue to challenge NACAA members across the nation. This year's oral presentations at the NACAA AM/PIC will cover some of the hot topics that may be experienced by farmers and educators across the country. Special thanks to the Ag Issues Committee for peer reviewing the submitted abstracts:

- Katie Wantoch, Wisconsin, Chair and North Central Vice-Chair
- Cassie Yost, Pennsylvania, Northeast Vice-Chair
- Elena Rogers, North Carolina, Southern Vice-Chair
- MJ Fisher, Colorado, West Vice-Chair

Is agriculture ready for climate change? The adaptability of farmers and their crops will determine the future of agricultural sustainability and global food security. This will be the exciting super seminar presented by Pam Knox, Director of the UGA Weather Network and agricultural climatologist for the University of Georgia's Department of Crop and Soil Sciences part of the College of Agricultural and Environmental Sciences, sponsored by the Agricultural Issues Committee at the 2022 NACAA AM/PIC. The presentation will discuss how to communicate the need to adapt and prepare for extreme weather events. "It's not about politics and it's not about how or why we got here. It's about doing what's best for our farmers and making sure they have the facts they need to make informed choices about their farming operations," according to Knox. Educators are encouraged to visit her well-known climate blog for more information at https://site.extension.uga.edu/climate/.

If you did not submit an abstract this year, please consider submitting one for next year's AM/PIC and sharing your exceptional work with colleagues. The Ag Issues Committee will meet during this year's AM/PIC. If you are not able to attend, please feel free to share your ideas, recommendations and comments on future topics and super seminar ideas. It has been a privilege to serve this past year as the Ag Issues Committee National Chair. Our committee looks forward to seeing you during a presentation at the upcoming AM/PIC!

Early Career Development Chair

Danny Lauderdale
North Carolina

Our committee has been working hard to develop programs to help Agents succeed during their early years in-order to have long successful careers in Extension. The current committee consists of:

Heather Schlesser, North Central, Wisconsin

Timothy Waller, Northeast, New Jersey

Danny Lauderdale, Southern, North Carolina

Ashley Wright, West, Arizona

In September 2021, Heather Schlesser and Ashley Wright held an NACAA 365 Webinar entitled "The Good, the Bad, and the Engaging Presentation" which provided examples of good presentation techniques to use and bad ones to avoid in order to deliver engaging digital presentations that enhance the learning experience for participants. The presentation is available for viewing on the NACAA YouTube Channel at: https://www.youtube.com/user/NACAA2011keynote.

We worked with Keith Mickler, NACAA Vice-President, to develop the criteria for the Promotion and Tenure Reviewer Database that is part of the Member Search database developed by Scott Hawbaker, Executive Director, and available on each member's NACAA.com Dashboard. To use the search, scroll to the bottom of the Member Search page and select Promotion or Tenure reviewers and search for those potentially interested in helping. There are currently 104 Promotion and 58 Tenure reviewers.

We also worked with Keith Mickler, NACAA Vice-President, and the NACAA Extension Foundation Board of Trustees to develop guidelines for the new Dan Kluchinski Memorial Scholarship Award which is dedicated to the memory of its namesake to encourage Early Career Development. Two $500 reimbursement scholarships are available each year to applicants with 10 years or less in Extension to use for an educational event that provides early career development benefits. Preference is given to NACAA events such as the AMPIC and PILD. Full details are available on the NACAA website under the General Awards section of Awards and Applications. The first award will be presented on Monday, July 18 during the AMPIC General Session which begins at 8 AM.

Finally, we have approved 12 presentations for our professional development session on Tuesday, June 19 from 8:30 AM

to 4:30 PM. Presentations will cover onboarding, program development, planning, promoting, hosting, mentoring, training, collaboration, and partnerships.

The Early Career Development Committee looks forward to seeing first timers, early career agents, experienced agents, and everyone attending the NACAA AMPIC. We encourage anyone interested in this area to join our committee meeting on Monday, July 18 from 1:30-2:30 PM.

The Leadership and Administrative Skills (LAS) Committee has taken on many new and exciting initiatives in the past year. At the 2022 NACAA AM/PIC we offer a Super Seminar on Leadership Development to inspire members to grow and develop their leadership skills both within NACAA, within their university and community. We hope this opportunity will inspire and assess the feasibility and interest in an expanded future leadership offering in conjunction with the AM/PIC.

The committee is also host to the DEI Advisory Board, a 12-member group representing equally each region of NACAA. The group is ambitious and among other offerings will be leading two presentation slots in the afternoon of the Leadership and Administrative Skills Presentations. Members from Florida will showcase their initiatives in DEI as well as a discussion session led by the Advisory Board and agents from Florida. Look for a DEI Advisory Member at the AMPIC, they will be displaying a sticker on their name tag. Special thanks to this group as they have gone above and beyond to create these new opportunities.

Lastly, we have a great line-up of speakers for the committee breakouts on Tuesday at AMPIC. This year's presentations highlight new ways of thinking, organizational changes and diversity, equity and inclusion. We look forward to all our presenters have to offer. Do you have a unique leadership or administrative topic in mind? Please consider submitting at next year's AM/PIC and sharing your unique efforts through NACAA.

The LAS Committee and DEI Advisory Board will meet during this year's AM/PIC. We encourage you to ask us about the work we have been doing. It takes many more to do good work in developing leadership and belonging in our organization. We welcome all to join our efforts, even a small time-commitment is useful to our very busy group.

Members – Colt W. Knight, University of Maine; Kelly McGowan, University of Missouri; David Yates, University of Tennessee; and Scott Duggan, Oregon State University.

The TET recognizes that Extension Agents are in a state of transition in both acclimating to life post-pandemic and utilizing new technologies to reach the new generation of extension clientele. In an effort to support our member, the TET has focused its development of webinars, seminars, professional development, and AM/PIC sessions on utilizing technologies like video equipment, 3-D/virtual reality, Social Media, Podcasts, asynchronous online courses, and more to create modern educational content.

The TET Committee hosted 14 presentations over 2 sessions of the 2021 Virtual AM/PIC with 600 total participants. The committee has approved 12 high quality presentations for the 2022 in-person AM/PIC in Florida and developed a Super Seminar entitled *Teaching and Educational Technology – Equipment Needs for Professional Extension Videos* on Wednesday, July 20, 2022 where we will highlight the use of varying cost video cameras, drones, 3-D cameras, and more…

The Teaching and Educational Technology Committee would like to invite you to view our Oral Presentations on Tuesday, July 19th in Florida and our Super Seminar on Wednesday, July 20th from 1:15PM -4:00 PM. Our committee is always open to new members and we are always in need of regional directors to help meet the technology and educational needs of our membership.

The Professional Improvement Council (PIC) is one of three Councils under our NACAA committee structure. Our mission is to provide subject-matter, professional development

opportunities for our members. The Professional Improvement Council consist of seven committees:

• 4-H & Youth chaired by Britany Council from Florida

• Agricultural Economics & Community Development chaired by Amanda Smith from Georgia

• Agronomy & Pest Management chaired by Ted Wiseman from Ohio

• Animal Science chaired by Mark Heitsuman from Washington

• Horticulture & Turfgrass chaired by Cyndi Lauderdale from North Carolina

• Natural Resources/Aquaculture chaired by Jody Gale from Utah

• Sustainable Agriculture chaired by Laura Miller from Texas

Educational activities for the council this year are oral presentations, super seminars, and tours. The Professional Improvement Council received a total of 107 presentations for consideration with 90 of them being accepted.

Number of oral presentations by committees:

4-H & Youth = 7

Agricultural Economics & Community Development = 12

Agronomy & Pest Management= 15

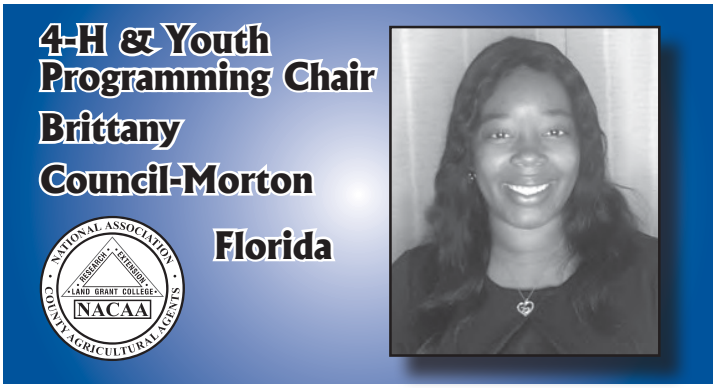
Animal Science = 9

Horticulture & Turfgrass = 20

Natural Resources & Aquaculture = 11

Sustainable Agriculture = 16

I am looking forward to being back in person and seeing so many familiar faces and meeting new ones! The role of Council Chair would be an impossible task if not for the excellent group of members who serve as chairs and vice-chairs. These members have worked very hard and put in countless hours fulfilling the duties expected of them. I want to thank each of you for your time, hard work, and dedication to the success of our association. I wish to thank the National Committee Chairs who have endured my many email reminders of deadlines and followed through on meeting those deadlines and thank them for the patience as I am learning this new role. I truly appreciate your hard work and efforts. In closing, I wish to extend my appreciation to my fellow council chairs David Marrison and Scott Jensen along with Vice-President Keith Mickler for the wonderful working relationship we had in fulfilling our duties during such trying times.



The 4-H and Youth Committee is charged with the responsibility of providing professional improvement opportunities for members in this area. This includes the development of professional improvement opportunities, securing resources to fund these activities, and promoting these activities to members. As we return to in-person conferences and eagerly anticipate our 2022 AMPIC we received 7 presentations all of which will be presented during the 4-H and Youth Presentation Workshop. We received submissions from three out of the four NACAA regions. Presentation applications tend to be an extremely competitive area from the amount of submissions to selecting submissions that will capture and engage the membership, thus making it very hard for the committee to select proposals. We are encouraging all who either applied and were not selected or did not apply at to please think about submitting a proposal for next year. These opportunities enhance your extension body of work and can even go on to be submitted in the Journal of Extension. The committee knows that our membership is doing some outstanding youth work that needs to be shared with others, remember it can be any youth related programming, not just 4-H activities. As we embrace the remainder of 2022 and plan for 2023, the committee's goals for the upcoming year include a series of "How-To" webinars for completing presentation submissions and submitting your proposal to the Journal of Extension. I encourage each state to share your thoughts with your state chairs and regional representatives as we continue to ensure we are meeting the needs of our members. The committee would like to thank the NACAA board for their support of 4-H and Youth programming and providing these opportunities for the membership.

Committee Members:

Amanda Smith (Georgia), Chair

Bill Shockey, (West Virginia) Northeast Region Vice-Chair

Madeline Schultz (Iowa), North Central Region Vice-Chair

Lindsay Chichester (Nevada), Western Region Vice-Chair

Chris Prevatt (Florida), Southern Region Vice-Chair

The Agricultural Economics and Community Development Committee is excited to offer professional improvement opportunities for all NACAA members during the 2022 AM/PIC in Florida. We have a full day of selected presentations planned for Tuesday, July 19, 2022.

Each presenting member will have 20 minutes to showcase their Extension program during their presentation and spend 5-10 minutes answering questions. The presentations cover a variety of topics in the areas of agricultural economics and community development from each region of NACAA. Be sure to join us to get ideas for improving your Extension programs in your home states.

The following programs are slated to be presented by our members:

1) "Farm Pulse Financial Management – Adapting Curriculum for Online Learners" Katie Wantoch, UW-Madison Division of Extension

2) "Certifying Financial Literacy for Iowa USDA/FSA Borrowers" Patrick Hatting, Iowa State University Extension and Outreach

3) "Marketing for Ag Producers 2021" Brooklyne Wassel, University of Georgia Extension

4) "Building Market Resiliency in Iowa Through Advanced Grain Marketing Courses for Women" Madeline Schultz, Iowa State University Extension and Outreach

5) "Master Agri-manager Workshop Series" Blake Carter, University of Georgia Extension

6) "Iowa Farmland Leasing Meetings Resonate" Kelvin Leibold, Iowa State University Extension and Outreach

7) "Dairy Gauge Initiative Southeastern Dairy Benchmarking Program" David Bilderback, University of Tennessee Extension

8) "Creating Cost of Production Budgets, it's as Easy as ABC with the Ag Budget Calculator" Glennis McClure, Nebraska Extension

9) "Revitalizing a Community Farmers Market to Enhance Access to Locally Grown" Paul Pugliese, University of Georgia Extension

10) "Urban Agriculture Workshops for Urban Producers" Hannah Wooten, University of Florida Extension

11) "Agritourism: Community & Economic Impacts" Kenzie Johnston, The Ohio State University Extension

12) "Agriculture and the Rise of Food Entrepreneurship" Jessica Sullivan, University of Florida Extension

In addition, our committee is hosting a super seminar on Wednesday, July 20, from 1:15-4:30 pm, titled: "Cultivating Resiliency in Ourselves and Our Clientele." When faced with adversity at work or at home, Extension professionals need to balance the demands of work and family. We will focus on "filling our cup" first so that we can be more productive and helpful to others. Noticing signs and symptoms of stress is the first step. Learning how to best cope with stress is next. We will also focus on how Extension professionals can support our farmers and other clientele with whom we work by teaching seminar participants to notice signs of stress in others and about the tools and resources available to help those facing adversity better manage stress. We are excited to be able to offer certificates for participants in this super seminar to obtain a QPR Certificate of Course Completion. We are grateful to the Mental Health Team from Iowa State University Extension for putting on this super seminar for our participants.

The committee hopes you enjoy the presentations on Tuesday and the super seminar on Wednesday and that you find some useful ideas to use in your own Extension programs and to improve your professional development in Extension.

I'd like to end this report with a personal note. This is my final term as Chair of the NACAA Agricultural Economics & Community Development Committee. It has been a wonderful experience serving as a Southern Region Vice Chair and eventually Chair. I will forever cherish the network that I have created with my fellow committee members over these past several years. Thanks to all of you for your service to NACAA and I look forward to seeing the great things that you will do through this committee in the future.

Committee Members:

Ted Wiseman, Committee Chair

Travis Harper, North Central Committee Vice Chair

Andrew Kness, North East Committee Vice-Chair

Raghuwinder Singh, Southern Committee Vice-Chair

Steve Van Vleet, Western Committee Vice-Chair

The Agronomy & Pest Management Committee received several presentations for this years AM/PIC. It was difficult to choose the final 15 presentations for 2022. This year was once again very competitive with a nice variety of topics from across the country. The seminars will be given on Tuesday, July 19 with concurrent sessions starting at 8:30 am. Topics for each of these presentations can be found in the conference agenda which cover numerous crops and pests along with IPM programming.

Please join us Monday afternoon at 1:30 for the Agronomy & Pest Management Committee meeting. We are working on topics for a super seminar in 2023. Plan to attend and provide input for this and other ideas you would like to bring to the attention of the committee.

I would like to thank the Vice-Chairs Travis, Andy, Raj and Steve for all that they accomplished this past year. It is a true pleasure to work with professionals who are committed to this organization. A big thank you goes to all the state Chairs for all the hard work in getting submissions in from the membership. I would like to also recognize our council chair Sherry Beaty-Sullivan and the NACAA Leadership for their assistance. We are excited to be back together in person to catch up with friends and see what great programs the men and women of NACAA are doing.

Committee Members

National Chair: Mark Heitstuman, Washington

Northeast Region Vice-Chair: Andrew Sandeen, Pennsylvania

North Central Region Vice-Chair: Martin Mangual, Michigan

Southern Region Vice-Chair: Steve Morgan, Georgia

Western Region Vice-Chair: Betsy Greene, Arizona

I would like to begin by thanking the Animal Science Committee Vice Chairs for all their hard work and support during the two years that I have served as the National Committee Chair. And special thanks to each of the NACAA State Animal Science Committee Chairs for all that they do to promote animal science programming, professional development, and recognition at the State level. The Animal Science committee is very much looking forward to working with the Florida Agricultural Agents on the annual Animal Science Pre-tour and AM/PIC July 15-22, 2022.

The 2022 Animal Science Pre-AM/PIC tour will take an in-depth look at animal agriculture in south Florida and will start and end in West Palm Beach. Tour participants will arrive in south Florida for an evening meal on Thursday, July 14th. Tour stops planned for Friday morning begin with a stop at Kempfer Beef Cattle Ranch, a 25,000-acre family-owned ranch in Saint Cloud. Next stop is a tour and lunch at the Okeechobee Livestock Market. Afternoon stops on Friday include Larson Dairy Farm, the largest dairy in Florida; and Diamond C Ranch, large, diversified beef cattle and agritourism operation. Saturday morning begins with a tour of United State Sugar/Westway Molasses. The next stop is at JB Ranch, a commercial cow/calf operation near the Everglades. Lunch is at Gator Park and includes an airboat ride through the heart of the Everglades National Park. The day ends back in West Palm Beach in time for supper. Special thanks to everyone from Florida who has been great in helping to organize the Animal Science tour, and to South Region Animal Science Committee Vice Chair Steve Morgan.

The Professional Development presentations are always one of the highlights of each AM/PIC. On Tuesday of this year's AM/PIC, the Animal Science committee will be hosting 10 outstanding presentations submitted by NACAA members. Topics to be discussed include presentations on preparing producers for foreign animal diseases, land management

utilizing grazing, quality assurance programs, forage growth management, and raising pasture turkeys. Please consider submitting an Animal Science presentation abstract for the 2023 AM/PIC to be held in Des Moines, Iowa.

Looking forward to seeing everyone in Florida in July!

Committee Members:

Cyndi Lauderdale, Committee Chair;

Linda Chalker-Scott (Washington), Western Region Committee Vice Chair;

Timothy Daly (Georgia), Southern Region Committee Vice Chair;

Kate Kammler (Missouri), North Central Region Committee Vice-Chair; and

Julie Kikkert (New York), Northeastern Region Committee Vice-Chair

The Horticulture and Turfgrass professional improvement committee is pleased to present this report to membership, as we reflect back on 2021-2022 and the upcoming 2022 NACAA AM/PIC.

We hosted a national professional development webinar, on September 8 focusing on invasive species and their impacts on horticulture and turf. The committee hopes that this will be the first in a series of professional development opportunities.

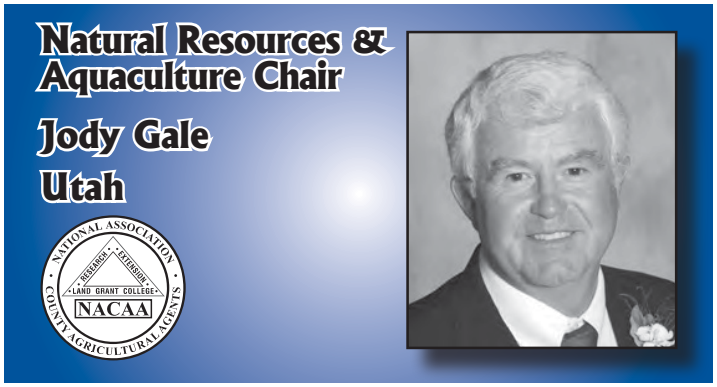
We are looking forward to "seeing" everyone face-to-face and attend an excellent program of professional development and fellowship at the 2022 AM/PIC. Much of the committee activity in 2021-2022 was focused on planning for the 2022 AM/PIC preconference tour. The tour begins on Friday, July 15 in Miami and tours Sunset Nursery specializing in topiaries and foliage for landscaping and interior scape. From there we will travel to Nixia's Exotic Plants and Rancho La Familia that grows plants for interior scape and the hotel industry. Next is Kampong National Tropical Garden which contains a fascinating array of tropical fruits and flowering trees. We will end our day at Dogfish Brewery in the Wynwood area. On Saturday, July 16 we tour the Deering Estate. The estate is dedicated to preserving and protecting natural ecosystems, native plants, and wildlife. Next, we travel to Grow2Heal Community Garden at Homestead Hospital. The produce grown is provided to hospital patients, visitors, employees, and local organizations in need. Our last stop is Greenlife Farms greenhouses that use hydroponics, renewable energy, and recycling in every element of their operation.

We developed a relationship with Bartlett Tree Research Laboratories to sponsor a super seminar titled "Lawn Care Myths" in 2021 and are excited to offer it this year on July 20. We look forward to an ongoing relationship with Bartlett Tree Research Laboratory.

The Horticulture and Turfgrass PIC committee worked to develop the horticulture and turfgrass oral presentation program for the upcoming 2022 AM/PIC. We are pleased with the number and quality of the submitted abstracts. The committee evaluated the abstracts, organized the sessions, maintained close contact with speakers, and moderated the sessions. Our thanks to the NACAA leadership team that successfully coordinates the oral sessions at the conference, which will include 20 presentations on a wide range of horticultural topics from research, volunteer management, and innovated new programs. Our thanks to the NACAA members who plan to share such impactful programming.

The Horticulture and Turfgrass PIC committee annual meeting is on July 18, 2022, in conjunction with the AM/PIC. Incoming and outgoing regional vice chairs will be in attendance, and the meeting is open to the NACAA membership. We will discuss the 2023 AM/PIC, scheduled for Des Moines, Iowa on August 12-17. Among agenda items are a planned preconference tour, a super seminar, and ongoing professional development opportunities during the upcoming year.

I want to thank the regional committee vice chairs and the state committee chairs for your support during my first year as Chair. As national committee chair, I want to encourage NACAA members to share ideas with the Horticulture and Turfgrass Committee. In particular, we need ideas related to the upcoming preconference tour, potential super seminars, and professional development activities. Feel free to reach out to the committee regional vice chair that represents your state. The committee meets virtually quarterly or as needed, and members are welcome to join our meetings. If any member is interested in a leadership opportunity with the committee, information on the application process is available on the NACAA website, or by reaching out to the committee.



Committee Members

Jody A. Gale, Committee Chair, Utah
Lindy Berg, North Central Region Vice-Chair, North Dakota

Justin Mansberger, Northeast Region Vice-Chair, Pennsylvania
Shannon Williams, Western Region Vice-Chair, Idaho
Ross Overstreet, Southern Region Vice-Chair, Mississippi

The NACAA Natural Resources Aquaculture Committee meet periodically in preparation for this year's in person AM/PIC. We are very much looking forward to meeting in person in West Palm Beach, Florida for the annual conference including the pre-tour. The Natural Resources Preconference Tour is graciously being provided by Sheila Dunning, a local University of Florida Agent in Okaloosa, County. It will be held July 14-16. The tour will feature Florida's unique natural resources including water habitats, protected plant and animal species and invasive species management in a rapidly growing state. The tour will highlight many environmental educational and eco-tour activities South Florida is known for. Our committee is also providing Natural Resource and Aquaculture related subject matter breakout sessions at the conference Tuesday, July 19th, 8:30-11:30 am and 1:30-4:30 pm in room 1D. Members previously submitted abstracts describing their outstanding Extension programs, which were peer reviewed by the committee and selected for publication and presentation. Eleven authors will provide oral presentations at the conference breakout session. We are excited to learn about their successful programs including, naturalist series; stewardship of New Jersey's marine resources; recycling promotion using social media; Pike County Adopt-A-Stream education; nature journaling; healthy ponds certification; feral hog control with traps and drones; congressional briefing; Utah's range camp; biochar demonstration kiln, and GPS collars for wild horse and livestock monitoring. Please join us to learn more about how successful extension agents are responding to local natural resource aquaculture needs and implementing successful, impactful programs. The committee always welcomes suggestions and feedback from membership. If you are interested in learning more about our committee, participating in our program, or serving on one of NACAA national committees, please contact Jody A. Gale jody.gale@usu.edu or (435) 893-0470.

The Sustainable Agriculture Committee members are Laura M. Miller, Committee Chair; Katie Wagner (Utah), Western Region Committee Vice-Chair; Christian Stephenson (Mississippi), Southern Region Committee Vice Chair; and Patrick Byers (Nebraska), North Central Region Committee Vice-Chair. Liz Bosak (Pennsylvania), Northeastern Region Committee Vice-Chair, resigned when she left Extension early this year. We welcome two new members at the 2022 AM/PIC, National Chair Lindy Berg (North Dakota) and Anna Hogsdon, (Pennsylvania), Northeastern Region Committee Vice-Chair.

Reading the Farm Super Seminar and Tour

The Reading the Farm Super Seminar and Tour at the 2022 AM/PIC comes to you with the leadership of Yvette Goodiel as our Florida Sustainable Agriculture Chair and incoming Florida Sustainable Ag Chair Jessica Ryals, our farm cooperators at Kai Kai Farms and the team of 2017 Fellows, Kurt Jones (Colorado), Anthony Bly (South Dakota), Naveen Kumar (Maryland) and Amanda Sears (Kentucky) who will lead us in the Reading the Farm process. Reading the Farm is a holistic approach to the traditional farm site visit. It encourages farmers and agricultural professionals to think about farm issues and ultimate sustainability in new ways.

Professional Development Sessions

During the 2022 AM/PIC three professional development sessions address economic, social and environmental aspects of sustainability. We were thrilled to have received 22 applications, a significant increase over 2021, and to be able to offer 20 presentations on topics ranging from climate change and carbon markets to cool alternative crops.

Sustainable agriculture topics can come from any Extension program area. All NACAA members are welcome to propose presentations of the results of their impactful projects and programs at the next AM/PIC.

SARE Fellows

NACAA members who want to improve their teaching and technology transfer skills to develop sustainable agriculture programs are encouraged to consider applying for the SARE Fellows program. https://www.sare.org/what-we-do/professional-development/fellows-program/

Like so many things, the Fellows program, which does involve travel, was put on pandemic hiatus and will begin accepting applications in March of 2023.

AMPIC Pre-Tour

With the able leadership of Yvette Goodiel and Hannah Wooten, we are offering a Sustainable Agriculture Pre-Tour in South Florida. On this two-day tour we will head east to Lake Okeechobee and the Everglades and South to Tropical Florida. It is a wonderful opportunity to see sustainable practices at work in a wide variety of agricultural enterprises.

The current structure for NACAA is built on three foundational blocks that are the basic components of NACAA's professional enhancement areas: Program Recognition, Extension Development, and Professional Improvement. The Program Recognition Council oversees the award-based programs that have been a long-standing tradition of NACAA.

The six committees which comprise the Program Recognition Council serve as the engine to recognize the efforts of our members for their professionalism, performance, creative works, and outreach to the communities they serve. Members can enter competitive contests that highlight their work. The six committees which make up this council are:

- Communications Committee chaired by Ron Patterson from Idaho.
- Professional Excellence Committee chaired by Nicholas Simmons from Florida.
- Public Relations & Ag Awareness Committee chaired by Tyrone Fisher from North Carolina.
- Recognition & Awards Committee chaired by Joni Ross Harper from Missouri.
- Scholarship Committee chaired by Stephen Hadcock from New York.
- Search for Excellence Committee chaired by Linda McClanahan from Kentucky.

Working from the grass roots up, the Program Recognition Council committees recognize the outstanding work of NACAA members in their respective states, regions, and at the national level. Each year, committees review hundreds of entries to determine state, regional and national winners and to recognize members for their outstanding efforts.

Our council was extremely pleased by the number of entries submitted by NACAA members in 2022. These included:

- 740 Communications Award entries.
- 135 Poster entries (92 Extension Education and 43 Applied Research).
- 101 Search for Excellence (SFE) applications in the 8 SFE categories.
- 8 applications for the Ag Awareness & Appreciation Award.

Due to our gracious sponsors, our committees will be presenting over $20,000 to members at this year's conference for their outstanding achievements.

In addition to the creative and academic work competitions, 124 NACAA members will be recognized by their peers for the career achievements during the NACAA Awards Banquet on July 20. Sixty-one members from across the nation will be receiving the Distinguished Service Award and 63 will receive the Achievement Award. NACAA will also be honoring the lifetime achievements of Eugene Schurman (Pennsylvania), Gene McAvoy (Florida), Woods Houghton (New Mexico) and Karl Hoppe (North Dakota) who each will be receiving the prestigious Hall of Fame Award.

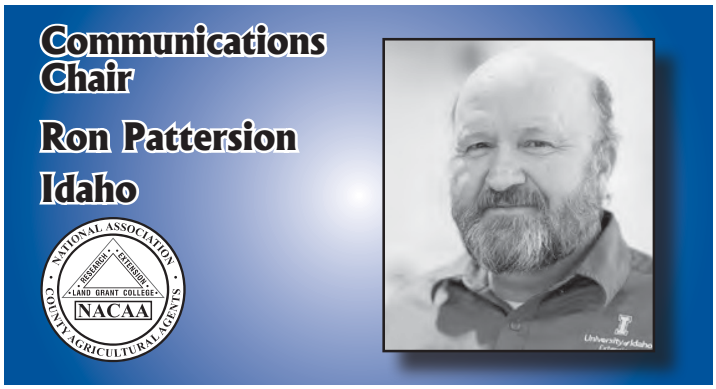
The NACAA Scholarship Committee has been very active in 2021-2022 making significant improvements to the NACAA Scholarship program. We are pleased that vested members can now receive up to $3,000 during their career to support their professional improvement activities. Learn more about the NACAA scholarship program at: https://www.nacaa.com/scholarship-criteria I also encourage you to return early from State's Night Out on Tuesday, July 20 to bid on hundreds of silent and live auction items at the NACAA Scholarship Auction. Come, bid often, and help make a difference for the NACAA Scholarship Fund.

During this year's AM/PIC, I encourage you to check out the activities which our committee's undertake. I especially urge you to join us in our committee meetings on Monday afternoon, July 18; it is a great chance to learn more about the activities of our committees. Each year the challenge to fill vacancies within the national committee structure gets a little more daunting. I encourage each and every member (regardless of how long you have been a member) to consider applying for committee membership. If anyone is interested or curious about the time commitment and responsibilities, speak with a current or past committee member during the AM/PIC. I think you will find that the benefit of committee membership and work far outweighs the time commitment.

I appreciate the hard work of the National Chairs, Vice-Chairs, and committees to overcome every challenge which has been presented to them during the past three years. I also wish to extend my appreciation to the entire National Board, my fellow council chairs Scott Jensen and Sherry Beaty-Sullivan, and Scott Hawbaker for their incredible dedication to our organization.

This is my third and final year as council chair; I am honored to have had the opportunity to serve as your Program Recognition Council Chair. The position of Council Chair is truly a challenge and a blessing. It has allowed me to learn more about our NACAA organization, develop lifelong working relationships, and has provided me the chance to work with some incredible County Agents from across the country.

I look forward to fellowshipping with you in sunny Florida!



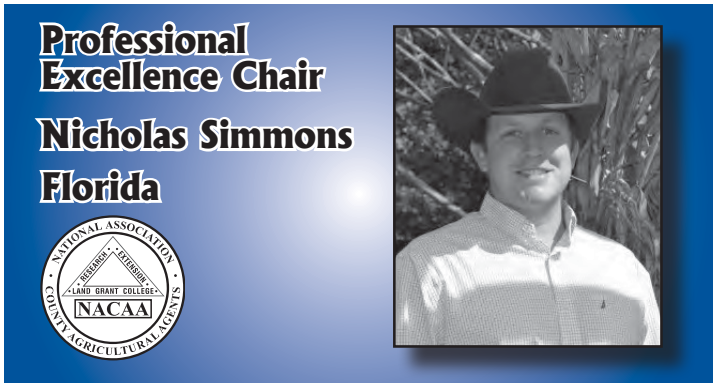
The Communications Awards competition provides a way for NACAA members to be recognized for their efforts to reach the general public. Congratulations to all our members for excellent Extension programming around the nation. The number of entries in the thirteen communication award categories, and the caliber of award entries was outstanding. In order to help members be more successful in their awards applications, our committee held a virtual training in February 2022.

While total entry numbers decreased in 2022, the trends that started because of the COVID 19 pandemic have continued strong. There were 738 total entries submitted by NACAA members from across the nation. The Southern Region led the way with 436 entries submitted, followed by the North Central Region with 183 entries, the Northeast Region with 67, and the Western Region with a slight bump up to 52. Congratulations to the Florida Association for the most entries as a state with 92 total applications. Florida was followed in the top five by Ohio with 53, South Carolina with 51, Texas with 46, and Arkansas and North Carolina tied with 41 each. The following is a summary of the entries made in each category.

- Audio Recordings had 63 entries
- Published Photo had 66 entries
- Computer Generated Presentation with Script had 46 entries
- Event Promotional Package had 60 entries
- Personal Column had 51 entries
- Feature Story had 42 entries
- Newsletter had 85 entries
- Educational Video Recordings had 111 entries
- Fact Sheet had 70 entries
- Publication had 52 entries
- Web Site/Online Content had 56 entries
- Learning Module/Notebook had 24 entries
- Bound Book/eBook had 12 entries

Now that we are back to a face-to-face conference the national winners will be announced at the Awards luncheon. The Communication Awards and poster Awards luncheon will be held together.

The NACAA Communications Awards Committee is very appreciative of the NACAA Board for continued funding of this program. A hearty thanks to the Communications Awards state chairs and regional vice-chairs for their hard work in making this awards program successful. The NACAA Communications Awards Regional Vice-Chairs for 2022 are: North Central Region Vice-Chair – Jeremy Jubenville (Michigan), Northeast Region Vice-Chair – Laura McDermott (New York), Southern Region Vice-Chair – Daniel Leonard (Florida) and Western Region Vice-Chair – Iris Mayes (Idaho). Without the state chairs and regional vice-chairs this program would not be possible. I would also like to thank David Marrison, NACAA Program Recognition Council Chair, and Scott Hawbaker, NACAA Executive Director, for their assistance throughout the year with questions and concerns. If you have any suggestions for improving the NACAA Communications Awards Contest, please contact Ron Patterson at rpatterson@uidaho.edu or call 208-529-1390.



The Professional Excellence Committee is responsible for organizing and conducting the poster session before and during the AM/PIC. It took a lot of dedication and work to make this happen, and without the regional vice-chairs, state chairs, and volunteer judges, the poster session would not be possible. Current regional vice-chairs are: North Central Region, Heather Gessner (SD); Northeast Region, Megan Muehlbauer (NJ); Southern Region, Brian Haller (AR); and Western Region, Bonnie Hopkins Byers (NM). Regional Vice-Chairs are responsible for connecting with state chairs throughout the year and assisting with the judging portion at the regional level. Presenting a poster is an excellent way for members to showcase their work in Extension Education or Applied Research, generate discussion during and after the conference, and publish their abstract in the conference proceedings.

This year we had an excellent number of accepted posters for judging and/or display at the AM/PIC, with a total of 135 (43 Research and 92 Extension Education). 2022 will be our first in-person meeting in two years, and we are excited to showcase the great work that our Extension colleagues have been doing to reach audiences.

The committee used independent pre-AM/PIC regional judging of state winners to select the 23 National Finalist posters. Judges from the four regions will evaluate the finalists on Monday, July 18th, to determine the National 1st, 2nd, and 3rd place award winners. Judging criteria are found on the NACAA website and can be reviewed to prepare for next year's posters.

All posters are displayed in the trade show area during the AM/PIC. Posters are to be in place no later than 5:00 p.m. on Sunday, July 17th and stay through 3 p.m. Tuesday, July 19th. There will be a "Meet the Author's Poster Session" from 10:00 a.m. – 10:30 a.m. during the break on Monday. National winners and finalists will be formally recognized during the Communications/Professional Excellence awards luncheon to be held on Tuesday, July 19th. Congratulations to all of our winners.

The Public Relations and Agricultural Awareness Committee is in charge of organizing the Agriculture Awareness and Appreciation Awards (A4) program. The A4 program is a great way for NACAA members to spotlight educational programs that demonstrate the public relations component of Extension work. It is also an opportunity to showcase how Extension agents and educators enrich and inform the public's understanding of agriculture in their communities. This year the A4 program had eight programs of outstanding public relations work representing every region of NACAA. There is a tremendous amount of great Extension work that many educators and agents are doing and this outreach makes an excellent way to share their success in the A4 program.

Congratulations to Joanna Coles from Kentucky. She is the Agricultural Awareness and Appreciation Award National Winner for 2022. Joanna will provide a video recording of her winning submission during the A4 Recognition on Monday, July 18th. Her topic will be "Increasing Agriculture Awareness Through Events, Media and Social Media". Congratulations also go to our National Finalist Ashley Wright from Arizona, along with her team of Blasé Evancho and Ethan Orr, presenting on "Joint Extension Agriculture and Family Consumer Health Sciences In-Service to Promote Ag Literacy".

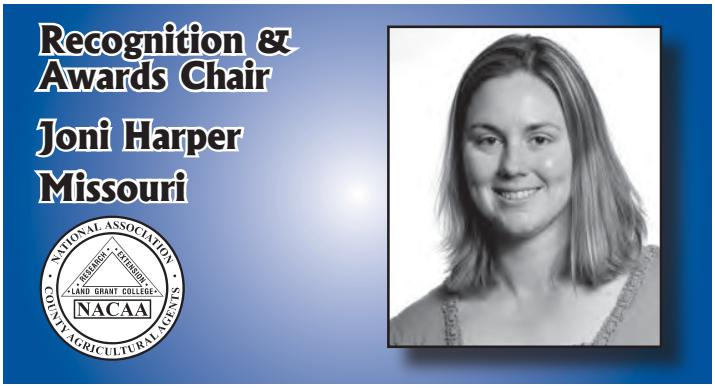
State winners include: Steve Pettis from North Carolina, Jennifer Caraway from Arkansas, Chris Hicks from Tennessee, Jennifer Ligon from Virginia, Lauren Butler from Florida, and Michael Hiller from Texas.

I want to send a heartfelt thank you to all of the hard-working judges, Public Relations and Agricultural Awareness Committee Regional Vice-Chairs and the State Chairs for their commitment to the difficult work of judging the excellent entries this year.

The Public Relations and Agricultural Awareness Committee appreciated having entries from two of the four regions in 2022 and challenges every state in NACAA to submit an entry in one of the NACAA awards programs, especially in the A4 program in 2023. Let Extension shine in all the communities we serve!

As always, we would like to send an earnest and special thank you Jim Hruskoci of Bayer Crop Science for sponsoring the Agriculture Awareness and Appreciation Award this year. It has been my pleasure to serve as the National Chair. I have enjoyed working with our Regional Vice Chairs and reviewing all of the great programming our Extension agents and educators are doing across the country on behalf of the agricultural industry.

We look forward in 2023 to hearing all of the unique ways of reaching and educating audiences, hopefully after the COVID-19 Pandemic!



Joni Harper, Chair of Recognition and Awards.

Recognition and Awards Committee Members:

North Central Vice-Chair – Edwin M. Lentz (Ohio)

West Vice-Chair – Zheng Wang (California)

Northeast Vice-Chair – Samantha Robison (Pennsylvania)

Southern Vice-Chair – Paula Burke (Georgia)

The Recognition and Awards committee would like to congratulate all the 2022 AA, DSA and Hall of Fame winners. The national and state committee members are passionate about recognizing our fellow agents. I would like to thank the regional vice-chairs and state chairs for all the great work they do on behalf of this committee.

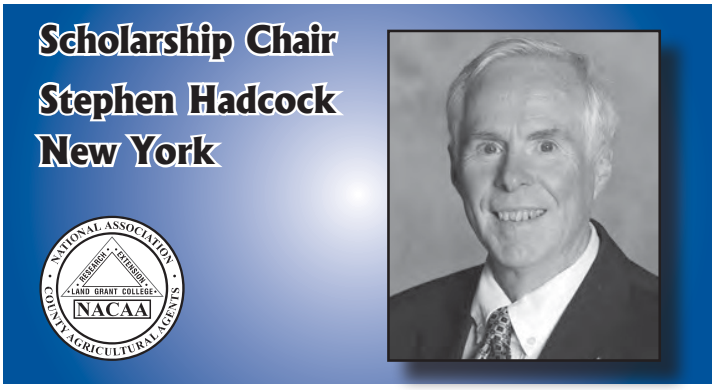
Gene McAvoy (Florida), Woods E. Houghton (New Mexico), Karl Hoppe (North Dakota) and Eugene Schurman (Pennsylvania) are our 2022 outstanding Hall of Fame winners. They will receive their awards at the annual banquet. Recipients of this award are recognized for a career of outstanding work as an extension educator and for being involved in their communities. They have provided leadership for professional organizations, churches, and humanitarian service organizations. This is the 17th year for this prestigious award.

On Tuesday morning, 62 Achievement Award recipients will receive their awards at a breakfast in their honor. This is the

48th year that NACAA has presented this award and this year's recipients will be joining 2,438 fellow Achievement Awards winners. The 2022 Achievement Award winners have demonstrated their ability to conduct high-quality educational programs and gain the respect of co-workers in less than 10 years of service.

This is the 84th year our national professional organization has recognized fellow educators with the Distinguished Service Award. These members were chosen by their respective states to receive one of the most prestigious awards given by NACAA. The Distinguished Service Award will be presented to 61 NACAA members from across the country and join 7,586 past recipients. These DSA recipients are being recognized for providing outstanding educational programming, are respected by their clientele and coworkers, and have worked for more than ten years.

The committee wishes to thank the Ag Pipeline Alliance for continuing their financial support for the Hall of Fame award. The committee expresses our appreciation for the continued support of the Achievement Awards breakfast by American Income Life Insurance Company- Special Risk Division for 48 years. In addition, they have provided sponsorship for 67 years overall to NACAA programs.



I thank North Central Region Vice Chair Adele Harty, Western Region Vice Chair Thomas Dominguez, Southern Vice Chair Carole Henry, and Northeast Vice-Chair Mike Haberland for their support and hard work this year.

The Scholarship Committee wishes to thank the NACAA Board for approving the recommendations the Committee offered. For 2022, members vested at the $40 level in the NACAA Scholarship are eligible to receive a scholarship of up to $1,500. Those vested at the $100 level (and have received some scholarship funds) may receive a scholarship of up to $1,500. For 2022, the maximum amount of scholarship funds a NACAA member can receive is $3,000. This is $1,000 more than was available in the past.

Vestment thresholds will change after the 2022 AM/PIC Meeting. The first level of vestment will go from $40 to $100. The second vestment level will go from $100 to $200.

The NACAA Scholarship Application is an online process with a June 1 deadline. To view the application criteria, go to https://www.nacaa.com/scholarship/criteria.php, then head straight to filling out the application, which can be found at https://www.nacaa.com/scholarship/application.php

Scholarships awarded:

In 2021, fourteen scholarship applications were received. National committee members reviewed the applications submitted by the applicants. The Scholarship Committee recommended the Scholarship Foundation fully fund all fourteen applications.

Thirteen were individual applications, and one group application was received. The total scholarship amount awarded was $15,800.

In 2022, ten scholarship applications were received and will be judged by the National Scholarship Committee during the AM/PIC. The total amount requested is $38,300. More information about the Scholarship recipients will be available later this year.

In 2021, the Scholarship Committee had an 'Online Silent Auction' fundraiser. Members had the entire month of June to donate items. The live and silent auction will take place this year at the AM/PIC in West Palm Beach. NACAA members are encouraged to submit information about their donations before arriving at the meeting this year.

The current Search for Excellence (SFE) committee is comprised of four regional vice chairs and myself. The regional vice chairs include Chris Zoller from Ohio, Jesse Fulbright from Montana, Amber Yutzy from Pennsylvania and Tatiana Sanchez from Florida.

The committee held an organizational meeting by Zoom/conference call in January 2022. We discussed procedures for promoting SFE entry submissions and for scoring the entries to be received. We reviewed plans for the upcoming AM/PIC and discussed duties of regional vice chairs as well as state chairs. During the conference call, we also confirmed the division of responsibilities regarding the SFE categories that each would lead and preside over at the 2022 NACAA AM/PIC.

They were as follows:

Consumer or Commercial Horticulture- Tatiana Sanchez

Crop Production- Linda McClanahan

Environmental Quality, Forestry, and Natural Resources- Chris Zoller

4H and Youth Programming- Jesse Fulbright

Farm & Ranch Business Management- Chris Zoller

Livestock Production – Amber Yutzy

Sustainable Agriculture- Amber Yutzy

Young, Beginning, or Small Rancher/Farmer – Linda McClanahan

Each regional vice chair was responsible for organizing a team of judges for each respective category, judging the entries and reporting the results to me. National finalists and winners were notified of their placing by May 18th. There were some challenges and delays in judging due to transition of the new NACAA website.

There were 101 completed entries this year. The entries per category was as follows:

Consumer or Commercial Horticulture- 16

Crop Production- 13

Environmental Quality, Forestry and Natural Resources- 15

Farm and Ranch Business Management- 5

4H and Youth Programming- 22

Livestock Production- 11

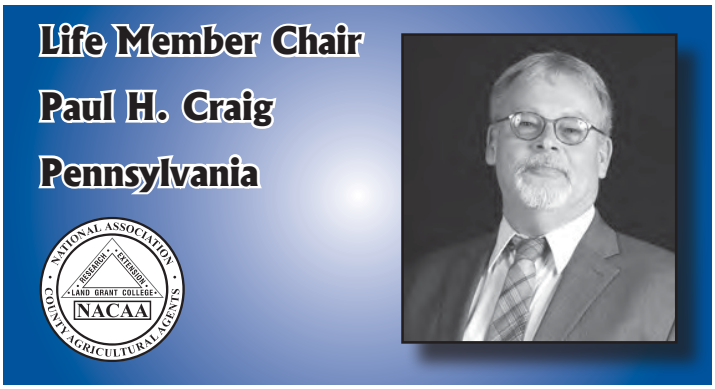
Sustainable Agriculture -7

Young, Beginning or Small Farmers/Ranchers- 12

The total number of entries received was an increase of 1 over last year. There are a lot of opportunities for members to participate by submitting entries in SFE. The entries are easy to prepare and submit, and the program provides an excellent opportunity for individual and team recognition.

Our 2022 winners and finalists will be recognized during their respective SFE luncheon sessions at the upcoming NACAA AM/PIC. The committee will continue to promote the SFE awards program and encourage more applications next year. For those interested in learning more about the SFE Committee or learning more about their duties as state chair, the SFE committee will meet on July 18 during AM/PIC.

Thank you to each state chair for their efforts in promoting SFE to their membership and judging/selecting state winners. I owe a huge thank you to each regional vice chair for all their efforts to facilitate the judging of the entries and other associated tasks of the committee. It's been a great honor to serve as National Chair of this committee over the past year. Thanks to Program Recognition Council Chair, David Marrison, for his assistance and support during the year. I appreciate the continued support NACAA Board provides for the Search for Excellence program. Finally, many thanks to NACAA Executive Director, Scott Hawbaker for his support and assistance.



Do you realize there are over 3,000 NACAA Life Members? I bet you didn't!

As John Lennon once said – "I hope someday you'll join us."

According to NACAA by-laws the Life Member committee serves as a liaison between active NACAA members and your national Board of Directors. In 2022, as in year's past, many Life Members continue to actively support your/our organization by working to increase resources for the Scholarship Fund. Other Life Members serve(d) on the national Scholarship and Policy Committees as well as annual meeting planning committees. In addition, Life Members gladly assist their local state and regional activities including retirement celebrations, state meetings, and AM/PIC's.

The Life Member committee serves an important role striving to maintain and expand opportunities for retired county agents to strengthen professional and personal bonds during an AM/PIC. Hospitality rooms, tours, seminars, and state activities provide Life Member attendees with many reasons for continuing attendance. Old friendships, built on a career in Extension and NACAA, last forever. Some Life Members have attended AM/PIC's for 40 years or more. This year there will be close to 30 Life Members in attendance. It will be so welcome to meet face to face after 2 years of Zoom meetings.

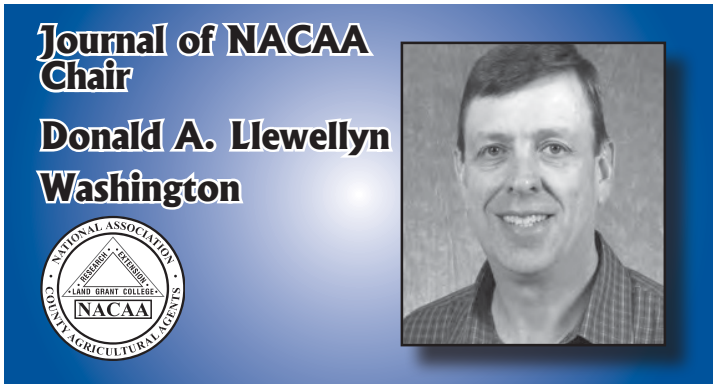
What does your state association do for Life Members? In PA, Life members are welcome and invited to statewide association activities throughout the year. The association also has a food stand during a summer ag expo where active and retired members volunteer their time for fund raising. Many Life Members like to stay connected and will participate if possible. Please consider keeping in touch with your Life

Members. It may be just to chat. As present and past members of NACAA you both have much in common.

Each year at an AM/PIC, during the life member annual business meeting, a memorial service is held to honor all NACAA Life Members who have passed during the past year. Names are gathered by the committee vice chairs thanks to efforts of each state life member contact who provides this information. The Life Member committee asks each state for your cooperation to make this event possible. Your state is encouraged to appoint one member as the Life Member contact. That person should be responsible to collect information on the names of individuals who have passed from year to year. At Penn State administration gladly shares links to information when it is provided from across the state to them.

The Life Member Committee for this year is represented by Janet Schmidt, Washington, Western Region; Dirk Webb, Oklahoma, Southern Region; Steve Munk, South Dakota, North Central Region, and Glenn Rogers, Vermont, Northeast Region. I have a great appreciation for their efforts this past year. As noted, this is the first face to face meeting since Fort Wayne IN. This is also my last year as Chair of the committee. John Campbell, Tennessee has volunteered to assume leadership these next 2 years.

Finally, the Life Member committee wishes to express our appreciation to the NACAA National Board for their continuing support of Life Members. Your considerations of the needs and wants of life members is valued. Also sincere thanks to the Florida Association for their outstanding efforts in planning and conducting this year's meeting.



It is indeed my pleasure to have served as Journal Chair and Editor of the Journal of NACAA. It is great to play an active role in NACAA at the national level. I sincerely believe that the Journal is part of a vital role for our members and important for their professional development and instrumental in helping them facilitate a positive career trajectory. As I end my term as Editor, I want to take this opportunity to thank everyone involved in this endeavor: 1) the former Editors that have provided me so much support over the last three years; 2) the authors who have been timely in their submission and revisions; 3) the NACAA members that have stepped up to provide the professional service of reviewing articles for publication; and 4) the NACAA board who always chart a positive course for NACAA. A special thank you is due to Scott Hawbaker who has helped me in every step along the way and has been awesome in providing technical support for the Journal and I will always appreciate that as well. This includes Scott's assistance while switching to a new submission system which in total is going to be really good, but as with any new system we had some minor issues to work out and Scott's guidance has been so valuable. Finally, I thank all the NACAA members for their unwavering support. The following are some highlights since last year for the Journal of NACAA:

- December 2021 issue had 12 manuscripts published
- June 2022 issue had 12 manuscripts published
- Authors have been proactive in getting their submissions in on time
- In general (although it varies by issue), the acceptance rate is running around 70% since I have been Editor
- As we have done at every AM/PIC since I have been editor, we will be giving a presentation at the 2022 AM/PIC during the Early Career Development section on publishing articles in the Journal of NACAA. This effort will be a collaboration with the new Editor of the Journal of NACAA.
- Over the course of my tenure, I have had good success in recruiting new reviewers for the Journal of NACAA, but many more are needed due to retirements and members' other commitments. Reviewer recruitment should continue.

As I turn over the reigns of the Journal of NACAA to our friend and colleague, Linda Chalker-Scott, let's all make her experience as Editor as rich as you all have made mine.

As time goes on, it is my hope that I have the opportunity to serve NACAA in other capacities at the national level.

My name is Amber Yutzy, and I am the new NACAA liaison to the National Outstanding Young Farmers of America. 2022 the National Outstanding Youth Farmers Congress was held in person at the Omni Hilton Head Oceanfront Resort on February 3-6. This year was unique because we were able to honor two classes of outstanding young farmers. Due to COVID, the 2021 applications were judged virtually, but the finalist was announced and honored at the 2022 Congress. I, unfortunately, was not able to attend the Congress this year, but our Past President J. Craig Williams represented NACAA with pride.

I look forward to attending next year to honor our recipients.

The Outstanding Young Farmers of America is a group comprised of past nominees of the Outstanding Young Farmer Program. The group is designed to facilitate an exchange of ideas and friendship that encourages excellence and involvement in agriculture and the local, state, and national communities. There are approximately 1,500 members of the OFA across the nation. They utilize their connections in a robust networking format to assist farmers and promote the importance of America's farming community.

The OYF program aims to foster better urban-rural relations through understanding the farmers' endeavors, developing a further appreciation for their contributions and achievements, and informing the agribusiness community of the growing urban awareness of farmers' importance and impact on America's economy.

As the farmer's business has changed, so has their involvement in the community. Today's farmer is an active citizen, participating in local and state government, civic groups, and charitable organizations. It is not only fitting that farmers be honored for their contributions and achievements—it is essential. This award has been established to recognize outstanding achievements in agriculture and community involvement.

I would like to recognize our 2021 and 2022 National Outstanding Young Farmers:

- Matt and Melissa Bottoms of Georgia
- Hillary and Jeff Barile of New Jersey
- Jeroen and Traci van der Ploeg of New Mexico
- Philip and Laura Finger of Wisconsin
- Richie and Sarah Heinrich of North Dakota
- Matt and Jenna Kilgus of Illinois
- Joe and Ashley Dudkiewicz of Wisconsin
- Hunter and Laura Grills of Tennessee

It's time to nominate your young farmers for the 2023 awards year. NOYF is a wonderful opportunity for you to recognize fantastic young farmers in your community as county extension agents. I ask you to nominate an individual worthy of this prestigious award. You can find information about the award and application on the National Outstanding Young Farmer website at: www. ofafraternity.org. Please start thinking about who would be worthy of this honor in your county or state. Applications are due August 1st, 2022. If your nominee is chosen as a top 10 finalist, NACAA will provide a $500 stipend for you to attend the 2023 NOYF Awards Congress to be held in Appleton, WI. Do not hesitate to reach out to me for help and support with the application process.

Many thanks and appreciation is extended to the NACAA officers and board for their support of me representing our association on the Extension Journal, Inc. (EJI) board for the past five years. I have thoroughly enjoyed serving in the capacity as the liaison to NACAA for Extension Journal, Inc. I am currently serving as President and look forward to continuing to assist in moving the organization forward as we complete navigating transitional changes since January, 2021.

Journal of Extension

As of January 1, 2021, the *Journal of Extension (JOE)* is published by Clemson University Press. Established in 1963, *JOE* is the flagship journal for Extension employees. As a refereed journal, *JOE* expands and updates the research and knowledge base for U.S. Extension professionals and other outreach educators to improve their effectiveness and serves as a forum for emerging and contemporary issues affecting U.S. Extension educators. Moreover, *JOE* provides a venue for professionals and students to publish original and applied research findings to share successful educational applications, scholarly opinions, educational resources, and challenges on issues of critical importance to Extension educators.

Through its commitment to author development, *JOE* also provides training and support for effective scholarly communications. *JOE* is a fully, open-access, quarterly journal included in the:

- Web of Science Core Collections Emerging Sources Citation Index (ESCI)
- Scopus (abstract and citation database)
- Education Resources Information Center (ERIC- full-text database)
- Cabells Whitelist

A Year of Change

2020 brought many changes to the face of *JOE*. Many of these changes were due to strategic planning implementation from 2019. Due to operating at a budget deficit for a number of years, the board explored options to increase revenues and reduce costs to produce the *Journal of Extension*. In 2019, in response to knowledge that EJI was experiencing financial issues, Clemson University Press submitted an unsolicited

proposal to partner with EJI for production of the *Journal of Extension* and operation of the Extension Job Bank. The EJI board voted in 2020 to move forward with the proposed partnership. The new partnership allows EJI to save a minimum of $50,000 annually in operational expenses, thereby putting the organization back into the black financially. EJI signed an MOU with Clemson University Press on September 9, 2020, formalizing this partnership. Drew Griffin assumed the role as editor.

Upcoming Plans

The transition of the *Journal of Extension* and the Extension Job Bank has been a success! The partnership was in place by the end of January 2021. The *Journal of Extension* has completely undergone a rebranding, complete with new logos and a marketing plan to raise the profile and awareness of the Journal. There is no longer a backlog in journal submissions (thanks to Drew and team)! We are currently ahead of schedule for the first time in several years, so we encourage you to visit our new website and consider publishing in the near future.

A fully expanded and more effective website (Journal of Extension | Clemson University) is currently in place and has so far proved invaluable to authors and peer reviewers alike. A tab was added for Author Resources with a variety of information. Authors can now track where their manuscript submission is in the publication process and, after an article is published, authors receive informational updates (such as download rates and locations).

In addition, the Extension Jobs portal received a facelift. Check out the new site here: Extension Jobs – Jobs in Extension, Outreach, Research & Higher Education (joe.org)

Special thanks

Since joining the EJI Board in January 2017, it has been a wonderful experience and a great opportunity to serve with other members of the Extension family from across our nation. The friendships and contacts I have made are priceless. Serving as the NACAA representative on the EJI board continues to both an honor and privilege.

107th Annual Meeting and Professional Improvement Conference

National Association of County Agricultural Agents

July 17–22, 2022
West Palm Beach, FL

2022 NACAA ANNUAL MEETING AND PROFESSIONAL IMPROVEMENT CONFERENCE

REGISTRATION
North Lobby, Palm Beach County Convention Center (PBCCC)

Saturday:	3:00 pm - 6:00 pm
Sunday:	8:00 am - 7:00 pm
Monday:	8:00 am - 5:00 pm
Tuesday:	8:00 am - 2:00 pm
Wednesday:	8:00 am - 2:00 pm
Thursday:	NOT OPEN - TOUR DAY

COMMERCIAL, EDUCATION EXHIBITS
Exhibit Hall A, (PBCCC)

Sunday:	9:00 am – 1:00 pm (Set-up)
Sunday:	1:00 pm - 6:00 pm
Monday:	9:00 am - 3:00 pm
Tuesday:	9:00 am – 4:00 pm
Tuesday:	4:00 pm – 6:00 pm (Take-down)

AWARDS, RECOGNITION & EDUCATIONAL DISPLAYS
POSTER DISPLAY
Exhibit Hall A, (PBCCC)

Sunday:	9:00 am 1:00 pm (Set-up) Sunday: 1:00 pm - 6:00 pm (Open)
Monday:	8:00 am - 10:00 am (Poster Judging)
Monday:	9:00 am - 3:00 pm (Open)
Monday:	10:00 am -10:30 am (Meet the Authors)
Tuesday:	9:00 am – 4:00 pm (Open)

ANNUAL MEETING RIBBON COLOR GUIDE

National Board	Dark Blue
National Council Chair	White
National Committee Vice Chair	Orange
National Vice Director	Tan
State President	Red
Past National President	Purple
Past National Secretary	Gold
Past National Treasurer	Dark Green
Life Member	Brown
Donor	Black
Guest	White/Gold
Host	Yellow
First Timer	Maroon
Press	Pink
Hall of Fame	Gray

Welcome to the 107th Annual Meeting and Professional Improvement Conference

National Association of County Agricultural Agents

NAME BADGES ARE REQUIRED.
PLEASE WEAR YOUR NAME BADGE AT ALL TIMES. YOU WILL NEED IT TO BE ADMITTED TO ALL FUNCTIONS INCLUDING MEALS

FLORIDA 2022 NACAA BEYOND THE BEACHES

Bill Burdine
President

Welcome to Florida

Welcome to sunny, West Palm Beach Florida and the 107th NACAA Annual Meeting and Professional Improvement Conference. With all the negative events going on in the world, it's great to finally be back together after two long years of being shut down or shut in. AM-PIC schedules can be overwhelming, so take some time to review the proceedings and mark all the events you wish to attend. The Florida Association, along with the NACAA Board and committees have a week filled with professional development and awards so don't miss your opportunity to learn, network and make life-long friendships.

The NACAA Committees and our members stand ready to share professional development opportunities that can improve your service back home. From oral presentations, posters, award presentations, exhibits, and speakers, there is something for everyone. Some of the best training you can get is the informal discussions in the hallways during breaks so make this time count too.

Don't miss the Beach Party! It's not our traditional Monday evening entertainment but I hope you'll like it. Wednesday General Sessions will be different as well. I plan to address some behind-the-scene details of our association just before we adjourn. Once again, we are using the YAPP app online proceedings for your mobile device. You will get schedule updates and notices so download it now.

A big thank you to everyone who sacrificed their time to make this conference possible. I know how much time and effort it takes so offer a big thank you to Florida and NACAA committee members who made this AM/PIC happen.

Do not miss the Tradeshow and exhibits. Sponsors and donors provide a lot of funding that keeps our registration fees as low as possible. Visit their booths, learn what they offer, and thank them for supporting NACAA. Don't forget the poster session where you get ideas from fellow agents that make you a better Extension agent.

Every AM/PIC has its own personality so roll with it! Enjoy this week, learn new ideas, and make memories that last a lifetime. Now start marking events of interest and get the most out of the 2022 conference. Welcome to Florida, enjoy some Southern Hospitality, and cheers to our Family Reunion!

Bill Burdine
NACAA President

NACAA BOARD OF DIRECTORS

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Mississippi

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Oklahoma

Southern Region Director
Melody Rose
Tennessee

North Central Region Director
Teresa Steckler
Illinois

Western Region Director
Kurt Jones
Colorado

Association Policy Chair
Mike Hogan
Ohio

Welcome to Florida

Welcome to Florida! We are thrilled you are here and we hope you have a great "live and in-person" AM/PIC in West Palm Beach. The area has a beautiful array of things to do inside and outdoors aside from the goings-on at AM/PIC.

Beyond The Beaches was chosen as our theme for this year's meeting. We know that Florida is widely known for our beautiful beaches but going beyond the beaches, our agricultural heritage is older than our nation and we hope you will experience some of that during your stay.

We will meet and register at the Palm Beach Convention Center and our first meal on Sunday night will be a hearty, home-cooked meal to ease you into your new surroundings. But the pace quickly turns with our opening kick-off, a new take on the flag ceremony, and the sounds of Latin crossover beats that mirror the multicultural historical aspect of Florida's founding and way of life.

Monday's activities will include all the regular AM/PIC agenda items that you are familiar with over the years, however, we will be changing things up a bit. We are going to the beach to unwind after a day of professional improvement, networking, and meetings (all the good stuff) and have a little relaxing fun with a thousand of your friends at Carlin Park. This is a different take on the usual 4-H night. Our agents have worked very hard on this dinner/event and we hope you will enjoy it. We know it's hot, but you should be able to find things that will distract you from talking about the weather.

On Tuesday if you are not already registered for the fun activities that we have planned for son and daughters, spouses, guests, and life members, downtown around the convention center you will find plenty of sightseeing, shopping, as well as excellent eateries for your enjoyment and Tuesday night's States Night Out. Please check out our website http://tiny.cc/ampic2022 and Visit the Palm Beaches if you need helpful suggestions on things to do. I would also like to thank Ashley Medieros with Visit the Palm Beaches for all her time helping to promote our event.

On Wednesday, check out the excellent lineup of seminars and if you don't have a ticket, hang out near the door to see if a space opens. Many times you can crowd in the back and get the information. Especially check out our sponsor Microsoft and their technology seminar. After we have our usual daily activities we will honor our Distinguished Service and Achievement Award recipients, and change our leadership at the banquet where we will be serving a delicious meal for you.

On Thursday we will be beyond the beaches and showcase the diversity of agriculture and natural resources in our state. We have plenty to see and do on the tours. If you are not going on the tours you might check out the beach. We will all meet at the South Florida Fairgrounds where the Hendry County Cattlemen's Association will generously be cooking a steak dinner for everyone. While you wait or after your meal, you can tour the very unique cultural heritage history of Yesteryear Village. A living historic park showcasing buildings and artifacts from 1895 -1945.

Our agents, sponsors, donors, and volunteers have spent enormous time and resources to make sure you have a wonderful time and that our AM/PIC is productive. If there is anything that you need during the conference please let one of our team members know so we can assist you. So welcome to Florida - we are glad that you are here. We will definitely go beyond the beaches next year as we wish Iowa's team good luck and pass them the baton.

Libbie Johnson
AM/PIC Co-Chair

Shawn Steed
AM/PIC Co-Chair

COMMITTEE CHAIRS

Program Recognition Council:	David Marrison, OH
Communications:	Ron Patterson, ID
Professional Excellence:	Nick Simmons, FL
Public Relations & Ag Awareness	Tyrone Fisher, NC
Recognition and Awards:	Joni Ross Harper, MO
Scholarship:	Stephen Hadcock, NY
Search for Excellence:	Linda Mcclanahan, KY
Professional Improvement Council:	Sherry Beaty-Sulllivan, AR
4-H and Youth Programming:	Brittany Council-Morton, FL
Ag. Economics & Community Development:	Amanda Smith, GA
Agronomy & Pest Management:	Ted Wiseman, OH
Animal Science:	Mark Heitstuman, WA
Horticulture & Turfgrass:	Cyndi Lauderdale, NC
Natural Resources/Aquaculture:	Jody Gale, UT
Sustainable Agriculture:	Laura Miller, TX
Extension Development Council:	Scott Jensen, ID
Ag. Issues & Public Relations:	Katie Wantoch, WI
Early Career Development:	Danny Lauderdale, FL
Leadership & Administrative Skills:	Nicole Thompson, PA
Teaching and Educational Technologies:	Colt Knight, ME

OTHER CHAIR POSITIONS

Annual Meeting:	Libbie Kelly, FL Co-Chair; Shawn Steed, FL Co-Chair
Association Policy:	Mike Hogan, OH
Life Members:	Paul Craig, PA

NACAA SPECIAL ASSIGNMENTS

Executive Director; Publisher, The County Agent:	Scott Hawbaker, IL
Journal of Extension:	Melody Rose, TN
Journal of NACAA:	Donald Llewellyn, WA
Outstanding Young Farmer:	Amber Yutzy, PA

VICE DIRECTORS

North Central Region:	Scott Gabbard, IN
Northeastern Region:	Nick Polanin, NJ
Western Region:	Linden Greenhalgh, UT
Southern Region:	Brian Beer, SC
Southern Region:	Paula Burke, GA

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107th ANNUAL MEETING
and
PROFESSIONAL IMPROVEMENT CONFERENCE
of the
NATIONAL ASSOCIATION OF
COUNTY AGRICULTURAL AGENTS
West Palm Beach, Florida
July 17-22, 2022

PBCCC – REFERS TO
PALM BEACH COUNTY CONVENTION CENTER
THROUGHOUT THE PROGRAM

FRIDAY, JULY 15

7:00 am - **HORTICULTURE COMMITTEE PRE-TOUR, ANIMAL SCIENCE PRE-TOUR, NATURAL RESOURCES PRE-TOUR, SUSTAINABLE AG PRE-TOURS**

8:00 am - **NACAA BOARD MEETING,**
5:00 pm Hilton Cypress

SATURDAY, JULY 16

7:00 am **HORTICULTURE COMMITTEE PRE-TOUR, ANIMAL SCIENCE PRE-TOUR, NATURAL RESOURCES PRE-TOUR, SUSTAINABLE AG PRE-TOURS**

8:00 am - NACAA BOARD MEETING
2:00 pm Hilton Cypress

3:00 pm - **REGISTRATION**
6:00 pm (PBCCC) - North Lobby

5:00 pm - - **VIP RECEPTION** (Invitation only)
7:00 pm Presidential Suite 1238, Hilton

SUNDAY, JULY 17

MEMBER

8:00 am- **REGISTRATION & SCHOLARSHIP AUCTION**
7:00 pm **DROP OFF**
PBCCC - North Lobby

9:00 am - **COMMERCIAL EXHIBIT TRADE SHOW,**
1:00 pm **EDUCATIONAL EXHIBITS, & NACAA POSTER SESSION SETUP,**
PBCCC Exhibit Hall A,
Coordinator: Nick Simmons, Professional Excellence Committee Chair

9:00 am - **REGIONAL DIRECTORS & VICE DIRECTORS**
12:00 pm **WORKSHOP,** PBCCC 1A
Presiding: Kurt Jones, Western Region Director

9:00 am - **SCHOLARSHIP SELECTION COMMITTEE,**
12:00 pm PBCCC, 1C
Presiding: Steve Hadcock, Scholarship Committee Chair

9:00 am - **NOMINATING COMMITTEE MEETING,**
12:00 pm PBCCC, 1B
Presiding: J. Craig Williams, Past President

12:00 pm - **PAST NATIONAL OFFICERS &**
2:00 pm **BOARD LUNCHEON,** PBCCC, 2F
Presiding: J Craig Williams, Past President

12:00 pm - **NATIONAL COMMITTEE CHAIRS AND VICE**
2:00 pm **CHAIRS LUNCHEON & WORKSHOP,**
PBCCC, 2DE (Ticket Required)
(Present & Incoming Committee Members)
Presiding: Keith Mickler, Vice President
Courtesy: NACAA

1:00 pm - **COMMERCIAL EXHIBIT TRADE SHOW,**
6:30 pm **EDUCATIONAL EXHIBITS, & NACAA POSTER SESSION DISPLAY - OPEN,**
PBCCC, Exhibit Hall A

1:00 pm - **NACAA EDUCATIONAL FOUNDATION**
5:00 pm **ANNUAL MEETING & BOARD OF DIRECTORS MEETING,** PBCCC, 1F
Presiding: Fred Miller, NACAA Educational Foundation President

SUNDAY, JULY 17

MEMBER

1:30 pm - **STATE OFFICERS WORKSHOP,**
3:00 pm PBCCC, 2C
Presiding: J.J. Jones, Southern Region Director

2:00 pm - **PROGRAM RECOGNITION COUNCIL WORKSHOP,**
3:30 pm PBCCC, 1E
Presiding: David Marrison, Council Chair

2:00 pm - **PROFESSIONAL IMPROVEMENT COUNCIL**
3:30 pm **WORKSHOP,** PBCCC, 1B
Presiding: Sherry Beaty-Sullivan, Council Chair

2:00 pm - **EXTENSION DEVELOPMENT COUNCIL**
3:30 pm **WORKSHOP,** PBCCC, 1A
Presiding: Scott Jensen, Council Chair

3:00 pm - **FIRST TIMER ORIENTATION,**
4:30 pm PBCCC, Ballroom AB
Presiding: Phil Durst, President- Elect

4:00 pm - **STATE PICTURES**
4:45 p.m. (See schedule in back of program)

4:30 pm - **U.S. SUGAR WELCOME TO FLORIDA DINNER**
6:30 pm PBCCC – Exhibit Hall A
(Ticket Required-See ticket for serving time)
Courtesy: NACAA/FACAA

5:30 pm - **STATE PRESIDENT REHEARSAL FOR FLAG**
6:00 pm **CEREMONY,** PBCCC – Grand Ballroom
Presiding: Bill Burdine

6:00 pm - **PARENTS ORIENTATION FOR SONS AND**
6:45 pm **DAUGHTERS PROGRAM,** Hilton Oceana A
Presiding: Tycee Prevatt and Luke Harlow, Florida Chairs Sons and Daughters

SUNDAY, JULY 17

MEMBER

7:00 pm - **OPENING SESSION & INSPIRATIONAL**
8:45 pm **PROGRAM,** PBCCC – Grand Ballroom
Presiding: Bill Burdine, NACAA President
- Presentation of Colors: U.S. Naval Sea Cadet Corps
- Pledge of Allegiance and 4-H Pledge: Wolfgang Oschmann
- National Anthem and "God Bless America": Mercedes Nodarse
- Presentation of State Flags: Kevin Korus
- Introduction of Keynote Speakers: Daniel Leonard
- Welcome: Dr. Scott Angle, UF/IFAS Senior VP
- Speakers: Dr. Andra Johnson, Dean of Extension, UF/IFAS and Vonda Richardson, Associate Director, FAMU
- Entertainment: Los Sobrinos del Sol
- Announcements: Libbie Johnson & Shawn Steed, 2022 AM/PIC Co-Chairs

9:00 pm **ICE CREAM SOCIAL,** PBCCC – Exhibit Hall A
Southeast Milk, Inc. and Florida Dairy Farmers

9:00 pm - **STATE PICTURES**
10:00 p.m. (See schedule in back of program)

9:00 pm - **HOSPITALITY ROOMS,**
10:30 pm Hilton Hotel - Rooms 1040, 1046, 1140, 1146

10:00 pm **FLORIDA AM/PIC COMMITTEE MEETING,**
PBCCC - 1F

MONDAY, JULY 18

6:30 am - **BAYER CROPSCIENCE EDUCATIONAL**
7:45 am **BREAKFAST**, PBCCC – Ballroom AB
Presiding: Ted Wiseman, Vice Chair - Agronomy & Pest Management
Courtesy: Bayer CropScience LP
Speaker: Ryan Tichich, Corn Agronomic Systems Team Lead, North America Market Development (Ticket Required)

7:00 am - **VOTING DELEGATES BREAKFAST,**
7:45 am PBCCC - 2DEF
Presiding: Connie Strunk, NACAA Secretary
Courtesy: NACAA (Invitation only)

MONDAY, JULY 18

MEMBER

8:00 am - **REGISTRATION & SCHOLARSHIP AUCTION**
5:00 pm **DROP OFF,** PBCCC - North Lobby

8:00 am - **NACAA POSTER JUDGING,**
10:00 am PBCCC – Exhibit Hall A

8:00 am - **GENERAL SESSION,**
10:00 am PBCCC – Grand Ballroom
Presiding: Dr. Bill Burdine, NACAA President
- Call to Order and Welcome
- Report to the Membership
- Recognition of Donors and Introduction of New Programs
- Dan Kluchinski Memorial Award
- Service to American Agriculture Award
- Presentation by bidding States for 2026 AM/ PIC: Colorado
- Keynote Address – Dr. Jewel Bronaugh, Deputy Secretary of Agriculture, USDA
- Announcements: Libbie Johnson & Shawn Steed, 2022 AM/PIC Co-Chairs

9:00 am - **COMMERCIAL EXHIBIT TRADE SHOW,**
3:00 pm **EDUCATIONAL EXHIBITS, & NACAA POSTER SESSION DISPLAY - OPEN,**
PBCCC – Exhibit Hall A

10:00 am - **BREAK AND MEET THE AUTHOR 's POSTER**
SESSION, PBCCC Exhibit Hall A
Courtesy: Agricultural Extension Associations from the 13 Southern Region States

10:30 am - **TRADE TALK CONCURRENT SESSIONS:**
11:40 am **OPEN TO ALL MEMBERS**
(See page 42-43 for Topic Descriptions)

SAFETY/FINANCIAL
PBCCC - 2A
Participants: Pipeline Ag Safety Alliance, Farm Credit

ANIMAL SCIENCE/CROP SCIENCE/FORAGE/ TURF
PBCCC - 2B
Participants: Bayer Crop Science, National Pork Board, Barenbrug

INTERNATIONAL PROGRAMS
PBCCC - 2C
Explorations by Thor

MONDAY, JULY 18

MEMBER

11:45 am - **AGRICULTURE AWARENESS &**
1:15 pm **APPRECIATION AWARD LUNCHEON,**
PBCCC – 1L (Ticket Required)
Presiding: Tyrone Fisher, Public Relations & Agricultural Awareness National Committee Chair
Speaker: Joanna Coles, Ashley Wright & Blasé Evancho
Topic: Increasing Agriculture Awareness Through Events, Media, and Social Media (Kentucky) Courtesy: Bayer CropScience

11:45 am **FIRST TIME ATTENDEE LUNCHEON,**
1:15 pm PBCCC – Ballroom AB
Presiding: Phil Durst, President- Elect
(Ticket Required)
Courtesy: NACAA

11:45 am - **PROFESSIONAL IMPROVEMENT &**
1:15 pm **SEARCH FOR EXCELLENCE LUNCHEONS,**
(Ticket Required)

CROP PRODUCTION,
PBCCC - 2D
Presiding: Linda McClanahan, SFE Committee National Chair
Presenter: D. Eddie McGriff (Alabama)
Program: Developing Crop Audits to Improve Crop Yields & Profitability
Courtesy: NACAA (Ticket Required)

FARM & RANCH FINANCIAL MANAGEMENT,
PBCCC - 2F
Presiding: Chris Zoller, SFE Committee Region Vice-Chair
Presenting: Shannon Dill and Jennifer Rhodes (Maryland)
Program: MidAtlantic Women in Ag Conference
Courtesy: Corteva (Ticket Required)

CONSUMER & COMMERCIAL HORTICULTURE,
PBCCC - 1F
Presiding: Mayerling Tatiana Sanchez, SFE Committee Region Vice-Chair
Presenting: Wendy Becker (Montana)
Program: Fort Peck Reservation
Courtesy: NACAA (Ticket Required)

MONDAY, JULY 18

MEMBER

EXCELLENCE IN 4-H PROGRAMMING,
PBCCC - 1E
Presiding: Jesse Fulbright, SFE Committee Region Vice-Chair
Presenter: Kapil Arora - National Winner
Program: Drone Discovery Teaches STEM Skills to Youth
Courtesy: NACAA (Ticket Required)

1:30 pm - **COMMITTEE WORKSHOPS FOR ALL**
2:30 pm **MEMBERS** (Workshops are open to all members. Attend any workshop of interest and become active in our Association)

"How to Host an AM/PIC", PBCCC – 1C
Presiding: Libbie Johnson, 2022 AM/PIC Co-Chair, Shawn Steed, 2022 AM/PIC Co-Chair

Communications, PBCCC 1J
Presiding: Ron Patterson, Chair

Search for Excellence, PBCCC - 1K
Presiding: Linda McClanahan, Chair

Professional Excellence, PBCCC - 1L
Presiding: Nick Simmons, Chair

Public Relations & Agricultural Awareness, PBCCC – 1D
Presiding: Tyrone Fisher, Chair

Recognition & Awards, PBCCC - 1A
Presiding: Joni Ross Harper, Chair

Scholarship, Hilton, Coral B
Presiding: Stephen Hadcock, Chair

4-H & Youth Programming, PBCCC – 1E
Presiding: Brittany Council-Morton, Chair

Agronomy & Pest Management, PBCCC- 2A,
Presiding: Ted Wiseman, Chair

Ag Economics & Community Development, Hilton Coral E,
Presiding: Amanda Smith, Chair

MONDAY, JULY 18

MEMBER

Animal Science, PBCCC – 1B
Presiding: Mark Heitstuman, Chair

Horticulture and Turf Grass, PBCCC - 2C
Presiding: Cyndi Lauderdale, Chair

Natural Resources/Aquaculture, PBCCC - 2B,
Presiding: Jody Gale, Chair

Sustainable Agriculture, PBCCC- 2D
Presiding: Laura Miller, Chair

Agricultural Issues, PBCCC - 2E
Presiding: Katie Wantoch, Chair

Early Career Development, PBCCC - 2F
Presiding: Danny Lauderdale, Chair

Leadership and Administrative Skills,
Hilton – Coral A
Presiding: Nichole Thompson, Chair

Teaching & Educational Technologies,
Hilton – Coral D
Presiding: Colt Knight, Chair

1:30 pm - 3:00 pm **LIFE MEMBERS BUSINESS MEETING,**
Hilton- Coral C
Presiding: Paul Craig, National Chair

2:30 pm - 3:00 pm **BREAK,** - Hilton near Oceana Pre-Ballroom
Courtesy: The Agricultural Extension Associations from the 13 Southern Region States

3:00 pm - 5:00 pm **REGIONAL MEETINGS & CANDIDATE PRESENTATIONS,**
SOUTHERN Region, Hilton Oceana B
NORTH CENTRAL Region, Hilton Oceana A
NORTHEAST Region, Hilton Oceana D
WESTERN Region, Hilton Oceana C

4:00 pm - 9:00 pm **MICROSOFT BEACH PARTY & DINNER**
Buses depart from the Convention Center outside of Exhibit Hall B near the Parking Garage.

MONDAY, JULY 18

9:00 pm - 10:30 pm **HOSPITALITY ROOMS,**
Hilton Hotel
Rooms 1040, 1046, 1140, 1146

10:00 pm **FLORIDA AM/PIC COMMITTEE MEETING,**
PBCCC - 1F

MEMBER

TUESDAY, JULY 19

7:00 am - 8:30 am **ACHIEVEMENT AWARD RECOGNITION BREAKFAST,** Hilton Oceana D
Presiding: Joni Ross Harper, Recognition & Awards Committee Chair
Courtesy: American Income Life Insurance Company (Invitation Only)

8:00 am - 2:00 pm **REGISTRATION & SCHOLARSHIP AUCTION DROP OFF,** PBCCC – North Lobby

8:00 am - 8:30 am **COFFEE BREAK**
PBCCC Hall A
Courtesy: Agricultural Extension Associations from the 13 Southern Region States

8:30 am - 11:30 am **DELEGATE SESSION,**
Hilton Oceana A
- Presiding: Dr. Bill Burdine, NACAA President
- Inspirational Thoughts – Melody Rose, Southern Region Director
- Delegate Roll Call
- Adoption of Agenda
- Appointment of Parliamentarian
- 2021 Delegate Session Minutes
- Nominating Committee Report
- Election of Officers
- Selection of 2026 AM/PIC Site
- Scholarship Committee Report
- NACAA Foundation Report
- Treasurer's Report
- Adoption of 2023 Budget
- Confirmation of Committee Appointments
- New Business
- Confirmation of Directors/Vice Directors
- Recognition of Retiring Officers
- Installation of Incoming Officers, Directors, and Vice Directors
- Remarks: Phil Durst, President-Elect

TUESDAY, JULY 19

MEMBER

8:30 am - 11:30 am **EXTENSION DEVELOPMENT COUNCIL SEMINARS**

8:30 am - 11:00 am **LEADERSHIP & ADMINISTRATIVE SKILLS SEMINARS,** PBCCC - 2D
Presiding: Nicole Thompson, Chair

8:30 am - 9:00 am
Don't Lose Your Marbles-Refocusing Your Priorities
Presenter: Lee Beers

9:00 am - 9:30 am:
Extension Retreats: Building Synergy, Collaboration, and Fun
Presenter: Nicholas Simmons

9:30 am – 10:00 am
Beyond Organizations: New Models for Getting Things Done
Presenter: Mark Platten

10:00 am – 10:30 am:
One Size Does NOT Fit All: Engaging Diverse Stakeholders through Varied Impact Communication
Presenters: Blake Carter, Robyn Stewart

10:30 am – 11:00 am:
Introducing the New Journal of Extension via Clemson University Press
Presenters: Tom Dobbins, Drew Griffen, Stephen Brown, Melody Rose

8:30 am - 11:30 am **EARLY CAREER DEVELOPMENT SEMINARS,**
PBCCC - 1J
Presiding: Danny Lauderdale, Chair and Heather Schlesser, Vice Chair

8:30 am - 9:00 am:
Onboarding of Agricultural Agents
Presenter: Marcelo Wallau

9:00 am - 9:30 am:
Getting to Nationals: How to Develop and Submit Award Worthy Content
Presenter: Alicia Halbritter

TUESDAY, JULY 19

MEMBER

9:30 am - 10:00 am:
Growing Expertise and Leadership in Early Career Professionals via Collaborative Team Efforts
Presenter: Laine McGee

10:00 am - 10:30 am
Extension Provides Value to Municipal Funding Partners through Collaborative Programs
Presenter: Yvette Goodiel

10:30 am - 11:00 am
Benefits of and Reflections on Extension Credentialing Program for Inmates
Presenter: Yvette Goodiel

11:00 am - 11:30 am
Publishing an Article in the Journal of Extension
Presenter: Donald Llewellyn

8:30 am - 11:30 am **TEACHING & EDUCATIONAL TECHNOLOGIES SEMINARS**
PBCCC - 1L
Presiding: Kelly McGowan and David Yates, Vice Chairs

8:30 am - 9:00 am:
Maine Farm News
Presenter: Donna Coffin

9:00 am - 9:30 am:
Showcasing Applied Poultry Research with the Public in Real Time Using Social Media
Presenter: Madison Philbrick

9:30 am - 10:00 am:
So You Want to Farm in Maine? Using Brightspace
Presenters: Donna Coffin

10:00 am - 10:30 am
The Story of an Online OPUS: Orchestrating a Master Gardener Program to a Canvas Course Management Site
Presenter: Madeline Flahive DiNardo

TUESDAY, JULY 19

MEMBER

10:30 am - 11:00 am:
Outcomes for In-Person vs. Virtual Drone Preparation Courses
Presenter: Kalan Taylor

11:00 am - 11:30 am:
CropsTV: A New Way of Delivering Agronomic Research-Based Information to Producers
Presenter: Rebecca Vittetoe

8:30 am - 11:00 am **AGRICULTURAL ISSUES SEMINARS**
PBCCC - 1E
Presiding: Cassie Yost - Chair,
Elena Rogers - Vice Chair

8:30 am - 9:00 am:
Reducing Employee and Environmental Risk with For-Hire Manure Applicators
Presenter: Jerry Clark

9:00 am - 9:30 am:
Learning by Doing at the Produce Handling Facility in Mills River
Presenter: Elena Rogers

9:30 am - 10:00 am:
What Comes After the PSA Grower Training? Continuing Fresh Produce Food Safety Education in Virginia
Presenter: Sarah Sharpe

10:00 am - 10:30 am
Beers & Steers: Bridging the Knowledge Gap with Common Interests
Presenter: Alicia Halbritter

10:30 am - 11:00 am:
Climate Resilient Small Farms in North Carolina
Presenting: Mark Blevins

11:00 am - 11:30 am:
Southeast Dairy Stewardship Program
Presenting: Colleen C. Larson

TUESDAY, JULY 19

MEMBER

8:30 am - 11:30 am **PROFESSIONAL IMPROVEMENT COUNCIL SEMINARS**

8:30 am - 11:30 am **4-H & Youth**
PBCCC – 1A
Presiding: Donna Aufdenberg, Brittany A. Council-Morton, Shannon Porter-Dill, Heather Jennings, Kali Benson

8:30 am - 9:00 am:
Engaging Youth as Consumers at Farmers' Market
Presenter: Amanda Bennett

9:00 am - 9:30 am:
Youth learn about beef production during agriculture week educational sessions
Presenter: Shannon Williams

9:30 am - 10:00 am:
Creating Independent School Gardens
Presenter: Mariah Simoneaux

10:00 am - 10:30 am
The 4-H Breakfast Club: Developing a Successful Livestock Project for Underserved Audiences
Presenter: Melissa Beerman

10:30 am - 11:00 am:
Farm to Plate, We Educate
Presenter: Lauren Butler

11:00 am - 11:30 am:
Ag Explore: Ag Career Boot Camp
Presenter: Jan Yingling

8:30 am – 11:30 am **ANIMAL SCIENCE**
PBCCC - 2C
Presiding: Mark Heitstuman, Betsy Greene, Martin Mangual, Andrew Sandeen

8:30 - 9:00 am:
Preparing Livestock Producers for a Foreign Animal Disease. Presenter
Presenter: David Stender

TUESDAY, JULY 19

MEMBER

9:00 - 9:30 am:
Hybrid Equine Program Combines Online and In Person Teaching to Target Behavior Changes in Cental Florida Horse Owners
Presenter: Caitlin Bainum

9:30 - 10:00 am:
Pandemic Ponies: Educating New Horse Owners During COVID-19
Presenter: Laura Kenny

10:00 - 10:30 am:
Environmental Lands Management Using Cattle Grazing
Presenter: Laura Bennett

10:30 - 11:00 am:
Beef Quality Assurance in Iowa Increasing Producer Profits
Presenter: Denise Schwab

11:00 - 11:30 am:
2021 Maine Pastured Turkey Project
Presenter: Colt Knight & Madison Philbrick

8:30 am - 11:30 am **AG ECONOMICS & COMMUNITY DEVELOPMENT**
PBCCC – 1K
Presiding: Amanda Smith, Madeline Schults, Chris Prevatt & Bill Shockey

8:30 - 9:00 am:
Farm Pulse Financial Management – Adapting Curriculum for Online Learners
Presenter: Katie Wantoch

9:00 - 9:30 am -
Certifying Financial Literacy for Iowa USDA/FSA Borrowers
Presenter: Patrick Hatting

9:30 - 10:00 am:
Marketing for Ag Producers 2021
Presenter: Brooklyne Wassel

TUESDAY, JULY 19

MEMBER

10:00 - 10:30 am:
Building Market Resiliency in Iowa Through Advanced Grain Marketing Courses for Women
Presenter: Madeline Schults

10:30 - 11:00 am:
Master Agri-manager Workshop Series
Presenter: Blake Carter

11:00 - 11:30 am:
Iowa Farmland Leasing Meetings Resonate
Presenter: Kevin Leibold

8:30 am - 11:30 am: **AGRONOMY & PEST MANAGEMENT I**
PBCCC - 2E
Presiding: Steve Van Vleet

8:30 - 9:00 am:
Taking Pesticide Safety Education & Soil Test Interpretation Online in the North
Presenter: Casey Matney

9:00 - 9:30 am:
Expanding Pesticide Programming Through Partnership with Florida Farm Bureau
Presenter: Danielle Sprague

9:30 - 10:00 am:
Crops for Kids
Presenter: Jan Yingling

10:00 - 10:30 am:
The Journey from an Epidemic to Success
Presenter: Mohamed Khan

10:30 - 11:00 am:
Agricultural Row Crops & Private Applicator Pesticide Courses in Alachua County, FL
Presenter: Kevin Korus

11:00 - 11:30 am:
Spray Rodeo Day: Teaching Spray Equipment Calibration & Pesticide Safety
Presenter: Matthew VanWeelden

TUESDAY, JULY 19

MEMBER

8:30 am - 10:00 am: **AGRONOMY & PEST MANAGEMENT II**
PBCCC - 2F
Presiding: Travis Harper

8:30-9:00 am
Characterization of Heat Stress Effects on Cotton Production in the Low Deserts of Arizona
Presenter: Blasé Evancho

9:00-9:30 am
Corn Rootworm Demonstration Plot: Evaluating the Effectiveness of Corn Root Management Strategies
Presenter: Rebecca Vittetoe

9:30-10:00 a.m.
Assisting Grain Corn Producers with Variety Selection in North Florida
Presenter: Keith Wynn

8:30 am - 11:30 am **HORTICULTURE & TURFGRASS I**
PBCCC - 2A
Presiding: Kate Kammler

8:30 - 9:00 am:
Garden in a Bag
Presenter: Kalyn Waters

9:00 - 9:30 am:
Free Senior Center Farmers' Markets During COVID-19
Presenter: Katie Wagner

9:30 - 10:00 am:
Home Vegetable Gardening Webinar Series
Presenter: Kate Kammler

10:00 - 10:30 am:
Harvest for Health: Home Vegetable Gardening Intervention Among Older Cancer Survivors
Presenter: Lucy Edwards

10:30 - 11:00 am:
Work Smarter, Not Harder to Report Impacts
Presenter: Michelle Atkinson

TUESDAY, JULY 19

11:00 - 11:30 am:
The 9-Days of Florida-Friendly Landscaping™ Social Media Marketing Campaign
Presenter: Norma Samuel

MEMBER

8:30 am - 11:30 am: **HORTICULTURE & TURFGRASS II**
PBCCC - 2B
Presiding: Julie Kikkert & Timothy Daly

8:30 - 9:00 am:
Tri-County Pecan Demonstration
Presenter: Kyle Sanders

9:00 - 9:30 am:
Phytophithora of Conifers-New Agents Novel Approaches Against an Old Enemy
Presenter: Timothy Waller

9:30 - 10:00 am:
Hubbard Squash Trap Crop as an 'Attract & Kill' IPM Strategy to Reduce Cucumber beetles and Squash Bugs
Presenter: Ayanava Majumdar

10:00 - 10:30 am:
Connecting Producers in North Florida to Citrus Programming
Presenter: Danielle Sprague

10:30 - 11:00 am:
The Art & Science of the Pest Predictive Calendar
Presenter: Ginny Rosenkranz

11:00 - 11:30 am:
Walk in the Shoes of a Florida Farmer
Presenter: Karen Stauderman

8:30 am - 11:00 am **NATURAL RESOURCES/AQUACULTURE**
PBCCC - 1D
Presiding: Jody A. Gale & Justin Mansberger

8:30-9:00 am:
Naturalist Series
Presenter: Eric Barrett

TUESDAY, JULY 19

MEMBER

9:00 - 9:30 am:
Extension Programming to Encourage Responsible Stewardship of New Jersey's Marine Resources
Presenter: Douglas Zemeckis

9:30 - 10:00 am:
Recycling Program Material on Social Media to Promote Recycling
Presenter: Steven Yergeau

10:00 - 10:30 am:
Pike County Adopt-a-Stream Teaches Water Education, Conservation, & Community
Presenter: Brooklyne Wassel

10:30 - 11:00 am:
Nature Journaling to Improve Environmental Observation & Identification Skills
Presenter: Krista Stump

8:30 am - 11:00 am **SUSTAINABLE AGRICULTURE I**
PBCCC – 1B
Presiding: Patrick Byers & Katie Wagner

8:30-9:00 am
Growing Baby Ginger in Moveable Caterpillar Tunnels
Presenter: William Errickson

9:00-9:30 am
Building Capacity in Climate Change Adaption Practices
Presenter: Ellen Mallory

9:30-10:00 am
Using Face-to-Face Tours to Provide Education & Awareness to Sustainable Agriculture
Presenter: Gary Lesoing

10:00-10:30 am
Sustainable Urban Food Production in Fort Lauderdale, FL
Presenter: Lorna Bravo

TUESDAY, JULY 19

10:30-11:00 am
Comparative Study of Yield, Production Cost & Water Use for Producer Managed Furrow Irrigation in Clay County Arkansas
Presenter: Stewart Runsick

MEMBER

11:00-11:30 am
Carbon Markets: Factors and Concerns Preventing Farmer Enrollment
Presenter: Michael Estadt

8:30 am - 10:30 am **SUSTAINABLE AGRICULTURE II**
PBCCC - 1C
Presiding: Laura Miller

8:30-9:00 am:
Passion Fruit: An Alternative Crop for Florida
Presenter: Mark Bailey

9:00 - 9:30 am:
Stark Sustainable Soil Initiative
Presenter: Heather Neikirk

9:30 - 10:00 am:
Meet the Meat
Presenter: Brittany Demezier

10:00 - 10:30 am:
The Ten Mistakes All New Bee Keepers Make
Presenter: Keith Fielder

9:00 pm - 4:00 pm **COMMERCIAL EXHIBIT TRADE SHOW, EDUCATIONAL EXHIBITS, AND NACAA POSTER SESSION DISPLAY - OPEN,**
PBCCC, Exhibit Hall A

11:45 am - 1:15 pm **COMMUNICATION/POSTER AWARDS LUNCHEON,** PBCCC – Ballroom AB
Presiding: Ron Patterson, Communications Chair and Nicholas Simmons, Professional Excellence Chair
Courtesy: NACAA & FACAA (Invitation Only)

TUESDAY, JULY 19

MEMBER

11:45 am - 1:15 pm **SEARCH FOR EXCELLENCE IN LIVESTOCK PRODUCTION PROGRAM,** PBCCC - 2EF
Presiding: Amber Yutzy, SFE Vice-Chair
Presenting: Miranda Meehan and Team (ND)
Program: Livestock Water Quality Program
Courtesy: National Pork Board (Ticket Required)

11:45 am - 1:15 pm **SEARCH FOR EXCELLENCE IN YOUNG, BEGINNING OR SMALL FARMS/RANCHER PROGRAM,** PBCCC - 1E
Presiding: Linda McClanahan, SFE National Chair
Presenting: Bonnie Hopkins Byers (NM)
Program: Growing Forward Farm
Courtesy: Farm Credit (Ticket Required)

11:45 am - 1:15 pm **SEARCH FOR EXCELLENCE IN ENVIRONMENTAL QUALITY, FORESTRY & NATURAL RESOURCES,** PBCCC - 1F
Presiding: Chris Zoller, SFE Vice-Chair
Presenting: Danielle Rhea (PA)
Program: Penn State Extension Backyard Stream Repair Program
Courtesy: NACAA (Ticket Required)

11:45 am - 1:15 pm **SEARCH FOR EXCELLENCE IN SUSTAINABLE AGRICULTURE,** PBCCC - 2D
Presiding: Jesse Fulbright, SFE Committee Region Vice-Chair
Presenting: Jennifer Patterson (OK)
Program: Adair County Annual Pasture Tour
Courtesy: NACAA (Ticket Required)

11:45 am - **EDUCATIONAL LUNCHEON – EXPERTISE IN SPECIALTY CROPS,** PBCCC - Ballroom C
Presiding: Liz Felter, UF/IFAS RSA
Presenting: Wendy Mussoline, Vanessa Vassilaros, Hannah Wooten, Kevin Athearn, and Shawn Steed
Courtesy: UF Extension (FACAA) (Ticket Required)

2:00 pm - 6:00 pm **COMMERCIAL EXHIBITS CLOSE AND TAKE DOWN,** PBCCC – Exhibit Hall A

1:30 pm - 4:30 pm **EXTENSION DEVELOPMENT COUNCIL SEMINARS**

TUESDAY, JULY 19

MEMBER

1:30 pm - 3:00 pm **LEADERSHIP AND ADMINSTRATIVE SKILLS**
PBCCC - 2D
Presiding: Nicole Thompson, Chair

1:30 pm - 2:00 pm:
Engaging Internationally to Make Impact Locally
Presenter: Norma Samuel

2:00 pm - 2:30 pm:
Inclusion, Diversity, Equitability, and Accessibility (IDEA) in Youth Development Programming Presenters: Vanessa Spero, Noelle Guay, Kimberly Richardson

2:30 pm - 3:00 pm
IDEA Panel Discussion
Panelists: Vanessa Spero, Noelle Guay, Dr. John Diaz, Laura Valencia

1:30 pm - 4:30 pm **EARLY CAREER DEVELOPMENT SEMINARS,**
PBCCC - 1J
Presiding: Ashley Wright and Tim Waller, Vice Chairs

1:30 pm - 2:00 pm:
A New Approach to Onboarding Ag and Natural Resources Extension Staff
Presenter: Erica Lyon

2:00 pm - 2:30 pm
Animal Sciences Graduate Student Mentorship: Extension and Academics Working Together
Presenter: Don Llewellyn

2:30 pm - 3:00 pm
Motivational Interviewing as a Tool to Address Farm Stress and Difficult Conversations
Presenter: Katie Wantoch

3:00 pm - 3:30 pm
Hosting a Successful Formal Meeting with an Agenda or PowerPoints
Presenter: Kalyn Waters

3:30 pm - 4:00 pm
Partnerships and Collaborations: Taking Your Job from Good to Better to Best
Presenter: Amy Stone

TUESDAY, JULY 19

MEMBER

4:00 pm - 4:30 pm
Peer to Peer Training for County Agents in Arkansas
Presenter: Sherri Sanders

1:30 pm - 4:30 pm **TEACHING AND EDUCATIONAL TECHNOLOGIES SEMINARS,** PBCCC - 1L
Presiding: Colt Knight – Chair
Scott Duggan – Vice Chair

1:30 pm - 2:00 pm:
Radio & Podcasts: Production, Reach, & Impact
Presenter: Karen Cox

2:00 pm - 2:30 pm
Social Media-Based Virtual Events and Evaluation System for Commercial Horticulture Extension Programs During the Pandemic
Presenter: Ayanava Majumdar

2:30 pm - 3:00 pm
Education and Conservation Through Conversation: The Art of Range Podcast
Presenter: Tipton Hudson

3:00 pm - 3:30 pm
Multi-Stage Engagement of Producers in On-Farm Research
Presenter: Rob Leeds

3:30 pm - 4:00 pm
You Had How Many Registrants? How to Leverage Canva and Facebook Groups to Expand the Marketing Capacity and Scope of Your Extension Programming
Presenter: Robyn Stewart

4:00 pm - 4:30 pm
Using Facebook Live for Producer Education: A Review of Four Years of Implementation
Presenter: Kalyn Waters

TUESDAY, JULY 19

1:30 pm - 4:30 pm **AGRICULTURAL ISSUES SEMINARS**
PBCCC - 1E
Presiding: Katie Wantoch - Chair MJ Fisher – Vice Chair

MEMBER

1:30 pm - 2:00 pm:
Support for Mental Health as a Production Tool in Farming: An Ambiguous Loss Perspective
Presenter: Emily Krekelberg
2:00 pm - 2:30 pm
Integrating Mental Health Discussions into Agricultural Programming
Presenter: Tim Christensen

2:30 pm - 3:00 pm
Meeting the Needs for On-Line and In-Person Pesticide Recertification Training During the COVID-19 Pandemic
Presenter: Mark Heitstuman

3:00 pm - 3:30 pm
Educating Federal Land Grazing Permit Holders in Utah's Piute and Wayne Counties
Presenter: Trent Wilde

3:30 pm - 4:00 pm
Farm Stress: Perceptions of Agricultural Agents and Farmers
Presenter: Alex Deason

4:00 pm - 4:30 pm
Hope on the Farm: A Farm Stress Film Series Preview
Presenter: Alex Deason

1:30 pm - 4:30 pm **PROFESSIONAL IMPROVEMENT COUNCIL SEMINARS,**

1:30 pm - 2:00 pm **4-H & YOUTH**
PBCCC - 1A
Presiding: Donna Aufdenberg, Brittany A. Council-Morton, Shannon Porter-Dill, Heather Jennings, Kali Benson

1:30 pm – 2:00 pm:
Green Thumb Club – Urban Gardening After School Program
Presenter: Sarah DeBour

TUESDAY, JULY 19

MEMBER

1:30 pm - 4:30 pm **AG ECONOMICS AND COMMUNITY DEVELOPMENT**
PBCCC – 1K
Presiding: Amanda Smith, Madeline Schultz, Chris Prevatt & Bill Shockey

1:30 - 2:00 pm:
Dairy Gauge Initiative Southeastern Dairy Benchmarking Program
Presenter: David Bilderback

2:00 - 2:30 pm:
Creating Cost of Production Budgets, it's as Easy as ABC with the Ag Budget Calculator
Presenter: Glennis McClure

2:30 - 3:00 pm:
Revitalizing a Community Famers Market to Enhance Access to Locally Grown
Presenter: Paul Pugliese

3:00 - 3:30 pm:
Urban Agriculture Workshops for Urban Producers.
Presenter: Hannah Wotton

3:30 - 4:00 pm:
Agritourism: Community & Economic Impacts
Presenter: Kenzie Johnston

4:00 - 4:30 pm:
Agriculture and the Rise of Food Entrepreneurship. Presenter: Jessica Sullivan

1:30 pm - 4:30 pm **AGRONOMY AND PEST MANAGEMENT**
PBCCC – 2EF
Presiding: Andrew Kness & Ted Wiseman

1:30 - 2:00 pm:
Helping Peanut Producers Optimize Harvest Timing with the aGDD Tracker
Presenter: Mark Mauldin

2:00 - 2:30 pm:
Edutainment, Fun Pesticide Safety Education Program
Presenter: Genevieve Christ

TUESDAY, JULY 19

2:30 - 3:00 pm:
Alabama Bermudagrass Hay Growers Summit Targets Advanced Producers
Presenter: Kent Stanford

MEMBER

3:00 - 3:30 pm:
Assessing and Improving Nitrogen Management in Wheat
Presenter: Aaron Esser

3:30 - 4:00 pm:
Manure Incorporation: A Nutrient Management Tool in the Chesapeake Bay Watershed
Presenter: Leon Ressler

4:00 - 4:30 pm:
Increasing Effectiveness of Regional Pest & Disease Monitoring Through Collaborative Initiatives
Presenter: Craig Frey

1:30 pm - 4:30 pm **ANIMAL SCIENCE**
PBCCC - 2C
Presiding: Mark Heitstuman, Betsy Greene, Martin Mangual, Andrew Sandeen

1:30 - 2:00 pm:
Annual Forage Growth in Iowa
Presenter: Denise Schwab

2:00 - 2:30 pm:
Providing Education to Western Sheep and Goat Producers. Presenter: Carmen Willmore

2:30 - 3:00 pm:
Starting an Artificial Insemination Clinic for Cattle Producers in Southern Arizona
Presenter: Ashley Wright

3:00 pm - 3:30 pm:
Finding the Ideal Cow for Idaho Rangelands
Presenter: Scott Jensen

TUESDAY, JULY 19

MEMBER

1:30 pm - 4:00 pm **HORTICULTURE AND TURFGRASS I**
PBCCC - 2A
Presiding: Cyndi Lauderdale & Timothy Daly

1:30 - 2:00 pm:
The Importance of Horticulture in Bible College Curriculum
Presenter: Stephen Brown

2:00 - 2:30 pm:
Horticulture Career Preparation Training in Arkansas Prisons
Presenter: Sherri Sanders

2:30 - 3:00 pm:
Getting the Most out of Master Gardener Training
Presenter: Sara Rutherford

3:00 pm - 3:30 pm:
Master Gardener Volunteers- Restructuring County Model
Presenter: Lee Beers

3:30 - 4:00 pm:
Successful Virtual Extension Horticulture Programming for Homeowners
Presenter: Timothy Daly

1:30 pm - 2:30 pm **HORTICULTURE AND TURFGRASS II**
PBCCC - 2B
Presiding: Linda Chalker-Scott

1:30 - 2:00 pm:
Tree Care Myth-Busting: Pruning
Presenter: Linda Chalker-Scott

2:00 - 2:30 pm:
All in for Arboriculture: From Need to Professional Development to Extension Program
Presenter: Bonnie Wells

TUESDAY, JULY 19

1:30 pm - 4:30 pm **NATURAL RESOURCES/AQUACULTURE I**
PBCCC – 1D
Presiding: Lindy Berg, Ross Overstreet, & Shannon Williams

MEMBER

1:30 - 2:00 pm:
Helping Ponds & People with Healthy Ponds Certification Program
Presenter: Michelle Atkinson

2:00 - 2:30 pm:
Teaching Producers How to Effectively Control Feral Hogs
Presenter: Terrell Davis

2:30 - 3:00 pm:
Congressional Natural Resource Briefing in Utah
Presenter: Jody Gale
3:00 pm - 3:30 pm:
Utah's Range & Natural Resource Camp, Influencing Participants to Select Land Management Careers
Presenter: Dr. Randal Violett

3:30 - 4:00 pm:
Biochar Demonstration Kiln
Presenter: Christopher Jones

4:00 - 4:30 pm:
Using GPS Collars to Monitor Wild Horse & Livestock Interaction
Presenter: Kalen Taylor

1:30 pm - 4:30 pm **SUSTAINABLE AGRICULTURE I**
PBCCC – 1B
Presiding: Patrick Byers & Katie Wagner

1:30- 2:00 pm
On-Farm Evaluation of Sorrel (Hibiscus sabdariffa) Varieties for Central Florida Commercial Production
Presenter: Matthew Smith

2:00-2:30 pm
Starting a Farm Education Program for U.S. Military Veterans
Presenters: Iris Mayes

TUESDAY, JULY 19

MEMBER

2:30-3:00 pm
Cascading Waterway: Multiplier Effect of Combining Grassed Waterway & Inline Wetland Basins
Presenter: Bruce Clevenger

3:00-3:30 pm
Sustainable Foodway Programming in Rural Utah Native American Communities
Presenter: Reagan Witsalucy

3:30-4:00 pm
Marketing & Expansion Opportunities with Specialty Sweet Potatoes in Florida
Presenter: Wendy Mussoline

4:00-4:30 pm
Meeting the Needs of Small Acreage Producers Through the Utah Urban & Small Farms Conference
Presenter: Katie Wagner

2:30 pm - 3:00 pm **BREAK** (LEMONADE and Tea)
PBCCC Registration Area. Courtesy of the Agricultural Extension Associations from the 13 Southern Region States

4:30 pm **STATES NIGHT OUT,**
States make own arrangements

7:00 pm **NACAA SCHOLARSHIP SILENT AND LIVE AUCTION PREVIEW,** PBCCC – Grand Ballroom
Cash bar available

8:00 pm **NACAA SCHOLARSHIP LIVE AUCTION,**
PBCCC – Grand Ballroom
Cash bar available

WEDNESDAY, JULY 20

6:30 am - 7:45 am **LIFE MEMBER BREAKFAST,**
PBCCC Ballroom C– Ticket Required

7:00 am - 8:15 am **NATIONAL COMMITTEE MEMBERS BREAKFAST,**
PBCCC - AB
(For all Present & Incoming Committee Members - Ticket Required)
Recognition of Retiring Committee Chairs, Vice Chairs & Special Assignments
Presiding: Keith Mickler, NACAA Vice President, Courtesy: NACAA

WEDNESDAY, JULY 20

8:30 am - 10:00 am **NACAA POLICY MEETING,**
PBCCC - 2D
Presiding: Mike Hogan, NACAA Policy Chair

MEMBER

8:00 am - 2:00 pm **REGISTRATION**
PBCCC – North Lobby

8:30 am - 9:00 am: **Coffee BREAK**
PBCCC Outside Grand Ballroom

9:00 am - 11:00 am **GENERAL SESSION,**
PBCCC - Grand Ballroom
Presiding: Dr. Bill Burdine, NACAA President
- Call to Order
- JCEP Creative Excellence Award Presentation
- State Membership Awards
- Keynote Speaker: Brigadier General Gary Huffman (ret.), Real Leadership is Caring about your People
- To Survive and Thrive: Bill Burdine
- Oklahoma Hat Presentation: Earl Ward
- Looking to the New Year: Phil Durst, NACAA President-Elect
- Announcements: Libbie Johnson & Shawn Steed, 2022 AM/PIC Co-Chairs

11:45 am - 3:30 pm **ADMINISTRATIVE LEADERS LUNCHEON & MEETING,** PBCCC - Ballroom C
Presiding: J. Craig Williams, Past President
Hosted by: UF Extension Administration, Dr. Andra Johnson & Dr. Saqib Mukhtar
(Ticket Required)

11:45 am - 1:10 pm **PIPELINE AG SAFETY ALLIANCE EDUCATIONAL LUNCHEON,**
PBCCC - 2EF
Program: Protecting Our Nations Farms As Well As Our Pipeline Infrastructure
Moderator: Keith Perkins, NACAA Treasurer
Sponsored by: Pipeline Ag Safety Alliance
(Ticket Required)

11:45 am - 1:10 pm **MODERNIZING PRODUCTIVITY: MAKING THE TOOLS WORK FOR YOU – EDUCATIONAL LUNCHEON,** PBCCC – Ballroom AB
Moderators: Kristin Kolodziej, Heather Cox, Joe Gasper & Dewayne Hyatt
Sponsored by: Microsoft (Ticket Required)

WEDNESDAY, JULY 20

MEMBER

11:45 am - 1:10 pm **DELIVERING AMERICA'S BEST ENERGY VALUE – EDUCATIONAL LUNCHEON**
PBCCC – 1DE
Speaker: Sophia Eccleston
Moderator: Christa Kirby
Sponsored by: NextEra (Ticket Required)

1:00 pm - 4:00 pm **ARPAS TESTING, ANIMAL SCIENCE,**
PBCCC - 1B
Moderator: Karl Hoppe, North Central Region Animal Science Committee Vice Chair

1:15 pm - 3:00 pm **SUPER SEMINAR 1 – Sustainable Agriculture**
PBCCC - 1J
Moderator: Laura Miller, Chair
"Reading the Farm"

1:15 pm - 2:45 pm **SUPER SEMINAR 2 – Agricultural Issues**
PBCCC - 2AB
Moderator: Katie Wantoch, Chair
"Adapting Agriculture to a Changing Climate"

1:15 pm - 3:15 pm **SUPER SEMINAR 3 – Horticulture & Turfgrass**
PBCCC - 1L
Moderator: Linda Chalker-Scott, Vice Chair
"Lawn Care Myth-Busting"

1:15 pm - 3:30 pm **SUPER SEMINAR 4 – Florida IT Team**
PBCCC - 1F
Moderators: Dewayne Hyatt & Joe Gasper,
"Delivering Effective Presentations with Power Point in 2022"

1:15 pm - 4:00 pm **SUPER SEMINAR 5 – Teaching & Educational Technology**
PBCCC - 2C
Moderator: Colt Knight, Chair
"Equipment Needs for Professional Extension Videos"

1:15 pm - 4:00 pm **SUPER SEMINAR 6 – Agricultural Economics & Community Development**
PBCCC - 1A
Moderator: Amanda Smith, Chair
"Cultivating Resiliency in Ourselves and Our Clientele"

WEDNESDAY, JULY 20

1:15 pm - 4:30 pm **SUPER SEMINAR 7 – Leadership & Admin Skills**
PBCCC - 1C
Moderator: Nicole Thompson, Chair
"Comprehending Your Leadership Style to Enhance Personal & Professional Growth at the Local Level"

MEMBER

4:00 pm - 5:30 pm **NACAA BOARD RECEPTION,**
Presidential Suite 1238, Hilton, (Invitation only)

4:30 pm - 6:30 pm **FORMAL PICTURE OPPORTUNITY,**
PBCCC – Ballroom Prefunction
(Cash bar available)

5:30 pm - 6:30 pm **DSA & AA RECIPIENTS, HALL OF FAME RECIPIENTS, NACAA BOARD MEMBERS, REGION DIRECTORS, PAST OFFICERS, SPECIAL ASSIGNMENTS, SPECIAL GUESTS, COUNCIL COMMITTEE CHAIRS AND VICE CHAIRS ASSEMBLE FOR BANQUET**
PBCCC – Ballroom Pre function
(Cash bar available)

6:30 pm **ANNUAL BANQUET,**
PBCCC - Ballroom (Ticket Required)

9:30 pm - 10:30 pm **PRESIDENT'S RECEPTION,**
Hilton Manor

THURSDAY, JULY 21

6:15 am - 9:00 am **ASSEMBLE FOR PROFESSIONAL IMPROVEMENT TOURS,** Breakfast will be served in the Courtyard of the Convention Center. Assembly area is the rear of Exhibit Hall A. DEPARTING from Exhibit Hall B rear exit near the Parking Garage

7:00 am - 9:00 am **PROFESSIONAL IMPROVEMENT TOURS**
check your ticket time

4:00 pm - **NON-TOUR PARTICIPANTS - SHUTTLE BUSES TO DINNER AT SOUTH FLORIDA FAIGROUNDS WILL DEPART FROM** PBCCC outside of Exhibit Hall B near the Parking Garage

THURSDAY, JULY 21

MEMBER

4:30 pm - 7:00 pm **THE BEST STEAK YOU EVER HAD, SPONSORED BY THE FLORIDA CATTLEMEN AND FLORIDA FARM BUREAU**
South Florida Fairgrounds

4:00 pm - 9:00 pm Shuttle buses will be running throughout the evening to PBCCC

FRIDAY, JULY 22

8:00 am - 6:00 pm **NACAA BOARD MEETING,**
Hilton Cypress

2022 SERVICE TO AMERICAN/WORLD AGRICULTURE AWARD RECIPIENT

Dr. Robert Kemerait,
Professor and Extension Specialist
UGA Department of Plant Pathology

Dr. Robert Kemerait, a professor of plant pathology at the University of Georgia (UGA), has spent his career at the Coastal Plain Experiment Station in Tifton, where he is an extension specialist responsible for management of diseases affecting agronomic crops. Dr. Kemerait has integrated international programming into every aspect of his work as an extension plant pathologist. It is this passionate dedication to agriculture outside of the U.S., and especially to students and poor farmers in developing countries struggling to provide for their families, which makes Dr. Kemerait deserving of the award.

As a professor at the University of Georgia, Dr. Kemerait is charged with providing extension outreach to agents and farmers for disease and nematode management of peanut, corn, cotton, and soybeans. These crops are planted on approximately 250 million acres annually and UGA Extension agents in well over half of Georgia's 159 counties must be able to effectively address pest management issues that affect them. Twenty years ago, this assignment was shared among three specialists. In addition to Extension agents, Dr. Kemerait has demonstrated extensive and sustained commitment to training graduate students to pursue careers in public service and outreach and to serving the needs of economically challenged farmers in developing countries across the globe.

Previous Recognitions Presented to Dr. Kemerait
In 2015, Kemerait was named a Fellow in the American Peanut Research and Education Society. This honor is bestowed on those who have made "outstanding contributions in an area of

specialization whether in research, Extension or administration and whether in public, commercial or private service activities." In 2016, Kemerait received the "Peanut Research and Education Award" from the American Peanut Council, national recognition for sustained and significant contributions to the peanut industry. In 2017, Kemerait was presented with a Plaque of Appreciation by the President of Benguet State University, Republic of the Philippines, for his role as invited plenary speaker at the 1st International Conference on Food, Environment and Culture. In 2017, Dr. Kemerait was selected to serve as a board member in the Office of International Programs in the American Phytopathological Society. In 2018, Dr. Kemerait became the first nonFilipino to be elected to the Philippine Phytopathological Society Board of Directors. In 2019 Dr. Kemerait received the Research-Extension Award from the Georgia-Florida Soybean Producers Association for the second time.

Dr. Kemerait's Support of Extension agents
UGA Extension has undergone significant changes since 2013, most notably the retirement of many senior agents who have been steadily replaced by young agents with great enthusiasm but often little experience. Dr. Kemerait passionately believes that one of the most important aspects of his career is to mentor these agents, new to the system or otherwise, through his position as an Extension plant pathologist and professor at the University of Georgia. Since 2013, he has developed and conducted inservice trainings in each of the four districts to prepare agents for issues they will face with growers and homeowners regarding disease diagnosis and disease management. He has also developed a lecture, "How to survive your first troubleshooting visits without feeling like an idiot" which is presented multiple times in different districts as a part of "new agent training". Kemerait sends frequent updates to the agents through email and Twitter to ensure that they have the information they need to have the confidence to do their job.

Dr. Kemerait takes great pride in the UGA ANR Extension agents and collaborates closely with them to assist in their professional development and also their recognition on state, regional, and national levels. Every year, Dr. Kemerait works with agents to develop, plan, establish, rate and harvest disease and nematode management trials appropriate both for the growers in their county and for presentations at professional meetings. He assists in defining objectives, acquiring needed seed and agrichemicals, establishing treatments and experimental design, rating for disease severity, and collection of yield at harvest. Dr. Kemerait also assists in statistical analysis of the data and with review of publications and presentations for professional meetings.

In addition to the information the agents acquire from these collaborative research projects that can help to improve management recommendations for growers, these efforts are also important for professional development through formal oral and poster presentations. As a sample, for the period from 2014 to 2019, UGA ANR agents reported at least 11 oral presentations and at least 19 poster presentations that included Dr. Kemerait as a co-author, based upon collaborative, on-farm field trials. Presentations were made at state, regional and national meetings and are critically important for success in the promotion process.Dr. Kemerait strives to provide leadership to all county agents in the UGA Extension for improved management of diseases and nematodes affecting

agronomic crops in Georgia, especially when previously unknown situations arrive. In 2015, bacterial blight, a disease of cotton until recently of minimal significance in Georgia become of tremendous concern to cotton farmers in the state. The cause of the increase was primarily the introduction of new, more susceptible varieties. However, the reemergence of this disease coupled with the possibility that contaminated seed was the reason for the issue led to fear-mongering by some and unnecessarily extreme concern by some farmers. Dr. Kemerait assumed leadership of the situation and worked closely with researchers and Extension specialists in other states to both better understand the reasons for the new outbreak and to provide growers with answers for management. Kemerait also included UGA Extension agents and other specialists in his efforts. He played a significant role in the development of Extension material for growers and presented at multiple meeting both on the reality of bacterial blight and on the management options. By the 2017 season, growers have become much more comfortable with the reality of the disease and with management options available to them. In 2018, the presence of the Cotton Leaf Roll Dwarf Virus was confirmed in Georgia's cotton crop. Again, Dr. Kemerait has teamed with colleagues on the UGA Cotton Team, Auburn University, and other public institutions to address this issue through meetings, e-mails and newsletters and to keep our UGA ANR agents informed in current developments.

International Work: Dr. Kemerait's Heart
Dr. Kemerait is deeply committed to helping those less fortunate around the world and it was, in large part, this passion which led him to a career in plant pathology. He has been actively engaged in international programs, working to improve the lives of poor and impoverished farmers and their families, especially in the Philippines and in Haiti. Prior to that, he worked for years on a USAID CRSP project in Guyana. Haiti and Guyana are two of poorest countries in the Americas and the Philippines is one of the poorest in Asia. Today, Kemerait is the only member of that original Peanut CRSP project from the University of Georgia still participating in USAID programs. Dr. Kemerait has been an integral part of these programs, serving as the co-PI from the University of Georgia. In total, work in Guyana (2001-2012) was funded for $950,000, work in Haiti (2007-2017) was funded for $1,000,000, and work in the Philippines was funded for $180,000. Dr. Kemerait has been a leader and essential part of all of these projects funded by USAID since their inception.

Conclusion
In conclusion, although Dr. Kemerait is assigned as an extension specialist domestically, his passion and dedication to the farmers, students, agricultural professionals, and families in developing countries is evident in every aspect of his program. From training graduate students and farmers to conducting applied research and producing Extension materials, he is absolutely dedicated to the welfare and future of those domestically andin the developing world. His efforts demonstrate that the difference one makes has less to do with where one lives and all to do with the passion and creativity used to address the challenges faced by farmers throughout the world.

2022 AM/PIC SPEAKER PROFILES

Dr. Jewel Bronaugh, U.S. Deputy Secretary of Agriculture, will be a speaker at the NACAA AM/PIC in West Palm Beach, Florida July 17 – 22, 2022. Dr. Bronaugh's professional roots have been in agriculture, nourished with a firm foundation of Cooperative Extension. Before joining the USDA, Dr. Bronaugh was the 16th Commissioner of the Virginia Department of Agriculture and Consumer Services (VDACS). She previously served as the Virginia State Executive Director for the USDA Farm Service Agency (FSA) in July 2015. Preceding her FSA appointment, she served as Dean of the College of Agriculture at Virginia State University (VSU) with oversight of Extension, Research and Academic Programs. Formerly, she was the Associate Administrator for Extension Programs and a 4-H Extension Specialist.

In the spring 2019, Dr. Bronaugh launched the Virginia Farmer Stress Task Force to raise awareness and coordinate resources to address farmer stress and mental health challenges in Virginia. This network continues to ensure state's farmers recognize the importance of mental health and have the necessary tools and support available to them before. In the fall of 2020, she helped establish the Virginia Food Access Investment Fund and Program, the first statewide program of its kind to address food access within historically marginalized communities.

Dr. Bronaugh has spent a lot of time with farmers, ranchers, and forestland owners in her career. She is motivated and inspired by their optimism even when the current road and road ahead is challenging. She is an advocate for all customers and stakeholders who rely on the USDA daily.

Dr. Bronaugh received her Ph.D. in Career and Technical Education from Virginia Tech. She is passionate about the advancement of youth leadership in agriculture. Dr. Bronaugh is from Petersburg, Virginia. She is married to Cleavon, a retired United States Army Veteran.

2022 AM/PIC SPEAKER PROFILES

Brigadier General Gary Huffman was the Deputy Senior Military Representative/ Chief, North Atlantic Treaty Organization Advisory Team, Sarajevo. General Huffman was responsible for leading a joint international military and civilian staff that conducted strategic level defense and security sector reform. Primary responsibilities included: Commander of Camp Butmir, Senior United States Officer/Military in the Balkans Area for the North Atlantic Treaty Organization, daily interaction with the Ministry of Defense and Joint Staff of the Armed Forces of Bosnia & Herzegovina, support to European Union Forces Operation ALTHEA, and coordination with multiple international organizations.

General Huffman received his commission through officer candidate school in 1984. He served in various command and staff positions in units at battery, battalion, brigade, and joint force headquarters. He served on active duty in Operation Desert Shield/Desert Storm, and commanded the 2nd Battalion, 2-114th Field Artillery during Operation Iraqi Freedom in 2004 - 2005. Prior to his commission, he served as an enlisted Soldier with the Army Reserve and Mississippi Army National Guard.

Now retired, he spends most of his time on his Mississippi farm. His hobbies include restoring vintage tractors, assisting with the Chickasaw Historical Society and counseling military colleagues both young and old.

This video courtesy of AARP Media Relations, depicts the character of the man rather than the accolades on the uniform.

https://vimeo.com/145468278?embedded=true&source=video_title&owner=40294312

Video courtesy of AARP Media Relations

TRADE TALK SESSION TOPICS:

(Concurrent Sessions held Monday morning, July 18, 2022)

SAFETY/FINANCIAL
PBCCC - 2A
Pipeline Ag Safety Alliance,
Farming Safely Around Utilities
Whether it's installing a new fence, planting a garden, or maintaining a firebreak, every ground disturbing activity has the potential to impact a utility. Join the Pipeline Ag Safety Alliance to learn best practices on preventing damage to buried utilities while keeping land and communities safe and productive. This will be a shortened version of the Luncheon to follow on Wednesday. For more information visit PipelineAgSafetyAlliance.com.

Farm Credit
Jonathon Ray, Chief Financial Officer of Farm Credit of Florida
Topic: A Lender's Perspective on Economic Conditions and Local Challenges

Both borrowers and lenders are becoming concerned about the current economic conditions and a potential recession as they face increasing costs, rising interest rates and declining consumer confidence. These factors, along with specific challenges faced by local producers, serve as key considerations when extending credit.

About Farm Credit of Florida:

Farm Credit of Florida is part of the nationwide Farm Credit system that provides financing for agriculture and farm related businesses. Additionally, Farm Credit specializes in lending for rural land and homes, whether for purchases, refinances improvements or construction. For more information about the types of financing available or how Farm Credit shares its profits with customers, visit farmcredit.com and to learn more about Farm Credit of Florida visit farmcreditFL.com

ANIMAL SCIENCE/CROP SCIENCE/FORAGE/TURF
PBCCC - 2B
Bayer Crop Science
The Bayer R&D Pipeline: The Beginning of What's Next.
Jim Hruskoci, PhD. Crop Protection Technical Development - Bayer CropScience. Increasing global population growth coupled with shrinking land and agricultural resources demands that Bayer must create innovation and an aggressive R&D pipeline of new genetics, products and digital innovations. Bayer's research commitment and R&D investment to agriculture, is second to none. Session attendees with receive an overview of the NEW Bayer CropScience pipeline and will learn what will shape the next decade of Ag Innovations.

National Pork Board
Topics discussed will be on the latest initiative of the National Pork Board and how American agriculture is positively being impacted.

Barenbrug
Got Grass? Want Grass? Barenbrug USA, a division of the Royal Barenbrug Group of the Netherlands, is one of the world's leading grass seed companies. Whether you need grass to feed livestock, grass for sports activities or grass for your personal greenspace we have the variety for you.
Barenbrug has business operations all over every continent of earth, with the exception of Antarctica. With our worldwide presence, we can research and introduce new species and varieties into the North American market that enhance the Barenbrug motto of Safe, Sustainable and Profitable.

INTERNATIONAL PROGRAMS
PBCCC - 2C

Explorations by Thor
Come and discuss travel opportunities with NACAA! Explorations by Thor and NACAA have partnered together to offer a variety of excursions exploring international and domestic farms, culture and culinary experiences. We will also discuss travel in a post Covid environment and open the floor to any questions you might have related to travel.

LIFE MEMBER & SPOUSES PROGRAM 2022 NACAA ANNUAL MEETING

(Spouses are welcome to attend General Sessions and Voting Delegate Session)

SATURDAY, JULY 16

LIFE MEMBER & SPOUSES

3:00 pm - 6:00 pm **REGISTRATION**
PBCCC - North Lobby

SUNDAY, JULY 17

8:00 am- 7:00 pm **REGISTRATION & SCHOLARSHIP AUCTION DROP OFF**, PBCCC - North Lobby

8:00 am - 5:00 pm **LIFE MEMBER & SPOUSES HOSPITALITY ROOM**
Hilton Rosemary

9:00 am - 1:00 pm **COMMERCIAL TRADE SHOW, EDUCATIONAL EXHIBITS, & NACAA POSTER SESSION SETUP,**
PBCCC - Exhibit Hall A,
Coordinator: Nick Simmons, Professional Excellence Chair

12:00 pm - 2:00 pm **PAST NATIONAL OFFICERS & BOARD LUNCHEON**
PBCCC - 2F
Presiding: J Craig Williams, Past President

2:30 pm - 3:30 pm **LIFE MEMBER COMMITTEE MEETING,**
PBCCC North Lobby
Presiding: Paul Craig, Life Member Chair
National Chairs/Vice Chairs of Life Committee

4:00 pm - 4:45 p.m. **STATE PICTURES**
(See schedule in back of program)

4:30 pm - 6:30 pm **WELCOME TO U.S. SUGAR'S FLORIDA DINNER**
PBCCC – Exhibit Hall A (Ticket Required-See ticket for serving time)
Courtesy: NACAA and FACAA

SUNDAY, JULY 17

6:00 pm - 6:45 pm **PARENTS ORIENTATION FOR SONS AND DAUGHTERS PROGRAM,** Hilton Oceana A
Presiding: Tycee Prevatt and Luke Harlow, Florida Chair Sons and Daughters

7:00 pm - 9:00 pm **OPENING SESSION & INSPIRATIONAL PROGRAM,** PBCCC - Grand Ballroom
(Doors Open at 6:30pm)
Presiding: Bill Burdine, NACAA President
- Presentation of Colors: U.S. Naval Sea Cadet Corps
- Pledge of Allegiance and 4-H Pledge: Wolfgang Oschmann
- National Anthem and "God Bless America": Mercedes Nodarse
- Presentation of State Flags: Kevin Korus
- Introduction of Keynote Speakers: Daniel Leonard
- Welcome: Dr. Scott Angle, UF/IFAS Senior VP
- Speakers: Dr. Andra Johnson, Dean of Extension, UF/IFAS and Vonda Richardson, Associate Director, FAMU
- Entertainment: Los Sobrinos del Sol
- Announcements: Libbie Johnson & Shawn Steed, 2022 AM/PIC Co-Chairs

LIFE MEMBER & SPOUSES

9:00 pm - 10:00 p.m. **STATE PICTURES**
(See schedule in back of program)

9:00 pm **ICE CREAM SOCIAL,** PBCCC – Exhibit Hall A
Sponsored by Southeast Milk, Inc. and Florida Dairy Farmers

9:00 pm - 10:30 pm **HOSPITALITY ROOMS,**
Hilton Hotel - Rooms 1040, 1046, 1140, 1146

10:00 pm **FLORIDA AM/PIC COMMITTEE MEETING,**
PBCCC - 1F

MONDAY, JULY 18

7:00 am - 8:30 am **SPOUSE BREAKFAST**
Hilton Oceana D - (Ticket Required)

8:00 am - 5:00 pm **REGISTRATION AND SCHOLARSHIP AUCTION DROP OFF,** PBCCC - North Lobby

MONDAY, JULY 18

LIFE MEMBER & SPOUSES

8:00 am - 5:00 pm **LIFE MEMBER & SPOUSES HOSPITALITY ROOM** Hilton 235, 241

8:00 am - 10:00 am **GENERAL SESSION,** PBCCC – Grand Ballroom
Presiding: Dr. Bill Burdine, NACAA President
- Call to Order and Welcome
- Report to Membership
- Recognition of Donors and Introduction of New Programs
- Dan Kluchinski Memorial Award
- Service to American Agriculture Award
- Presentation by bidding States for 2026 AM/ PIC: Colorado
- Keynote Address – Dr. Jewel Bronaugh, Deputy Secretary of Agriculture, USDA
- Announcements: Libbie Johnson & Shawn Steed, 2022 AM/PIC Co-Chairs

9:00 am - 3:00 pm **COMMERCIAL EXHIBIT TRADE SHOW, EDUCATIONAL EXHIBITS, AND NACAA POSTER SESSION DISPLAY - OPEN,** PBCCC – Exhibit Hall A

9:00 am - 12:00 Noon **SPOUSE ACTIVITIES**

ACTIVITY 1 – PALM BEACH EXPERIENCE 1 Wetlands
(9:00 AM – 12 Noon)
Buses depart from the Convention Center outside of Exhibit Hall B near the Parking Garage.

ACTIVITY 2 – PALM BEACH EXPERIENCE 2 Art Museum
(10:00 am – 12 Noon)
Van departs from the Convention Center outside of Exhibit Hall B near the Parking Garage.

10:00 am - **BREAK AND MEET THE AUTHOR POSTER SESSION,** PBCCC Exhibit Hall A
Courtesy: Agricultural Extension Associations from the 13 Southern Region States

MONDAY, JULY 18

1:00 pm - 3:00 pm **LIFE MEMBERS BUSINESS MEETING,** Hilton Coral C
Presiding: Paul Craig, Chair

2:30 pm - 3:00 pm **BREAK,** - Hilton near Oceana Pre-Ballroom
Courtesy: The Agricultural Extension Associations from the 13 Southern Region States

3:00 pm - 5:00 pm **REGIONAL MEETINGS AND CANDIDATE PRESENTATIONS,**
North Central Region, Hilton Oceana A
Southern Region, Hilton Oceana B
Western Region, Hilton Oceana C
Northeast Region, Hilton Oceana D

LIFE MEMBER & SPOUSES

4:00 pm - 9:00 pm **MICROSOFT BEACH PARTY & DINNER**
Buses depart from the Convention Center outside of Exhibit Hall B near the Parking Garage. Buses will start leaving at 4 pm.

9:00 pm - 10:30 pm **HOSPITALITY ROOMS,** Hilton Hotel - Rooms 1040, 1046, 1140, 1146

TUESDAY, JULY 19

6:45 am - 3:00 pm **LIFE MEMBERS & SPOUSES TOURS**
Buses depart from the Convention Center outside of Exhibit Hall B near the Parking Garage.

TOUR 1 – SURF
(7:00 am – 2:00 pm)
Assemble at 6:30 where the buses will depart.

TOUR 2 – TURF
(9:30 am – 3:00 pm)
Assemble at 9 where the buses will depart.

8:00 am - 2:00 pm **REGISTRATION AND SCHOLARSHIP AUCTION DROP OFF,** PBCCC – North Lobby

8:00 am - 5:00 pm **LIFE MEMBER & SPOUSES HOSPITALITY ROOM** Hilton 235, 241

TUESDAY, JULY 19

LIFE MEMBER & SPOUSES

8:00 am - 8:30 am **COFFEE BREAK**
PBCCC Hall A Courtesy: Agricultural Extension Associations from the 13 Southern Region States

8:30 am - 11:30 am **DELEGATE SESSION,** Hilton Oceana A
Presiding: Bill Burdine, NACAA President

9:00 pm - 4:00 pm **COMMERCIAL EXHIBIT TRADE SHOW, EDUCATIONAL EXHIBITS, AND NACAA POSTER SESSION DISPLAY - OPEN,** PBCCC, Exhibit Hall A

2:45 pm - 4:15 pm **THE FLORIDA CITRUS INDUSTRY.** Hilton Coral B
Speaker: Chris Oswalt UF/IFAS

2:45 pm - 4:15 pm **TROPICAL FRUIT HILTON** Hilton Coral D
Speaker: UF/IFAS Tropical Research and Education Center Specialist.

2:45 pm - 4:15 pm **HISTORY OF THE PALM BEACHES** Hilton Coral E
Speaker: Guest from the Palm Beach Historical Society.

4:00 pm - 6:00 pm **COMMERCIAL EXHIBITS CLOSE AND TAKE DOWN,** PBCCC Exhibit Hall 1

2:30 pm - 3:00 am **BREAK** (LEMONADE and Tea)
PBCCC Registration Area. Courtesy of the Agricultural Extension Associations from the 13 Southern Region States

4:30 pm **STATES NIGHT OUT,**
States make own arrangements

7:00 pm **NACAA SCHOLARSHIP SILENT AND LIVE AUCTION PREVIEW,**
PBCCC - Grand Ballroom (Cash bar available)

8:00 pm **NACAA SCHOLARSHIP LIVE AUCTION,**
PBCCC - Grand Ballroom (Cash bar available)

WEDNESDAY, JULY 20

LIFE MEMBER & SPOUSES

6:30 am - 7:45 am **LIFE MEMBER BREAKFAST,** Hilton Coral A
Ticket Required
Presiding: Paul Craig, NACAA Life Member Chair

8:00 am - 2:00 pm **REGISTRATION** PBCCC – North Lobby

8:00 am - 5:00 pm **LIFE MEMBER & SPOUSES HOSPITALITY ROOM** Hilton 235, 241

8:30 am - 9:00 am: **COFFEE BREAK** PBCCC Outside Grand Ballroom

9:00 am - 11:00 am **GENERAL SESSION,** Grand Ballroom
Presiding: Dr. Bill Burdine, NACAA President
- Call to Order
- JCEP Creative Excellence Award Presentation
- State Membership Awards
- Keynote Speaker: Brigadier General Gary Huffman (ret.), Real Leadership Cares about the People
- To Survive and Thrive: Dr. Bill Burdine
- Oklahoma Hat Presentation
- Looking to the New Year: Phil Durst, NACAA President-Elect
- Announcements: Libbie Johnson & Shawn Steed, 2022 AM/PIC Co-Chairs

8:30 am - **LIFE MEMBERS & SPOUSES ASSEMBLE FOR TOURS** – All Buses depart from the Convention Center outside of Exhibit Hall B near the Parking Garage.

TOUR 1: COASTAL TOUR (9:00-1:00 pm)

TOUR 2: GARDEN TOUR (9:00 – 12:30)

TOUR 3: FLAGLER MUSEUM (9:00 – 12:30)

1:00 - pm 2:00 pm **TRAVELOGUE PROGRAM** PBCCC – 1K Presenting: Chuck Schwartau, NACAA Past National Treasurer

WEDNESDAY, JULY 20

AFTERNOON WORKSHOPS

1:00 pm - **WORKSHOP 1 ART – INK AND ISOPROPYL ALCOHOL,** Hilton Coral B

1:00 pm - 2:00 pm **WORKSHOP 2 - RESTAURANT – EAT REGIONAL,** Hilton Coral D

2:45 pm - 4:15 pm **WORKSHOP 3 –BULB CHIPPING** Hilton Coral E

LIFE MEMBER & SPOUSES

4:00 pm - 5:30 pm **NACAA BOARD RECEPTION,** Presidential Suite, Hilton (Invitation Only)

4:30 pm - 6:30 pm **FORMAL PICTURE OPPORTUNITY,** PBCCC - Prefunction area (Cash bar available)

5:30 pm - 6:30 pm **DSA & AA RECIPIENTS, HALL OF FAME RECIPIENTS, NACAA BOARD MEMBERS, REGION DIRECTORS, PAST OFFICERS, SPECIAL ASSIGNMENTS, SPECIAL GUESTS, COUNCIL COMMITTEE CHAIRS AND VICE CHAIRS ASSEMBLE FOR BANQUET** PBCCC - Ballroom Prefunction area (Cash bar available)

6:30 pm **ANNUAL BANQUET,** Grand Ballroom (Ticket Required)

9:30 pm - 10:30 pm **PRESIDENT'S RECEPTION,** Hilton Manor

THURSDAY, JULY 21

6:15 am - 9:00 am **ASSEMBLE FOR PROFESSIONAL IMPROVEMENT TOURS,** Breakfast will be served in the Courtyard of the Convention Center. Assembly area is the rear of Exhibit Hall A. DEPARTING from Exhibit Hall B near the rear exit near the Parking Garage

7:00 am - 6:00 pm **PROFESSIONAL IMPROVEMENT TOURS,** Check your ticket time

LIFE MEMBER & SPOUSES

4:00 pm - **NON-TOUR PARTICIPANTS - SHUTTLE BUSES TO DINNER AT SOUTH FLORIDA FAIGROUNDS WILL DEPART** from the Convention Center outside of Exhibit Hall B near the Parking Garage.

5:00 pm - 7:00 pm **THE BEST STEAK YOU EVER HAD, SPONSORED BY THE FLORIDA CATTLEMEN AND FLORIDA FARM BUREAU**
South Florida Fairgrounds

4:00 pm - 9:00 pm Shuttle buses will be running throughout the evening to PBCCC

SONS & DAUGHTERS PROGRAM 2022 NACAA ANNUAL MEETING

SATURDAY, JULY 16

3:00 pm - 6:00 pm **REGISTRATION** (PBCCC) - North Lobby

SUNDAY, JULY 17

8:00 am- 7:00 pm **REGISTRATION AND SCHOLARSHIP AUCTION DROP OFF**, PBCCC - North Lobby

4:00 pm - 4:45 p.m. **STATE PICTURES** (See schedule in back of program)

4:30 pm - 6:30 pm **WELCOME TO U.S. SUGAR'S FLORIDA DINNER** Convention Hall Exhibit Hall A
(Ticket Required-See ticket for serving time)
Courtesy: NACAA & FACAA

SONS & DAUGHTERS

6:00 pm - 6:45 pm **PARENTS ORIENTATION FOR SONS & DAUGHTERS PROGRAM,** Hilton Oceana A
Presiding: Tycee Prevatt and Luke Harlow, Florida Chair Sons and Daughters

7:00 pm - 9:00 pm **OPENING SESSION & INSPIRATIONAL PROGRAM,** PBCCC - Grand Ballroom
(Doors Open at 6:30pm)
Presiding: Bill Burdine, NACAA President
- Presentation of Colors: U.S. Naval Sea Cadet Corps
- Pledge of Allegiance and 4-H Pledge: Wolfgang Oschmann
- National Anthem and "God Bless America": Mercedes Nodarse
- Presentation of State Flags: Kevin Korus
- Introduction of Keynote Speakers: Daniel Leonard
- Welcome: Dr. Scott Angle, UF/IFAS Senior VP
- Speakers: Dr. Andre Johnson, Dean of Extension, UF/IFAS and Vonda Richardson, Associate Director, FAMU
- Entertainment: Los Sobrinos del Sol
- Announcements: Libbie Johnson & Shawn Steed, 2022 AM/PIC Co-Chairs

SUNDAY, JULY 17

9:00 pm - 10:00 p.m. **STATE PICTURES** (See schedule in back of program)

9:00 pm **ICE CREAM SOCIAL,** PBCCC – Exhibit Hall A
Sponsored by Southeast Milk, Inc. and Florida Dairy Farmers

MONDAY, JULY 18

8:00 am - 5:00 pm **REGISTRATION & SCHOLARSHIP AUCTION DROP OFF,** PBCCC - North Lobby

7:45 am **SONS & DAUGHTERS GATHER** Hilton Oceana A

8:15 am **SONS & DAUGHTERS DEPART FOR** Gator Park

5:30 pm **SONS & DAUGHTERS RETURN** Hilton Oceana A

4:00 pm - 9:00 pm **BEACH PARTY & DINNER** All Buses depart from the Convention Center outside of Exhibit Hall B near the Parking Garage.

SONS & DAUGHTERS

TUESDAY, JULY 19

8:00 am - 2:00 pm **REGISTRATION** PBCCC – North Lobby

8:15 am **SONS & DAUGHTERS GATHER** Hilton Oceana B

8:45 am **SONS AND DAUGHTERS DEPART FOR** Palm Beach Zoo

4:30 pm **SONS & DAUGHTERS RETURN** Hilton Oceana B

4:30 pm **STATES NIGHT OUT,** States make own arrangements

7:00 pm **NACAA SCHOLARSHIP SILENT & LIVE AUCTION PREVIEW,** Grand Ballroom

8:00 pm **NACAA SCHOLARSHIP LIVE AUCTION,** Grand Ballroom

WEDNESDAY, JULY 20

7:45 am **SONS & DAUGHTERS GATHER**
Hilton Oceana B

8:15 am **SONS & DAUGHTERS DEPART FOR**
Cox Science Center & Aquarium
Rapids Water Park

5:15 pm **SONS & DAUGHTERS RETURN**
Hilton Oceana B

6:15 pm - 9:00 pm **SONS & DAUGHTERS FAREWELL PARTY**
Hilton Coral BCD

THURSDAY, JULY 21

6:15 am - 9:00 am **ASSEMBLE FOR PROFESSIONAL IMPROVEMENT TOURS,** Breakfast will be served in the Courtyard of the Convention Center. Assembly area is the rear of Exhibit Hall A. DEPARTING from Exhibit Hall B near the rear exit near the Parking Garage

SONS & DAUGHTERS

7:00 am - 6:00 pm **PROFESSIONAL IMPROVEMENT TOURS,** Check your ticket time

4:00 pm - **NON-TOUR PARTICIPANTS - SHUTTLE BUSES TO DINNER AT SOUTH FLORIDA FAIGROUNDS WILL DEPART** from the Convention Center outside of Exhibit Hall B near the Parking Garage.

5:00 pm - 7:00 pm **THE BEST STEAK YOU EVER HAD, SPONSORED BY THE FLORIDA CATTLEMEN AND FLORIDA FARM BUREAU**
South Florida Fairgrounds

4:00 pm - 9:00 pm Shuttle buses will be running throughout the evening to PBCCC

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2022 FLORIDA AM/PIC DONORS & SPONSORS

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Dr. Lakesh Sharma – Soil, Water & Ecosystem Sciences
Dr. Mathews Paret – North Florida REC - Quincy
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Dr. Norm Leppla – Entomology & Nematology
Dr. Paul Fisher – Environmental Horticulture
Dr. Pratap Devkota – West Florida REC - Jay
Dr. Richard Raid - Everglades REC – Belle Glade
Dr. Shouan Zhang – Tropical REC - Homestead
Dr. Steve Sargent – Horticultural Sciences
Dr. Xavier Martini – North Florida REC – Quincy
Dr. Xin Zhao – Horticultural Sciences
Dr. Zachary Brym – Tropical REC - Homestead
Dr. Zane Grabau – Entomology & Nematology
Dr. Saundra TenBroeck – Animal Sciences 4-H Horse Program

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Suwannee Valley Electric Cooperative
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Louisiana County Agricultural Agents Association
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Cold Hardy Citrus Association
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Florida Watermelon Association

DONORS & SPONSORS (continued)

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North Carolina Association of County Agricultural Agents
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NACAA Annual Meeting and Professional Improvement Conferences

Year	President	Location
1916-1919	Heaton, Ed	Chicago, IL
1920	Kennedy, C.N.	Chicago, IL
1920	A.J. Dexter	Chicago, IL
1921-1922	Mosher, ML	Chicago, IL
1923	Merrill, JW	Chicago, IL
1924	Perdue, Calvin	Chicago, IL
1925	Kirkpatrick, K A	Chicago, IL
1926	Hedge, J C	Chicago, IL
1927	Palm, A W	Chicago, IL
1928	Bucholz, A B	Chicago, IL
1929	Olda, R L	Chicago, IL
1930	McKay, Morgan	Chicago, IL
1931	Mayhew, Earl	Chicago, IL
1932	Whonsetler, J E	Chicago, IL
1933	Clough, R S	Chicago, IL
1934	Douglass, Ellwood	Chicago, IL
1935	Kerrigan, P N	Chicago, IL
1936	Abbott, H E	Chicago, IL
1937	McConnell, Bright	Chicago, IL
1938	Boyd, George W	Chicago, IL
1939	McCormick, Dewey Z	Chicago, IL
1940	Parker, J Ed Jr.	Chicago, IL
1941	Ryall, E V	Chicago, IL
1942	Keller, C C	Chicago, IL
1943	Toyne, L V	Chicago, IL
1944	Beck, E D	Chicago, IL
1945	MacDougall, Allister F	Chicago, IL
1946	Sill, Weber H	Chicago, IL
1947	Nichols, H M	Chicago, IL
1948	Sterling, Stuart	Chicago, IL
1949	Logan, John Henry	Denver, CO
1950	Carter, Rex	Chicago, IL
1951	Bay, Ed	Memphis, TN
1952	Hoar, Sherman	Chicago, IL
1953	Kerr, L J	Philadelphia, PA
1954	Brown, Joe T	Salt Lake City, UT
1955	Williams, E O	East Lansing, MI
1956	Farrington, Fletcher	N. Houston, TX
1957	McDougall, R H	Boston, MA
1958	Bunnell, Marion	Seattle, WA
1959	Walker, Orville F	Kansas City, MO
1960	Rose, Carl E	Miami, FL
1961	Campbell, Howard H	New York, NY
1962	Trierweiler, Bernard G	Las Cruces, NM
1963	Barger, Paul	Minneapolis, MN
1964	Cook, Elmo	New Orleans, LA
1965	Thurston, Joseph S	Pittsburgh, PA
1966	Hansen, N John	Honolulu, HI
1967	Kunau, G J	Omaha, NE
1968	Estess, Ansel	Lexington, KY
1969	Whipp, Roscoe N	Atlantic City, NJ

1970	Esplin, Grant M	Corvallis, OR
1971	Iverson, Larry	Columbus, OH
1972	Strohbehn, Douglas W	Atlanta, GA
1973	Hibbard, Russell E	Baltimore, MD
1974	Marek, Richard G	Tucson, AZ
1975	Goodwin, Norman J	Milwaukee, WI
1976	Kennedy, Thurman J	Richmond, VA
1977	Jones, Robert L	Hartford, CT
1978	Koester, Ed	Boise, ID
1979	Juchartz, Donald	Rapid City, SD
1980	Smith, James A	Oklahoma City, OK
1981	Firth, Leslie N	Cornell University, NY
1982	Roberts, Wayne	Billings, MT
1983	Merrick, A Daniel	Wichita, KS
1984	D'Armond, Reymond	New Orleans, LA
1985	Sorensen, Dave	Hershey, PA
1986	Dictson, Billy	Colorado Springs, CO
1987	Davis, Bob	Fargo, ND
1988	Witherspoon, William D. "Billy"	Charlotte, NC
1989	Curran, G. Richard	New Brunswick, NJ
1990	Phillips, Dave	Seattle, WA
1991	Hawbaker, Stuart	Peoria, IL
1992	Tatum, Hal	Little Rock, AR
1993	Kelly, William C	Baltimore, MD
1994	Warnock, Doug	Casper, WY
1995	Sifferath, Warren	Bloomington, MN
1996	Jenkins, Jamie	Nashville, TN
1997	Moramarco, Donna W	Burlington, VT
1998	Drost, Don	San Antonio, TX
1999	Gary Hall	Omaha, NE
2000	Curtis Grissom	Jackson, MS
2001	C. David McManus	Albuquerque, NM
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2003	Steven Munk	Green Bay, WI
2004	Frank FitzSimons	Orlando, FL
2005	Glenn Rogers	Buffalo, NY
2006	Mickey Cummings	Cincinnati, OH
2007	Chuck Otte	Grand Rapids, MI
2008	N. Fred Miller	Greensboro, NC
2009	Richard Gibson	Portland, OR
2010	Phil Pratt	Tulsa, OK
2011	Stan Moore	Overland Park, KS
2012	Paul D. Wigley	Charleston, SC
2013	Paul Craig	Pittsburgh, PA
2014	Henry D. Dorough	Mobile, AL
2015	Mike Hogan	Sioux Falls, SD
2016	Cynthia L. Gregg	Little Rock, AR
2017	R. Mark Nelson	Salt Lake City, UT
2018	Alan B. Galloway	Chattanooga, TN
2019	Richard H. Fechter	Fort Wayne, IN
2020	Gene McAvoy	Virginia Beach, VA (Virtual)
2021	J. Craig Williams	Philadelphia, PA (Virtual)
2022	Bill Burdine	West Palm Beach, FL

PICTURE SCHEDULE
Guests are welcome to join their home state delegation,
State DSA and AA recipients will NOT be photographed at this time (taken during award ceremonies)
STATE PICTURES WILL BE TAKEN AS PART OF THE CONFERENCE

BE PROMPT AS THESE MOVE QUICKLY

NACAA AMPIC 2022-
State Pictures Order
Sunday, Outdoor Location:
4 – 4:45 pm –
PBCCC -Ballroom Prefunction
2nd Floor

1. Iowa
2. Arkansas
3. Mississippi
4. Idaho
5. Colorado
6. North Dakota
7. Nebraska
8. Minnesota
9. Oklahoma
10. Wisconsin
11: Michigan

Sunday, Indoor Location 1 (large group):
9 -10 pm
PBCCC - Exhibit Hall, in front of the large palms on the ground floor

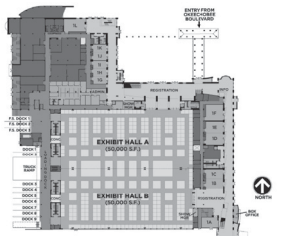
1. North Carolina
2. Georgia
3. Kentucky
4. Tennessee
5. Ohio
6. Alabama
7. Pennsylvania
8. Utah
9. Texas
10. South Carolina
11. Virginia
12. Kansas
13. Illinois
14. Maryland
15. Florida

Sunday, Indoor Location (small group) 2:
9 -10 pm
PBCCC - 1A on the ground floor

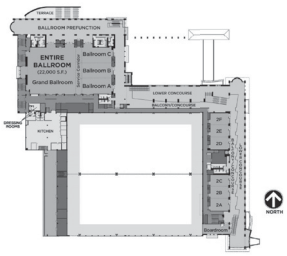
1. West Virginia
2. Missouri
3. Arizona
4. Louisiana
5. New Mexico
6. Washington
7. California
8. Montana
9. South Dakota
10. Indiana
11. Maine
12. Wyoming
13. New Jersey
14. Nevada
15. New Hampshire
16. Alaska
17. Massachusetts
18. Hawaii
19. Puerto Rico

PALM BEACH COUNTY CONVENTION CENTER (PBCCC)

LEVEL 1 (GROUND FLOOR)



LEVEL 2



HILTON FLOOR PLAN

FUTURE ANNUAL MEETING AND PROFESSIONAL IMPROVEMENT CONFERENCE DATES

2023 - Des Moines, IA
August 12-17

2024 - Dallas, Texas
July 14 -July 18

2025 - Billings, Montana
June 29 - July 2

Poster Session

Applied Research

2022 NACAA

107th
Annual Meeting
and
Professional Improvement Conference

West Palm Beach, Florida

2022 Poster Session
Applied Research

1st Place

EFFECT OF SEEDING RATE ON SOYBEAN YIELD – HOW LOW CAN WE GO?

APPLIED RESEARCH
Stephanie Karhoff
OSU Extension Educator, Ag and Natural Resources
Bryan

Authors: Stephanie Karhoff[1], Elizabeth Hawkins[2]

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[2] Field Specialist, Agronomic Systems , The Ohio State University, Ohio, 45177

Soybean seed cost in Ohio has increased 20% in the past ten years, prompting growers to consider lower seeding rates. However, the optimum seeding rate of soybean [Glycine max (L.) Merr.] is highly dependent on the environment. Replicated on-farm strip trials provide growers with personalized data to better inform their seeding rate decision. The objectives of this study were to understand the yield impact of varying soybean seeding rates and determine the economic and agronomic optimal rate for Williams County, Ohio. On-farm strip trials evaluating five seeding rates ranging from 80,000 to 240,000 seeds per acre were conducted in 2019, 2020, and 2021 near Montpelier, Ohio. Stand counts were taken 4 – 6 weeks after planting to determine final stand, and yield and moisture was collected with a calibrated yield monitor. The effect of seeding rate on yield across years was determined using a linear mixed effects model. Seeding rate did not significantly affect yield from 2019 to 2021 in Williams County and seeding rates less than 200,000 seeds per acre had the greatest return above seed cost. This study demonstrates that Williams County soybean growers can lower seeding rates to increase their return, though a final population of 100,000 plants per acre is recommended to achieve maximum yield. Overall, these data will improve seeding rate recommendations for northwest Ohio soybean growers and inform future replant decisions and variable rate seeding prescriptions.

2nd Place

THERMAL TOLERANCE OF COMMON SNOOK BY LATITUDE AND SALINITY

APPLIED RESEARCH
Brittany Scharf
Marine Agent
UF/IFAS Extension
Brooksville

Authors: Brittany Scharf[1]

[1] Marine Agent, University of Florida, Florida, 34604

Abiotic factors such as temperature and salinity can affect fish physiological and behavioral responses, resulting in environmentally induced variation in thermal tolerance. Such variation in ecological conditions may therefore influence species distributions across geographic ranges and habitat types. Local adaptations may account for differences in thermal tolerance to allow fish to survive in thermal refuges and thus persist in regions where environmental conditions may be otherwise unsuitable. For example, euryhaline fishes may occupy waters of salinity near 12 ppt to be isotonic with their environment, maximizing energy available for growth and survival. The Common Snook Centropomus undecimalis is one of Florida's most popular sport fish. It occupies various coastal habitats spanning from artificial reefs to freshwater rivers where they are exposed to fluctuating temperatures and salinities. We ran chronic lower-lethal temperature experiments on juvenile Common Snook (239 - 377 mm total length) for three salinity treatments (3 ppt, 15 ppt, and 30 ppt) to better understand how salinity affects survival and ultimately the availability of thermal refuge habitat. Cessation of feeding, loss of equilibrium, and death were recorded. Unexpectedly, our finding showed that this species is the least cold-tolerant (10.49°C) at the mid-salinity treatment (15 ppt). Lower-lethal temperature (9.17°C) for the high-salinity treatment (30 ppt) was similar to previous studies; however, our lower-lethal temperature (9.21°C) for the low-salinity treatment (3 ppt) was much lower than published findings and suggests potential habitat and thermal refuge characteristics during cool winter periods. Furthermore, our latitudinal findings support that this species range expansion has occurred due to mild winters and the development of an overwintering behavior type. We plan to further investigate lower-lethal temperatures for this species at the northern limit of their range.

3rd Place

EFFECTS OF WHOLE-GRAIN SUPPLEMENTATION ON HEALTH, GROWTH, AND PROFITABILITY OF PASTURE-RAISED LAMB

APPLIED RESEARCH

Amanda Grev
Forage Extension Specialist
University of Maryland Extension
Keedysville

Authors: Amanda Grev[1], Susan Schoenian[2], Jeff Semler[3], Dahlia O'Brien[4]

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[2] Small Ruminant Extension Specialist, University of Maryland Extension, Maryland, 21756
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[4] Small Ruminant Extension Specialist, Virginia State University, Virginia, 23806

Energy is often the most limiting nutrient in pasture-based diets. The objectives of this project were to compare the health, growth, and market value of lambs raised on pasture with and without whole-grain supplementation to determine if the additional energy provided would improve the profitability of pasture-based lamb production. In mid-June 2020 and 2021, Katahdin ram lambs (n=79 in 2020; n=99 in 2021) arrived at the Western Maryland Research and Education Center. After a 10-d acclimation period, lambs were allocated into two equal treatment groups based on age, bodyweight (BW), body condition score (BCS), birth type, and fecal egg count (FEC). Lambs in the pasture group (PAST) rotationally grazed 2 ha of high quality, mixed pasture for 100 d. Lambs in the supplemented group (SUPP) grazed similar pastures and were hand-fed a daily energy supplement (whole barley) at 0.45 kg/head/d. Both groups were handled bi-weekly to determine BW, BCS, and FAMACHA© scores. Individual fecal samples were collected upon arrival and at 1-2 additional time points each year. At the conclusion of grazing in 2020, lambs were ultrasound scanned to determine carcass traits. Data was analyzed using mixed model analysis, with statistical significance set at $P \leq 0.05$. Average daily gain (ADG) varied considerably among weigh periods and standard deviations were large, indicating wide variation in individual performance. Final BW did not differ between groups in 2020 but was greater for SUPP lambs (36.2 kg) than PAST lambs (33.0 kg) in 2021 ($P = 0.02$). Across both years, SUPP lambs had higher ADG (0.14 kg/d) and final BCS (2.8) compared to PAST lambs (0.11 kg/d; BCS 2.6; $P \leq 0.02$). Final FEC and FAMACHA© scores were lower for PAST lambs (240 EPG; FAMACHA© 1.6) than SUPP lambs (468 EPG; FAMACHA© 2.0) in 2020 ($P \leq 0.05$) but were similar between groups in 2021. SUPP lambs had greater backfat (4.77 mm) compared to PAST lambs (4.17 mm; $P = 0.03$), but loin area was similar between groups. Altogether, these results indicate a slight growth advantage for the SUPP lambs; however, the value of the additional gain likely would not cover feed expenses.

National Finalists

AN EXPLORATION OF RELATIONSHIPS BETWEEN DAIRY COW BUNCHING BEHAVIOR AND ENVIRONMENTAL FACTORS

APPLIED RESEARCH

Jenifer Cruickshank
Extension Dairy Management faculty
Oregon State University Extension Service
Salem

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[2] Recently graduated BS student, Oregon State University, Oregon, 97331

Bunching of cattle in barns is a common, seasonal problem on dairy farms. This behavior can lead to lower feed intake and increased risk of injury, particularly to teats. We wanted to know if environmental variables such as temperature humidity index (THI), wind, month, and time of day influence this detrimental behavior. An open-sided free-stall barn with two 110-cow pens oriented north to south, where bunching is regularly observed in the summer at the north end, served as the study site. Temperature and humidity were recorded in each quarter of each pen (east and west) from June 2017–November 2018. Over that same period, mounted cameras viewing each quadrant of the barn took still photos every 10 minutes. Photos from seven timepoints (6:30, 9:00, 11:00, 12:00, 17:00, 18:00, and 19:00) were scored for cow distribution in each pen. The scoring system ranged from -5 to +5 with zero indicating uniform distribution. A score of +3 would indicate that ~60% "extra" cows were in that quadrant of the barn, while a -4 would indicate that ~80% of cows were "missing" from that quadrant. Bunching was quantified by subtracting the south from the north end scores for each pen. Episodic measurements of ammonia and CO2 levels were also taken at the north and south ends of the barn. From mid-August 2018–November 2018, additional weather measurements from ~100m north of the barn, including wind direction and speed, were collected. Several statistical models were run in R: 1) score difference with month, time of day; 2) score difference sum with month, mean barn THI, the difference between

the north and south end THI values; 3) score difference with month, time of day, THI, wind speed, wind direction. Ammonia and CO2 levels were uniform between north and south ends. We found that THI has strong influence on bunching, with the model fitting to the cubic degree. However, wind did not seem to have influenced bunching.

DEHYDRATOR ONION YIELD RESPONSE DIFFERS BY BIOSTIMULANT PRODUCT AND GROWTH STAGE AT APPLICATION

APPLIED RESEARCH
Michael Rethwisch
Farm Advisor - Crop Production and Entomology
University of California Cooperative Extension
Blythe

Authors: Michael Rethwisch[1], Kassandra Allan[2], Lauren-Elizabeth Pope[3], Nathan Tribby[4]

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[3] tudent Assistant 3, University of California Cooperative Extension - Riverside County, California, 92225
[4] Student Assistant 3, University of California Cooperative Extension - Riverside County, California, 92225-1649

Dehydrator onions are a crop that continues to expand in acreage in the California low desert. Biostimulants may be a viable way to increase production, but little research on dehydrator onion yield responses to these types of product existed, with the most recent research being conducted almost 20 years ago with a single product. Since then, many new biostimulant products and chemistries have become commercially available, but with no comparative data existed for their efficacy. This project was initiated to fill this informational void. During the 2019-2021 production seasons, onion yields resulting from the application ten (10) biostimulant products were document. Three (3) products were initially applied pre-germination or early emergence with the other seven (7) products being first applied when multiple leaves were present. Field trials were conducted on differing varieties and soil types to determine the consistency of results. During 2021, comparisons of two (2) vs. three (3) applications of foliar products were also conducted, with the two applications being made at third and fifth green leaf stage, while the three application regimen also included applications at the seventh green leaf stage. Yield data indicated that for the products applied pre-germination/early emergence the best yield response was noted from two applications of Liquid Seaweed Concentrate (emergence with second application at the fifth green leaf). For Guarantee Complex, a single application was best. Several foliar based products averaged 4+% increases in yield (Vitazyme at 20 oz./acre, single application, CytoPower with two applications). Several products resulted in yield decreases when a third application was made, however, this was not true for all products. Results were fairly consistent over the two years, providing high confidence that certain biostimulants can provide a positive economic return. The yield results also indicate that the onion development stage is an important factor for targeting effective usage of biostimulant products, and that biostimulant products also differ greatly for their ability to increase dehydrator onion yields.

IDENTIFICATION OF EFFECTIVE PLANTING TIMES OF COVER CROPS INTERSEEDED INTO CORN

APPLIED RESEARCH
Jake Hadfield
Extension Assistant Professor
Utah State University
Logan

Authors: Jake Hadfield[1], Kalen Taylor[2], Cody Zesiger[3], Mike Pace[4], Jody Gale[5], Matthew Palmer[6], Matt Yost[7], J. Earl Creech[8], Ryan Larsen[9]

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[2] Extension Assistant Professor, USU Extension, Utah, 84624
[3] Extension Assistant Professor, USU Extension, Utah, 84404
[4] Extension Professor, USU Extension, Utah, 84302
[5] Extension Associate Professor, USU Extension, Utah, 84701
[6] Extension Professor, USU Extension, Utah, 84627
[7] Extension Associate Professor, USU Extension, Utah, 84322
[8] Extension Professor, USU Extension, Utah, 84322
[9] Extension Associate Professor, USU Extension, Utah, 84322

Interseeding cover crops between the rows of growing corn has become of interest among Utah agriculture producers. Little to no research has been done in the intermountain west with alkaline soils, short growing seasons, and little precipitation during the summer months. This research project aims to address these challenges and to identify the most effective planting times of cover crops interseeded into corn in Utah.
Eight research plots were chosen in five counties throughout Utah on producer owned corn fields. Plots were 15’ wide by 30’ feet long with six treatments

including a control (no interseeding), and cover crops interseeded at five different corn vegetative (V) growth stages (V2, V4, V6, V8 and V10 stage). Treatments were replicated four times utilizing a randomized complete block design. All other corn production practices (irrigation, fertilizer, insecticides, etc.) were managed by the cooperating growers. Hand-harvesting occurred in early September when silage corn had reached 65% moisture. A 10 ft. section of the center two corn rows in each plot was harvested to determine corn silage yield and a sub sample of 3 randomly selected corn stocks chopped in a wood chipper/shredder for forage quality analysis. Corn quality samples were analyzed at a certified lab for nutritional parameters.

The first year results indicated that cover crop interseeding time (V2, V4, V6, V8, and V10) had no effect on corn silage yield. While one or two research trials had differences in corn silage nutritional quality, overall no consistent trends were found. The findings suggest that interseeding time has little to no effect on overall corn silage yield. However it should be stated that due to a lack of precipitation in the early spring, cover crop interseeding had little to no success in establishing during 2021. Weeds in some fields also played a role in preventing establishment of successful cover crop stands. Overall it was determined, that the best cover crop interseeding time occurs between the corn growth stages of V4 and V6 due to producer management practices. Additional study years are needed to verify and solidify these first year results.

THE EFFECT OF WINTER WHEAT AND SPRING OATS COVER CROPS TERMINATION TIMING ON CORN YIELD

APPLIED RESEARCH
Wayne Flanary
Field Specialist in Agronomy
University of Missouri Extension
St. Joseph

Authors: Wayne Flanary[1]

[1] Field Specialist in Agronomy, University of Missouri Extension, Missouri, 64507

A cover crop termination study was established at the University of Missouri Graves Chapple Research Center located at Fairfax, Missouri. The trial objective was to measure the impact of termination timing of winter wheat and spring oats on corn yield. The cover crop treatments were tested using an experimental complete randomized block design with three replications. Corn was planted April 30, 2021, and 180 pounds of nitrogen in the form of urea coated with Agrotain top-dressed the same day. Cover crops were terminated at tiller, joint, boot and head flowering. All growth stages of the winter wheat occurred earlier than spring oats. Corn yield was reduced with each later termination timing in both spring oats and winter wheat with the largest yield losses occurring during the termination at the flowering stage. Termination timing of winter wheat and spring oats as cover crops with corn should be considered early.

HIGH QUALITY BALEAGE IN KENTUCKY

APPLIED RESEARCH
Brandon Sears
COUNTY EXTENSION AGENT FOR AGRICULTURE & NATURAL RESOURCES
RICHMOND

Authors: Brandon Sears[1], Levi Berg[2], Corinne Belton[3], April Wilhoit[4], Don Sorrell[5], Jimmy Henning[6], Jeff Lehmkuhler[7]

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[4] Fleming County Extension Agent for Ag & Natural Resources, University of Kentucky, Kentucky, 41041
[5] Life Member, University of Kentucky, Kentucky, 41076
[6] Extension Forage Specialist, University of Kentucky, Kentucky, 40546
[7] Extension Beef Cattle Specialist, University of Kentucky, Kentucky, 40546

The ability to harvest forage as high moisture hay bales (baleage) gives Kentucky producers many advantages, including timely production, higher forage quality, and less weathering loss compared to traditional dry hay systems. Unfortunately, some producers have experienced reduced animal performance and even deaths from feeding improperly harvested baleage.

Our main objective of this survey was to define the quality of Kentucky baleage using indicators such as pH and volatile fatty acids (VFA). We also evaluated production methods that promote low pH and a suitable VFA profile. Finally, we sought to develop confidence in the safety of baleage for livestock consumption using butyric acid as a marker for potentially 'bad' or toxic baleage.

These objectives were accomplished using a diverse set of samples collected from Central and North-Central Kentucky farms. Samples were analyzed for forage quality and fermentation using Dairy One commercial forage lab. The dataset consisted of 45 samples from 2019.

Baleage moisture content varied widely with values ranging from 22% to 79%. Lower moisture content bales did not produce a desirable VFA profile but had good odor. Only when moisture approached 60% did samples in this survey achieve 3% lactic acid and a pH of 5 or less, which are the generally accepted threshold values for good fermentation. Fermentation characteristics were adequate for most samples when moisture content was between 60% and 70%, but results became less predictable. Above 70% moisture, elevated anti-quality factors such as butyric acid were common. Increased ash content was not correlated with butyric acid production, but ash levels varied seasonally based on forage drying conditions.

Overall moisture content had the greatest influence on fermentation. Acceptable baleage was produced at a wide range of moisture from 20-70%. Bales with less than 50% moisture content did not ferment well but were stable in storage. We determined that butyric acid content is one of several markers that can contribute to the evaluation of baleage as good or potentially problematic, meaning it could have the ability to cause livestock disorders, feed refusal or death.

POST-HARVEST CHARACTERISTICS OF FIVE NEW PEACH AND NECTARINE VARIETIES

APPLIED RESEARCH
Hemant Gohil
Agriculture and Natural Resource Agent
Rutgers Cooperative Extension
Clarksboro

Authors: Hemant Gohil[1], Daniel Ward[2]

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[2] Extension Specialist, Rutgers NJAES, New Jersey, 08302

Five new peach and nectarine varieties were released in 2018 from the Rutgers tree fruit breeding program. To understand how best to select and market these varieties growers need to better understand the characteristics of their fruit. The objective of this study was to (1) estimate fruit qualities, both chemical and physical at harvest, that determine much of the value of peaches and (2) evaluate three varieties for their fruit firmness during cold storage. Varieties were evaluated in the field for flesh color, crop load, shape, skin color, fuzz, attractiveness, stone characteristics (free, semi-free, or cling), flesh color, and bacterial spot on fruits and leaves. Fruits were harvested based on ground color change and size and then stored in cold storage at the research station, in conventional cold storage (33°F, 95% RH). Fruit data characteristics were measured as, firmness (lb.), diameter (inches), mass (grams) juice total soluble solids (TSS) concentration (°Brix), pH, and total titratable acidity (TTA) (%). Total 483 growers in the Mid-Atlantic and Mid-Eastern region were educated on, characteristics of five new peach verities and how-to optimize fruit harvesting and storage. This information was also published in the trade magazine Good Fruit Grower (~16,000 circulations).

SOUTHERN REGION ENTRIES:

REEVALUATION OF SOIL-TEST-BASED POTASSIUM FERTILIZER RECOMMENDATIONS FOR LOUISIANA SOYBEAN

APPLIED RESEARCH
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Most land-grant universities have developed fertilizer-K recommendations based on soil-test K concentration from 0-4, 0-6, or 0-8-inch soil depth. Although topsoil-K concentration is a good indicator of fertilizer-K need for soybean [Glycine max (L.) Merr.], it sometimes gives false positive error i.e., soil-K concentration indicates a positive yield response to fertilizer-K but in fact it does not occur. This can partly be due to K leaching down to the soil profile (6-12-inch or deeper), which soybean plants can easily access resulting in no yield response to added K. We evaluated soybean yield response to five different fertilizer-K rates (0, 40, 80, 120, and 160 lb K2O ac-1) and two different soil-K concentrations from 0-6 and 0-12-inch depths across 32 sites in Louisiana from 2020 to 2021. Based on 2-yr results, fertilizer-K increased soybean yield at 14 of 32 sites. Soil-K concentration explained 74% of relative soybean yield variability for 0-6-inch depth and 69% for 0-12-inch depth. The critical soil-K concentrations were similar across all soil types for both soil depths (123 and 126 ppm for 0-6-inch and 0-12-inch depths, respectively) and were 100% accurate in predicting K deficient sites. Our critical soil-K concentration does not support the current critical soil-K concentrations for Louisiana soybean, which vary with soil types (98-141 ppm for silt-loam and 142-274 ppm for clayey soils at 0-6-inch depth). Tissue K and crop sensing results at the R2 stage showed that both leaflet- and petiole-K concentrations and visible atmospherically resistant index (VARI) were strongly

correlated with relative soybean yield. However, plant VARI was better in identifying K deficient sites and correlating with soil-K concentrations at both depths than tissue K concentrations. Our 2-yr data suggest that it may be possible to develop only one critical soil-K concentration (110-135 ppm K) across all soil types for soybean production in Louisiana. Plant VARI can be alternative tool in diagnosing in-season K deficiency and help in rescuing soybean yield loss. Our calibration model suggests that soybean requires more K to maximize yield than currently recommended rate under low and very low soil-K levels. This study will be continued in 2022.

COMMUNITY IPM STRATEGIES AS MEANS OF REDUCING INSECTICIDE APPLICATIONS

APPLIED RESEARCH
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A homeowners' association (HOA) in Alachua County, Florida, received complaints from local homeowners regarding insecticide usage within its common areas. To determine the most appropriate course of action, the leadership of the HOA contacted UF/IFAS Extension Alachua County's agents to learn about implementing better insecticide management practices. Concluding meetings between the HOA board, county extension agents, and the landscape and pest control companies, two alternative pest management treatment strategies were proposed to reduce insecticide use while following UF/IFAS recommendations. The objective is to adopt integrated pest management (IPM) as the HOA's basis for pest control, including cultural management, regular scouting, and proper insecticide applications. Four turfgrass test plots (at neighborhood entrances) with similar environmental conditions were selected during the first year of the program. An additional four plots were selected for the second year of the study. The total treatments for the two years (Feb 2020-Feb 2022) included four control plots (calendar spray program), two plots with alternative spray schedules (reduced spray frequency), and two plots with IPM schedules (no application unless pest pressure observed). Initial soil samples, insect traps, visual quality assessments, monthly applicator scouting reports, and insecticide logs were collected to compare different treatments. Concluding the first year of data collection, there was little to no visual impact seen across treatments and there was a decrease in insecticide usage from the control plots. Concluding the second year of data collection, the results showed minor changes. On a scale of 1-5, the average pest damage rating for control (3.61) was slightly higher than the reduced spray frequency (3.44) and IPM (3.22). Insecticide applications were reduced by 50% for reduced spray frequency and 66% for IPM, as compared to the control plots. Insecticide use reduction helps to ease concerns regarding pesticide exposure in the community while providing an economic benefit. After concluding the study there is a very slight tradeoff between visual pest damage and insecticide applications spray frequencies. Therefore, adopting the reduced spray frequency schedule uses half the number of insecticides with little to no impact on the visual quality of the turfgrass.

USING SUAS AND MULTISPECTRAL SENSORS TO QUANTIFY FERAL HOG DAMAGE IN FORAGES

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Feral hog populations and their range continue to expand. The USDA estimates feral hog damage to agriculture at around $1.5 billion annually. Accurate damage quantification has proved to be difficult.

The main objectives of this project were to collect whole field imagery of feral hog damage in forages using small Unmanned Aerial System (sUAS) a Matrice 300 RTK (SZ DJI Technology Co., Ltd., Shenzhen China) equipped with a multispectral sensor and to develop a workflow that accurately highlights and efficiently quantifies damaged areas. Mission flights collected imagery using a 5 band Micasense RedEdge sensor (AgEagle Sensor Sysems Inc. Wichita, Kansas 67226) which captured narrow spectral bands of blue, green, red, NIR and Red edge. With these bands, four separate layers were created and compared; the raw Red Edge and NIR bands, a composite RGB layer, and a Normalized Difference Vegetative Index (NDVI). While the RGB layer was easy to visualize, the raw bands

and NDVI provided single values for each pixel that facilitated the extraction of quantitative information for comparisons. While the established vegetative indices NDVI provided quantitate values, early attempts were unsuccessful at correlating pixel values to damage; however, disturbed soil turned by feral hogs was distinguishable when looking at the raw Red Edge and NIR imagery.

The team is currently exploring a threshold approach to map this observable damage in an attempt to ultimately develop an index or workflow using a combination of these two bands (Red Edge, NIR) that accurately highlights damage represented as a heat map. The results were used to visualize and quantify the extent of damage across a whole field.

This project demonstrated the potential value of sUAS and multispectral imagery in efficiently quantifying hog damage in forage production systems.

EVALUATING DURACOR IN FLORIDA PASTURE WEED MANAGEMENT

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Hard to control pasture weeds is an issue for Florida cattle producers. Two problematic weeds are tropical soda apple (Solanum viarum) and dogfennel (Eupatorium capillifolium). DuraCor is a premix of florpyrauxifen-benzyl & aminopyralid, promoted as a new resource for pasture weed management. However, limited research has been done to determine if this premix effectively controls Florida pasture weeds and if tank-mix partners are required for optimum weed control. Therefore, experiments were conducted at Limestone, FL (dogfennel at 12 inches tall) and Lake Wales, FL (dogfennel at 35 inches tall and tropical soda apple at 16 inches tall) to determine the efficacy of DuraCor alone and with tank-mixes. Visual evaluations of weed control were performed at 30, 60, and 120 days after application (DAT). Treatments were applied using methylated seed oil (MSO) at 1% v/v and a non-ionic surfactant (NIS) at 0.25% v/v as adjuvants. In general, the addition of PastureGard HL at 8 fl oz acre-1, WeedMaster at 48 fl oz acre-1, and 2,4-D at 48 fl oz acre-1 improved dogfennel control over that with DuraCor alone at 16 fl oz acre-1. Control was similar to that provided by the standard tank-mix of GrazonNext HL + PastureGard HL at 24 + 8 fl oz acre-1. MSO provided better initial dogfennel control by 30 DAT, though there was no adjuvant effect by 60 DAT at Limestone. DuraCor alone and with tank-mixes provided at least 85% control to TSA at Lake Wales, except when tank-mixed with 2,4-D, which resulted in no greater than 57% by 30 DAT. Adjuvant type does not appear to impact tropical soda apple control. After the first evaluation, frost precluded further data collection at the Lake Wales location. Overall, these data suggest that TSA is susceptible to DuraCor; however, tank-mix partners are necessary for optimum dogfennel control. Furthermore, this new herbicide combination with a tank-mix partner provides a similar control of dogfennel and tropical soda apple as compared to the standard tank-mix of GrazonNext HL + PastureGard HL.

DETERMINING WET SOIL TOLERANCE OF 4 CLOVER SPECIES

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Many low-lying pastures in Arkansas are frequently waterlogged in late winter and early spring making it difficult to maintain good stands of different forages including legumes. This trial looked at the wet soil tolerance of four different clover species. The goal was to determine if any would be a suitable option for those low-lying pastures that tend to stay wet through the late winter and early spring months leaving fewer forage options. Planting was done on October 8th of 2020 utilizing Arrowleaf (Blackhawk), Balansa (Fixation), Crimson (Dixie), and White (Durana) clovers. The clover species chosen were clovers that were readily accessible in the state. The trial was replicated four times and planted using

a no-till planting method. Results conducted during this study on very wet soil, showed that Balansa clover had excellent growth and stand density, but stands of Crimson and Arrowleaf clovers were thin and poor. Balansa had a canopy height of 20" on April 20th compared to a canopy height of only 7" for the Durana white clover. Maturity of Balansa appears to be between that of Crimson clover (very early) and that of Arrowleaf clover (very late). April to early May appears to be the period of highest productivity for Balansa. There was minimum forage growth in fall and winter, however, as day length increased, and temperature warmed upright forage growth was promoted with Arrowleaf and Crimson annual clovers.

MYCOTOXIN CONCERNS IN THE FLORIDA BEEF CATTLE INDUSTRY

APPLIED RESEARCH

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Beef cattle producers in Florida have expressed concerns of the potential presence of mycotoxins in warm-season perennial grasses and their effect on cattle health. Although fungi associated with cool-season grasses have been known to produce mycotoxins that can lead to economic losses in the cattle industry, little is known about the presence and severity of mycotoxins in warm-season perennial grasses. Specialists and Extension Agents collaborated in a multi-year study with the aim of evaluating mycotoxin occurrence and severity in warm-season perennial grasses. Forage samples of limpograss, bermudagrass, and bahiagrass were collected from 13 ranches across Florida from 2017-2019. Additional forage samples were taken in Osceola and Brevard Counties during 2021-2022 with focus on seasonal changes of fungal populations and mycotoxin levels. To date, over 500 samples have been collected for multi-mycotoxin testing and analysis of fungal community. Results showed that forage species affected the fungal community and mycotoxin profile of the samples. Our results confirmed the identification of Fusarium, Alternaria, and Aspergillus, and the presence of several lesser-known mycotoxins termed "emerging mycotoxins". Co-occurrence of two or more mycotoxins was common. Of importance to cattle health, levels of zearalenone, along with derivatives, α-zearalenol β-zearalenol, and zearalenone-4-sulfate, were prevalent in higher concentrations in bermudagrass and limpograss. Fumonisin, beauvericin, enniatin, ergonovine, elymoclavine, lysergol, diphydrolosegol, agroclavine, alternariol, and alternariol methyl ether were also present in samples. During a sample collection in Osceola and Brevard Counties, the fungal stroma of Myriogenospora atramentosa was first documented in limpograss (c. Floralta). Although results confirm the presence of mycotoxins in Florida pastures, there are many contributing factors that can influence whether concentrations are of concern for animal health. Additional sampling and further research should determine tolerance levels for beef cattle exposed and pasture management strategies that mitigate mycotoxin in forage grasses. This study exemplifies how collaboration between Specialists and Extension Agents have a significant role in research and scientific discoveries.

USING THE BORDER ROW RICE METHOD AS A VIABLE ALTERNATIVE TO CONVENTIONAL FLOOD RICE

APPLIED RESEARCH

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This applied research trial set forth to demonstrate that rice production using the border row rice method can be a worthwhile and profitable method for farmers to utilize. This method requires a precision leveled field that does not possess a cross slope. This field was divided by small levies or borders every 60-80ft. These borders are not required to be substantial as in traditional fields but provide just enough height to direct water down the field. Because this rice never goes into a traditional flood, water is flushed across the field to ensure adequate moisture. The field selected for this trial was a Crowley-Stuttgart loam which is excellent for flushing water across instead of holding a flood. Prior to seeding, two burn-down herbicide applications were sprayed across a 27-acre field, giving us a clean field to start our demonstration. After the burn-down applications, border rows were pulled

and spaced 60ft apart. No seed beds were pulled for this field. Instead, seeding was done via flat drill. The cultivar used for this trial was RiceTec FP 7321. The field was scouted by Cooperative Extension Service agents weekly. Agents provided fertilizer timing recommendations based on growth stage, watering recommendations based on growth stage and soil moisture, and fungicide/insecticide applications based on weed/insect observations. At harvest, this border row rice field yielded 248.58 bu/ac and milled at 48/70. Of 16 field demos across Arkansas, which included traditional flooded and row rice fields, this field yielded the highest bu/ac harvest, had the lowest total cost per bushel of the demonstration fields and recorded the highest return above specified expenses at $692.88 per acre. This created of profit of $18,710.73 for this 27-acre field. This demonstration showcases that with proper conditions that the border row rice method can be a viable option to producers in the rice industry.

ONE YEAR ASSESSMENT OF THREE ST. AUGUSTINE CULTIVARS RESISTANCE TO TAKE-ALL ROOT ROT

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Introduction

Take-all root rot is a one of the major problems faced by Florida homeowners. The disease is known to affect all warm season turf grass species. Not all turf species and cultivars are equally susceptible to take-all root rot and not all species express the same symptoms.

Take-all root rot is caused by the fungus Gaeumannomyces graminis var. graminis (GGG). The disease not only affects roots but also found on rhizomes and stolons. The disease mostly occurs in the wet, humid summer months. In January 2021, we established a take-all root rot trial in Kenansville, FL on three cultivars of St. Augustine: Floratam, CitraBlue

Methods

This was a completely randomized block design with eight replications at one square meter each. This area was inoculated with GGG in 2018. These were evaluated using a visual assessment of turf, using the Horsfall-Barrat Scale to indicate disease severity. Drone imagery and the enhanced normalized difference vegetative index (endvi) algorithm were also utilized in the assessment. All plots were cared for according to BMP recommendations. A visual assessment was conducted a year post planting using the Horsfall-Barratt Scale. The disease was confirmed via microscopic observation.

Results

The Horsfall-Barratt score for CitraBlue was 4.5 (indicating 12% disease). Floratam scored 9.3 (indicating ~90% disease). ProVista scored 10.5 (indicating ~97% disease). Drone imagery was also incorporated into the assessment for later correlation with the Horsfall-Barratt assessment.

Conclusion

When replacement of a Floratam lawn is needed, CitraBlue is currently a very tolerant cultivar of St. Augustine turf to take-all root rot. We intended to establish these plots for a two-year assessment, but the Floratam and ProVista turf plots are unlikely to survive for a two-year assessment.

USING FLY TAGS FOR HORN FLY CONTROL IN ALABAMA

APPLIED RESEARCH
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Need: Horn flies are the most economically important external parasite of cattle, costing the cattle industry hundreds of millions of dollars each year. There are many products labeled for control of horn flies in Alabama, one of the commonly used delivery methods is via insecticide impregnated ear tags. Through repeated use, many of these products have become virtually useless due to horn fly resistance. This research was conducted to give up-to-date protocols for the use of horn fly tags in Alabama cattle production systems.

Methods: There are currently tags labeled for horn fly

control from three insecticide groups: organophosphates, pyrethroids, and avermectins. A total of six brands of fly tags were tested: two organophosphate tags (Patriot® and Corathon®), three pyrethroid tags (Python Magnum®, Saber Extra®, and CyLence Ultra®), and one avermectin tag (XP 820®). The six fly tag brands constituted the treatments, the experiment was replicated twice, giving 12 treatment herds and two control herds. The tags were placed in 12 herds averaging 30 head across Southwest Alabama. Tags were applied according to label directions once horn fly numbers reached the economic threshold (200 flies/animal). Tags were assigned based on the prior years horn fly control tactic (not randomly assigned). Accounting for previous years control method allowed for a true test of the fly tag while also accounting for possible resistance in the local horn fly population. Fly counts were taken by choosing five treatment cows at random and recording the total flies on each cow. Counts were taken on a weekly basis until either: tag failure was noted by reaching economic threshold, or fly season ended.

Results: The control groups consistently showed a higher fly count than all the treatment groups throughout the study. All the fly tag treatments kept horn fly numbers below economic threshold throughout the season.

Implications: Commercially available fly tags can be effective at managing horn flies in Alabama if used correctly. Producers need to rotate between insecticide classes each season. Make sure to wait until horn flies reach economic threshold before applying tags and cut out tags at the end of each season.

A SURVEY OF SPRAY WATER QUALITY IN EASTERN SOUTH CAROLINA: THE IMPORTANCE OF GREENHOUSE FLOAT WATER AND SPRAY WATER SAMPLING FOR FLUE-CURED TOBACCO FARMERS

APPLIED RESEARCH
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South Carolina tobacco producers spend approximately 17-18% (~$730.00 / acre) of their total direct costs on crop protection in the form of herbicide, insecticide, fungicide, and sucker control applications, and 5-6% on transplant production. We often overlook the ingredient that makes up 95% or more of our spray and greenhouse floatwater solutions, and that is water. Extension agents in the Pee Dee Region have noticed a delicate balance between water quantity and water quality. Shallow wells usually pump smaller amounts of good quality water, and deeper wells often supply large amounts of water with decreased quality. This reduced water quality could result from saltwater intrusion into groundwater near-coastal counties and the mineral composition of underground geological formations. When these water quality parameters are unsuitable, pesticide efficacy or greenhouse transplant production can be negatively impacted. For example, spray water with a pH of 8 doesn't sound like a big deal, but the pH scale is logarithmic, meaning a pH of 8 is ten times more basic/alkaline than a pH of 7 and one-hundred times more basic than a pH of 6. Since many pesticides are weak acids (pH of 4-6.5), mixing them with a water source that has a higher pH (>6.5) could quickly break them down, making them less stable and, ultimately, not as effective. Poor water quality can be very costly to South Carolina tobacco producers since reduced crop protection and transplant production directly correlate with decreased yields and/or profits. Water hardness and pH are the main two water quality parameters that affect pesticide performance. Iron levels and salinity (EC or TDS) can also hinder pesticide performance. Total Bicarbonates, pH, Sodium, and Chloride in Greenhouse float water are the main parameters that affect transplant production. After completing a water quality survey of the 10 tobacco producing counties, we observed a wide range of results throughout the survey area and even within the same county. This indicated the need to encourage growers to test all water sources used for pesticide application and transplant production.

EVALUATING THE ECONOMIC POTENTIAL OF ALFALFA ADOPTION IN THE DEEP SOUTH

APPLIED RESEARCH

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Many soils throughout the United States have been eroded and degraded from continuous crop production. Despite the widespread recognition of crop rotations as a means for increasing soil health by reducing soil erosion, nutrient loss, and pest cycles, many row crop producers have not yet implemented a crop rotation of more than two crops in their operation. One common perspective from producers is that while a crop rotation has benefits, their confidence in adopting and making another crop work is lacking due to economics and implementation. While the long-term benefits to the land from implementing a longer crop rotation is difficult to determine, we can begin to calculate the short-run costs and benefits for producers who choose to evaluate adoption themselves. During 2020 and 2021, alfalfa production data were collected from a row crop producer in Florida. An Excel spreadsheet was developed to analyze the revenue, cost, production, and net returns for planting alfalfa and marketing square bales to the local legume hay market. The spreadsheet helped the producer determine if alfalfa could be an economically viable crop to be implemented on their operation. The economic factors included in the spreadsheet were a) forage yield, b) cost of production, c) price per square bale, and d) net returns above total specified costs. Additional economic variables that were evaluated were projected breakeven levels for cost of production, forage yield, and price per square bale. For the seven fields that were evaluated the forage yield ranged from 2.1 to 3.4 tons/acre, the cost of production ranged from $413 to $657 per acre, and the net returns above total specified costs ranged from -$22 to $215 per acre.

PERFORMANCE OF BACTERIAL SPOT TOLERANT ADVANCED PEACH SELECTIONS IN ALABAMA

APPLIED RESEARCH

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Peach growers in Alabama are looking for competitive new cultivars to solve various production issues and improve production sustainably. Clemson University peach breeding program has developed new improved peach and nectarine selections that can considerably contribute to sustainability. Advanced selections ‘SC-1’ and ‘SC-2’ possess valuable traits, including fruit tolerance to bacterial spot. An experimental plot was established at the Chilton Research and Extension Center (CREC) near Clanton in Central Alabama in 2017 to test the performance of the two advanced selections in local conditions. The specific objectives of this study are to evaluate the vegetative and productive qualities of ‘SC-1’ and ‘SC-2’ and develop recommendations for peach producers in the state. The two selections produced their first commercial crop in 2021 when measurements were collected to determine total yield and fruit quality attributes. Due to a hard freeze event in mid-February, only 7% of flower bud survival was evident for ‘SC-1’. Consequently, a significant crop loss was evident by the poor total yield/tree (2.7 kg/tree) data recorded. Fruit size was 200.6 g on average for ‘SC-1’. In contrast, 80% freezing temperature survival of the flower buds was recorded for ‘SC-2’. Total yield per tree was high for ‘SC-2’ and averaged 38.3 kg/tree with a mean fruit size of 137.3 g, likely due to the high crop load of 337 fruit/tree. Both selections produced fruit with very attractive appearance and excellent taste. During the 2021 season when heavy bacterial spot infection was recorded in southeastern peach orchards, both selections demonstrated high fruit tolerance to this bacterial disease.

ANALYZING THE EFFECT PLANT POPULATION HAS ON YIELDS FOR DRYLAND CORN

APPLIED RESEARCH

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Across all the different production systems, Georgia corn growers have demonstrated the ability to achieve great corn grain yields in the past. These yields have been achieved through adoption of modern corn hybrids coupled with improved management technologies and careful attention paid to all production practices. One aspect of production practices involves determining seed population and spacing. There is no one plant population to maximize yield and net returns across all fields in Georgia. Optimum populations vary according to soil type, hybrid, irrigation capabilities, and individual management practices. Irrigated cropping systems can support greater plant populations than dryland cropping systems. Current plant population recommendations for irrigated corn in Georgia are between 28,000 to 36,000 plants per acre. In dryland cropping systems current plant population recommendations are between 18,000 and 20,000 plants per acre in sandy soils. In previous growing seasons, a local grower planted 24,000 seed to the acre on sandy dryland fields with the yield goal being 100 bu/acre. Using that information, as well as the growers desire to find out what populations work best for different fields, a seed population study was created. Three fields were identified and labeled as high yielding, mid-yielding, and low yielding. Three seed populations were tested in each field and were replicated 4 times across the fields using randomization. It was found that the yields from the 18,000 seed population resulted in an average yield of 100 bu/acre which matched the yield goal for the grower. 16,000 population did not show a significant difference when compared to 18,000, while yields from the 14,000 population were 15% less than 18,000.

ZINC FERTILIZER SOURCE IN RICE PRODUCTION

APPLIED RESEARCH

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Zinc (Zn) deficiency is the most common micronutrient deficiency in rice production. Zn deficiency can range from yield reductions of 10% to 100% yield loss in severe cases when not corrected. In soils with high pH (pH>6.0) and low soil test zinc (<2.5ppm) it is recommended to apply 10 pounds of actual Zn per acre. Producers in Monroe County do not have local access to a Zn product that can apply 10 pounds of Zn per acre economically. Producers have only been able to apply products containing 1-2 pounds/acre of Zn. This has resulted in hidden hunger reducing rice yields. Three fields were located in the county that required 10 pounds/acre of Zn according to University of Arkansas soil test reports. Two treatments per field were established containing three Zn fertilizer applications with a check. Soil samples were taken prior to plot establishment in the spring and again after harvest in the fall. Tissue samples were taken at midseason to determine Zn tissue concentrations. Results from tissue test and soil test were averaged together to aid in simplicity of conveying results. Midseason plant sample results revealed that all plots had sufficient Zn levels including the checks. However, Zinc Sulfate was the only application showing higher plant levels than the check indicating it is more water soluble than MicroMergeZn. MicroMergeZn plot tissue samples were no different than the check plot levels. Soil test results revealed higher soil test Zn levels across all plots in the fall compared to spring. The 2 pounds Zn per acre MicroMergeZn treatment only averaged a .75 ppm increase which did not improve soil test category results. The 10 pounds Zn per acre Zinc Sulfate and MicroMergeZn treatments resulted in two soil test report categories higher such as improving from low to optimum. Zinc Sulfate did so at a much more reasonable cost at $30/acre compared to $90/acre for the MicroMergeZn application. Awareness was brought to the county of the importance of correct Zn sources. Producers have since sourced Zinc Sulfate as a more economical choice providing the crop with needed nutrients adding yield potential.

AN EVALUATION OF FUNGICIDE PROGRAMS IN TWO PEANUT GENOTYPES WITH CONTRASTING DISEASE RESISTANCE

APPLIED RESEARCH

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Fungicides and cultivar selection are key components of a peanut integrated disease management plan. However, the interaction between these components on peanut diseases (e.g. white mold (Athelia rolfsii) and leaf spots (Passalora arachidicola; Nothopasslora personata) is unclear. The objective of this experiment was to quantify differences in disease response between peanut genotypes FloRun 331TM (FR331) and Georgia 06G (GA06) under seven Peanut Rx based fungicide programs and two controls. Leaf spot (LS) defoliation was estimated using the Florida 1-10 scale. Foliar disease onset occurred between 75 and 90 days after planting (DAP) with scale ratings ranging from 5 to 8 at 135 DAP. Stem rot incidence was recorded throughout the season as the number of 1-ft foci/90 ft of row with below ground hit ratings collected 148 DAP at digging. Fungicide program did not have an impact on stem rot hits, but incidence was numerically lower with FR331™ having 0.53 hits per treatment compared to GA06's 2.75 hits. Yield responses related to fungicide program varied between cultivars, however, both cultivars saw significant ($p < 0.01$) yield savings when fungicides were applied. These yield savings were larger on average for GA06 (1,825 lb/acre) than FR331 (1,588 lb/acre), especially for chlorothalonil alone applications (GA06 = 1827 lb/acre, FR331=997 lb/acre). Cultivar resistance as well as yield potential is critical to determining the impact fungicide programs will have on yield savings.

ASSESSMENT OF FOLIAR AND FERTILIZER IMPREGNATED MO FOR EFFECT ON NITRATE CONCENTRATION IN JOHNSONGRASS

APPLIED RESEARCH

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Toxic nitrate accumulation is a recurring problem in summer forages including sorghum-sudangrass (Sorghum bicolor L. Moench X Sorghum sudanese P. Stapf) and johnsongrass (Sorghum halepense L. Pers.) during drought periods in summer. The earliest authentic accounts of nitrate toxicity were reported by Mayo in 1895 when cattle died after eating cornstalks (Wright and Davidson, 1964). Acute nitrate poisoning causes anoxia in animals resulting in abortion of fetuses, low productivity, or death (Garner et al., 1979). Nitrate toxicity occurs most often during periods of drought, combined with nutrient deficiency, cloudy weather, or when heavy N applications have been made. However, toxic levels can occur under high N fertilizer application even with good rainfall. Although numerous studies have been done to determine the mechanism of toxic nitrate accumulation, no good recommendation exists for reducing these toxic levels in forage so that they can safely be used for livestock feed. Micronutrients play a major role in nitrate reductase (NR) activity. Molybdenum deficiency can lead to high nitrate levels since Mo is required by NR (Marschner, 1986). Graham (in Davies, 1956) described soils of known and suspected Mo deficiency as being highly weathered with a high percentage of quartz and extremely low amounts of feldspars. This description fits many Arkansas soils and a large part of the southeastern United States. Ramani and Kannan (1986) reported higher NR activity in sorghum supplied with increasing amounts of Mo. Forage nitrate-N concentrations below 700 ppm are considered safe for livestock consumption with no additional feeding modifications. If Mo seed treatment or foliar Mo application can reduce toxic forage nitrate concentrations to safe levels for livestock use, producers throughout the U.S. could benefit. Fewer animals would be lost from nitrate poisoning. Application of Mo as foliar applied or impregnated fertilizer did not reduce incidence or concentration of high nitrate-N levels in

post-application samples of johnsongrass forage. Forage nitrate concentration was not as high as expected at the highest N rate application of nitrogen fertilizer at 150 lbs/a increased nitrate-nitrogen concentrations above safe levels (700ppm).

LATE SEASON BERMUDAGRASS CONTROL IN PECAN ORCHARD HERBICIDE STRIPS

APPLIED RESEARCH
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Georgia is the largest producer of pecans in the United States with approximately 88 million pounds grown annually and a significant value of $263 million dollars. With an increase in popularity for pecan production, and lower commodity pricing in other agricultural areas, some land use has shifted to implement new pecan orchards throughout the state. Orchards planted in old pastures, hay fields, or areas where bermudagrass is common can see significant competition between this weed pest and young pecan trees. Therefore, an experiment was conducted to assess the effectiveness of 4 post emergent herbicides in a late season application on established bermudagrass in a young pecan orchard herbicide strip. Roundup, Fusilade, Select, and Poast were applied at the maximum labeled rate in a single application to herbicide strips of non-bearing pecan trees. Herbicides were mixed in two-liter bottles with a non-ionic surfactant, and applied at a rate of 10 gallons per acre. Each treatment was randomized and subsequently replicated three times with a plot being 10 feet wide and 25 feet long. Plot ratings were taken 21 days and 30 days after application. Ratings were taken for overall control and bermudagrass control for each plot. Statistical analysis was performed using ARM software, and statistical differences were observed. The greatest level of control noted in this study came from Roundup with 100% control of bermudagrass 30 days after application. Fusilade did improve in bermudagrass control from the 21 day to 30 day rating. Poast and Select both provided the least amount of control.

THE EFFECT OF POTASSIUM ON SUGARS, CRUDE PROTEIN, AND TONNAGE IN LIMPOGRASS

APPLIED RESEARCH
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The roots of Agriculture Extension have always been feed with producer input. Whenever producers have issues, they let Extension know so that we may examine the issue and try to come to a resolution. This project began just as so. A producer familiar with watermelon production prosed the hypothesis that Potassium fertilization would increase sugar content in Limpograss (Hermarthria altissima). So, at the UF/IFAS Trial Plots in Kenansville FL we designed a randomized block trial with 4 treatments, and 3 replications. 0 (control) 80, 100, and 120lbs of Potassium per acre were the treatments. Sugar content in the forage was quantified by crushing sample plant material and placing the extractant on a refractometer and estimating Brix content. In conjunction Crude Protein and Total Digestible Nutrients (TDN) was measured using in vitro analysis. Forage yield was measured by cutting and weighing round bales after each treatment. Our results showed that Potassium fertilization decreased sugar content in Limpograss. There was also an inverse relationship between Potassium fertilization and crude protein concentration. However, there was no significant difference between Potassium treatments. Potassium fertilization also increased forage yield. Our logic is that by increasing the forage yield from Potassium fertilization, the sugar content either doesn't increase at a similar rate or doesn't increase at all. Thus, causing the increase in yield to "dilute" the sugar content.

INVESTIGATING THE USE OF GENOMICS TESTING TO SELECT REPLACEMENT HEIFERS IN GEORGIA BEEF HERDS

APPLIED RESEARCH

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Reproductive efficiency is essential for beef herd success and profitability. It begins with replacement heifer selection. Traditional heifer selection depends on evaluating several physical traits such as age and body weight at weaning and age at puberty. The study design is to answer the question: Does genomic testing in beef replacement heifer selection have value for the average Georgia beef herd owner? We investigated the practical application and feasibility of genomic testing for selecting commercial beef heifers. In this study, we compared Neogen Igenity Beef genomic testing with pregnancy rates. Neogen reports the results as a quartile ranking for each heifer with the best being a 4-star rank and the lowest as 1-star rank. In this study three herds were evaluated. The first (Herd 1) consist of 27 heifers, the second (Herd 2) consisted of 20 heifers, and the third (Herd 3) consisted of 52 heifers. Heifers from herd 1 and 2 were selected from a herd on UGA Coastal Plain Experiment Station Beef Unit in Alapaha, Ga. Heifers in herd 3 were commercial heifers consigned to the UGA HERD program in Irwinville, Ga. Herd 1 pregnancy checks were performed on August 22nd, 2019. The correlation between Neogen rankings and days bred was 0.604 for Herd 1 first pregnancy. Herd 2 was checked August 20th, 2020 for first calf pregnancy. There was no significant difference ($P > 0.18$) between star ranking and pregnancy rates on pregnancy in Herd 2. Herd 3 heifers were pregnancy checked on March 17th, 2020. There was no significant difference in star ranking versus pregnancy rate for these heifers as well.

EFFICACY OF SELECTED ACARICIDES AGAINST BROAD MITE IN BELL PEPPER, GEORGIA 2021

APPLIED RESEARCH

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Bell pepper, Capsicum annuum, is a high value crop in Georgia. In the tri-county area of Tift, Colquitt, and Worth Counties, there are over 1,200 acres of bell pepper representing nearly $27,800,000 in economic value. Broad mite, Polyphagotarsonemus latus, is an economic pest of vegetable production in the area. Specifically, broad mites have been problematic in fall pepper and eggplant production. Broad mite populations can build rapidly in a field and their damage can affect plant growth weeks after control measures are taken. Damage from broad mite appears as malformed terminals and fruit caused by the mite's toxic saliva. The distorted growth of the terminal leaves is often mistaken for herbicide injury, nutrient deficiency, or physiological disorder. Scouting and early detection is critical to successful control of broad mite but can be extremely difficult due to the small size of the pest and the fact that mites could be present for at least two weeks before plant damage becomes apparent. A hand lens or microscope is necessary to view adults, as the females are .2 mm long and males are .11 mm. The purpose of this study was to evaluate selected products labeled for control of broad mite in pepper.

The experiment was conducted in a commercial pepper field in Omega, GA. Acaricides tested were Torac 21oz, Agri-Mek 3.5 oz, Portal 2 pts, and Magister 36 oz. Five terminals were collected per plot and all live mites counted on 24 Sept and 27 Sept, 3 and 6 days after treatment (DAT), respectfully.
All treatments were significantly different from the check 3 DAT. Magister and Torac provided significantly better control at 3 DAT when compared to Agri-Mek and Portal. Broad mite counts 6 DAT showed all treatments provided significantly similar control when compared to the check. There were no differences between treatments 6 DAT. These data suggest all treatments provided significant control of broad mite.

DREW COUNTY FURROW IRRIGATED RICE VERIFICATION FIELD

APPLIED RESEARCH

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The Arkansas Row Crop Verification Program is an interdisciplinary effort among growers, county Extension agents, Extension specialists, and Division of Agriculture researchers. It is a two year on-farm demonstration of all the research-based practices and technologies recommended to maximize the production and profitability of row crops in Arkansas. The overall goal is to verify that management according to Division of Agriculture recommendations can result in increased profitability compared to standard producer practices. The program began in 1980 with cotton. Rice and soybean verification programs began in 1983, followed by wheat verification in 1986, and corn and grain sorghum in 2000.

In the Rice Research Verification Program, the grower agrees to carry out recommended practices in a timely manner. Recommendations are based on Extension Service recommendations and are provided by the local county agent. The county agent visits the field at least once per week to monitor the field situation and potential problems. The Drew County furrow-irrigated rice (FIR) field was located just west of Tiller on Perry Clay soil. The cultivar chosen was RT 7521 FP treated with the company's standard seed treatment. The first year of the program, the field consisted of 40 acres and the previous crop grown was soybeans. The field was drill-seeded at 23 lbs/ac on May 4th. Emergence was observed on May 18th with a stand count of 7.1 plants/ft2. No tillage practices were used for spring field preparation. The field was harvested on September 12th yielding 184 bu/ac and a milling yield of 63/69. The average harvest moisture was 16%. The second year of the program, the field consisted of 35 acres and the previous crop grown was soybeans. The field was drill-seeded at 25 lbs/ac on April 20th. Emergence was observed on April 29th with a stand count of 9.9 plants/ft2. No tillage practices were used for spring field preparation. The field was harvested on September 2nd yielding 210 bu/ac and a milling yield of 47/67. The average harvest moisture was 15%.

EXPLORING A BIOLOGICAL ALTERNATIVE FOR TOMATO SPOTTED WILT VIRUS CONTROL IN TOBACCO

APPLIED RESEARCH

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The leading tobacco disease in Georgia is spotted wilt caused by Tomato spotted wilt virus (TSWV). TSWV is transmitted mainly by tobacco thrips (Frankiella fusca) in tobacco. TSWV leads to leaf necrosis and yield losses. Actigard® and imidacloprid have been used as pre-transplant seedling treatments in the majority of Georgia tobacco since 2006, resulting in 50% average reduction of spotted wilt. SP2700 (Ninja) has been utilized for viral control in tobacco and other plant species outside the United States. The primary objective of the trial was to test the efficacy of SP2700 (Ninja) as a biological alternative or accompanying treatment for TSWV control in Georgia tobacco production. Treatments were combinations of Actigard®, imidacloprid, and Ninja at fixed days pre-transplant (7 or 3d) and post-transplant (7, 28, and 49d). TSWV was significantly reduced by treatments which included either Actigard® and imidacloprid or imidacloprid and Ninja in the greenhouse prior to transplanting. Late application of imidacloprid following multiple applications of Ninja in the greenhouse and field did not significantly improve TSWV control compared to the non-treated check. Overall TSWV pressure was relatively low compared to other growing seasons and may have limited the ability observe trends in spotted wilt control between treatments. Continued investigation of Ninja for TSWV control in tobacco is recommended.

NORTH CENTRAL REGION ENTRIES:

BENEATH THE SURFACE: INVESTIGATING SOIL MICROBIAL COMMUNITIES AND ENZYME ACTIVITIES IN A CANFIELD SILT LOAM UNDER VARIOUS TILLAGE AND FERTILIZER MANAGEMENT SYSTEMS

APPLIED RESEARCH
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With increasing costs of inputs, many small farmers are focusing more on soil health to maintain yields and profitability while decreasing inputs. Part of a healthy soil is a diverse and active soil microbial community. In 2021, soil biological measurements were assessed in the Stark Sustainable Soil Initiative through funding from the Paul C. and Edna H. Warner Endowment Fund for Sustainable Agriculture provided through The Ohio State University Agro-Ecosystems Program. Soil microbial community analysis was determined through the fatty-acid methyl ester (FAME) method and potential soil enzyme activity was determined through assessment of three enzymes: N-acetyl-glucosaminidase (NAGase), a carbon and nitrogen cycling enzyme, acid phosphastase (Acid_P), a phosphorus cycling enzyme, and β-glucosidase (B_Glucos), a carbon cycling enzyme. These measurements were taken across eleven farms in Stark County (Northeastern), Ohio, with the same soil type but varying management techniques (i.e. tillage, fertilizer, etc.) at the 0-15 cm (6 inches) depth. Results revealed that hay fields had greater measurable soil health indicators than all cultivated fields, but there was no difference among tillage methods in cultivated fields [No-till (NT), Disc-chisel (DC), Mold-board plow (MP)]. In total microbial abundance, the Hayfields averaged 297 nmol g-1 while the cultivated fields averaged 158 nmol g-1, a 61% difference. There was a 57% greater NAGase activity and 65% greater Acid_P activity in Hayfields compared to cultivated fields but no difference in B_Glucos activity. However, while potential soil enzyme activity increased with increasing microbial population, there was a strong correlation between enzymes and substrates. Correlation analysis revealed a strong positive relationship between organic matter (LOI) and NAGase ($r=0.66$) and LOI and B_Glucos ($r=0.37$). These results suggest that increasing soil organic matter may reduce synthetic fertilizer inputs by providing soil microorganisms the substrates needed for enzyme activity and increased release of plant available nutrients.

SOFT RED WINTER WHEAT RESPONSE TO NITROGEN RATE IN A HIGH YIELD ENVIRONMENT

APPLIED RESEARCH
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Producers rely on university research to apply the proper rate of nitrogen for optimal wheat yields and to reduce the risk of nutrient loss into the environment. Few nitrogen rate studies have been completed in recent years in the Eastern Corn Belt. The objective of this study was to determine the nitrogen rate for optimal yields for soft red winter wheat at this location. AGI 217B, a medium-maturity variety, was established in the fall of 2020 on the OARDC Northwest Agricultural Research Station near Custar, Ohio. Seven nitrogen rate treatments were applied as urea-ammonium nitrate between greenup and early stem elongation (Feekes Growth Stage 6). Rates included in the study were 0, 40, 70, 90, 110, 130, and 150 pounds per acre. All treatments received 30 pounds of nitrogen per acre prior to planting. Experimental design was a completely randomized block replicated four times. Analysis was a simple ANOVA. Grain yield, test weight, and spike number were measured for each plot. Yields were 69, 72, 112, 122, 125, 126, and 131 bushels per acre for the 0, 40, 70, 90, 110, 130 and 150 nitrogen rates, respectively. The trend was for grain yield to significantly increase with larger nitrogen rates, $p<0.10$. Yields were similar for 90 and 110 treatments and similar for the 110 and 130 treatments. However, the 150-pound treatment was significantly larger than the lower rates suggesting that yield may have increased with more nitrogen. Thus, an optimum rate was not conclusive for this site for this year.

IMPROVING NUTRIENT DENSITY AND TRANSPORT OF BEDDED PACK MANURE BY COMPOSTING

APPLIED RESEARCH

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According to USDA-NASS 2018 data, Fulton-Henry-Williams Counties, Ohio are home to nearly 60,000 head of cattle and calves annually. It is estimated that over 90% of the manure produced on these farms is in the bedded pack or solid form. Since 2015, these farms have been restricted from hauling manure in the Western Lake Erie Basin (WLEB) during the winter months, creating a need to stockpile manure in dry stack barns or outdoors. Using a watershed peer group, five farmers at 8 sites composted solid cattle manure for this study. Goals of the project were to measure moisture, weight and volume reductions in manure, analyze nutrient samples throughout and encourage further distribution of manure nutrients to fields with low phosphorus test levels. The research involved each farmer weighing manure before and after composting, turning compost weekly with a commercial compost turner in a windrow, intensely sampling each windrow weekly, and transporting the nutrients to a desired low phosphorus field.

Results of the research from these eight sites show a 53% reduction in weight from 258 tons at the start to 121 tons at the finish. Manure volume reduced 28% suggesting an increased utilization of dry stack barns already in the watershed. The average transport distance by each farmer was 4.5 miles from the animal barn as opposed to a normal less than one mile distance. Nutrient density per ton doubled for phosphorus, potassium, sulfur, and calcium; all at statistically significant levels. Nitrogen density did not increase as it was used in the composting process.

FARM MACHINERY INJURIES: A RETROSPECTIVE ANALYSIS OF ADMISSIONS AT A LEVEL I TRAUMA CENTER IN NORTH DAKOTA

APPLIED RESEARCH

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Agriculture ranks among the most hazardous industries worldwide. However, agricultural injury (AI) rates are underrepresented due to a lack of a national reporting system. Few studies exist that examine the incidence and magnitude of injuries sustained from a variety of farm machinery, including augers, balers, and combines. The purpose of this study was to characterize the incidence, injury characteristics and outcomes of patients presented to a Level I adult trauma center in Fargo, North Dakota with farm machinery injuries (FMIs). We identified the types of machinery that are most commonly associated with FMI and described the nature of these injuries by severity, site, type, age, sex, and length of hospital stay. A retrospective review of the trauma registry of Sanford Medical Center Fargo (SMCF) was performed between January 2010 and December 2020. FMI were identified through ICD-9 & ICD-10 codes and analysis of injury descriptions entered into a free text field unique to the SMCF registry. We identified 106 patients with FMI, and manually categorized each injury by the type of machinery associated with the injury. Injuries related to falls, including falling on or into machinery, all-terrain vehicles, or animal handling were excluded. The age range for FMI patients was 10 to 86 years with a mean of 48 years and a median of 51.5 years. Males experience 91.2% of tractor injuries and individuals 65 and over account for 53% of all tractor injuries (n=18). Tractor injuries were the cause of five of the six FMI deaths. Males accounted for all deaths. Additionally, 24.5% of FMI are related to machine maintenance. Auger injuries are the second most common

FMI and combine injuries (n=2) and PTO injuries (n=4) were less common. Between 2018 and 2020, the number of tractor and auger injuries doubled. Our findings indicate FMI injuries represent a significant problem in the upper Midwest. Although tractor rollovers are preventable and most rollover fatalities could be avoided, we identified tractors as the most common cause of injury and death, especially for older male farm workers. These results underscore the need for further investigation into aging-related farm safety issues.

SHELL CREEK WATERSHED SURVEY: WATER QUALITY PERCEPTIONS AND LAND MANAGEMENT PRACTICES

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Concerns about flooding, soil erosion and poor water quality in agricultural production led to the 1999 formation of the Shell Creek Watershed Improvement Group (SCWIG), a group of farmers who identify and promote conservation practices in the Shell Creek watershed. The objective of this project was to assess Shell Creek watershed producers' perceptions about water quality, gauge the acceptance of practices, and identify practices producers are most likely to adopt.

A survey was developed for and sent to all producers farming land in the Shell Creek watershed. The survey was sent to 886 addresses. 194 responded (22%). Overall, 17.7% of survey respondents (n = 194) are very concerned about water quality affecting their farm management. When asked about how concerned they are about specific contaminants affecting water quality, the number of respondents "very concerned" increased to 26% for E. Coli and 26% for Atrazine in Shell Creek, and 30.4% for Nitrate in groundwater.

The conservation practice row crop producers were most likely to try was cover crops, with 21% "Very Likely" to try. Livestock producers were "Very Likely" to try a Manure Management System (16.5%, n=133) and Prescribed Grazing (14.9%, n=134). While, most row crop producers in the Shell Creek watershed already use one or more conservation practice that improves water quality, additional support for implementation of cover crops is the conservation practice that would likely lead to the conservation practice quickest adoption rate.

Producers are implementing reduced or no-tillage (79.0%, n =158), nutrient management (71.0%, n=155), and conservation crop rotation (66.9%, n=157) at high rates compared to the national average, although most do not consider themselves early adopters (12%, n =175). This may be the result of 20 years of grassroots efforts and peer pressure to use conservation practices in the watershed.

Support for the use of cover crops will likely result in the quickest conservation practice adoption rate for the watershed. Evaluating treatment options for E.Coli at the bottom of the watershed may prove more effective than developing voluntary practices throughout the watershed. Survey results will provide guidance for future local conservation education and incentive-based projects and programs.

GROWING THE LAVENDER INDUSTRY IN MISSOURI

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"Growing the Lavender Industry in Missouri" is being conducted by researchers from University of Missouri Extension to determine a set of standardized growing practices for lavender in Missouri. Lavender (Lavandula spp.) has increased in popularity for its appeal in the home landscape and its usefulness in culinary, medicinal, decorative products, beauty products, cut flowers, aromatherapy, and essential oil production. As a result, interest in commercial production has also increased and cultivation resources for growers in Missouri are sparse. Growing practices will include plant establishment, soil preparation, winter protection, cultivar selection, plant phenology, insect and disease issues, optimal flower and oil production parameters, and fertilization. Results of this

project will be disseminated via workshops, field days, and guide sheets for growers.

NORTHEAST REGION ENTRIES:

EXPLORING MARKET POTENTIAL OF BABY GINGER AS A NICHE CROP IN TEMPERATE CLIMATES

APPLIED RESEARCH
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Baby ginger (Zingiber officinale) is a unique product has potential as an excellent niche crop with a retail market value of $16 per pound. While ginger is typically grown in tropical climates, baby ginger can be produced in temperate regions using season extension methods. This project explored market potential for baby ginger production in Central New Jersey. In 2021, field trials of baby ginger (var. Peruvian Yellow) were conducted at the Rutgers University Specialty Crop Research and Extension Center using moveable caterpillar tunnels. Ginger yields were measured from eight replicated rows harvested over a four-week period starting in mid-October. After the ginger was harvested, samples of the crop were donated to 18 different local businesses (including food and drink establishments) with a survey to complete, indicating their satisfaction with the crop and how likely they might be to purchase it from local growers in the future. The majority of survey respondents had not used baby ginger before, and survey responses indicated that 100% of respondents were very satisfied with the crop overall and 91% were likely to purchase baby ginger from local farmers in the future (n=11). High yields combined with a high satisfaction from local businesses and their likelihood to purchase baby ginger from growers indicate strong market potential for baby ginger as a niche crop in temperate climates.

WESTERN REGION ENTRIES

USE OF CLINOPTILOLITE IN COMPOSTING OF DAIRY MANURE TO REDUCE AMMONIA EMISSIONS AND INCREASE STABILITY

APPLIED RESEARCH
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Composting is one of the most used methods to treat dairy manure. Most manures, including dairy manure, don't have the proper carbon to nitrogen ratio (C:N) for composting without the loss of nitrogen as ammonia during the composting process. Due to the lack of enough carbon sources to balance the initial compost mix in desert areas, including southern Idaho, USA, several amendments are available to try to reduce the loss of nitrogen during the composting process. This paper describes the effects of adding clinoptilolite zeolite to the dairy manure compost mix on ammonia emissions and the final compost product. Cumulative ammonia emissions were reduced by 12.3% ($p=0.05$) during the monitored periods. Ammonia emissions on successive turns showed a much marked decreasing trend on treated windrows compared to the control indicating a final reduction above the measured 12.3%. Solvita® maturity test show a significant difference ($p<0.01$) in the NH3 test results between control (CTR), index 2.5±0.35 and treatment (TRT), index 5.0±0.35. Carbon Dioxide (CO2) test results were no significant. All other calculated parameters show a significant difference between control and treatment. Maturity index was 4.8±0.33 for CTR and 6.7±0.33 for TRT ($p<0.02$). Oxygen depletion was 0.022±0.002 for CTR and 0.009±0.002 for TRT ($p<0.02$). NH4+ estimate was 1167 for CTR and <200 for TRT ($p=0.05$). Laboratory results showed that Nitrate concentration in the treatment compost, 702±127 mg/kg was three times higher than the control, 223±127 ($p=0.05$) The NO3 to NH4+ ratio (NO3:NH4) in the treated windrows is also indicative of a much more stable compost than what is to be expected in a dairy compost with such

low initial C:N. The treated compost had a higher maturity index and stability, it also had significantly less emissions potential, less phytotoxicity and noxious potential than the control. The project demonstrated the feasibility of using the addition of clinoptilolite zeolite into the composting process as a Best Management Practice to change the nitrogen dynamics and reduce NH3 emissions during the composting process, increase the maturity and stability of the final compost, and reduce its NH3 loss potential when applied.

WINTER SQUASH EVALUATION IN NORTHERN NEVADA

APPLIED RESEARCH
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Reno

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Recently, the local community has gained immense knowledge of eating local and seasonal commodities through educational activities provided by food hubs and Extension outreach efforts, which have boosted the market demand for locally grown produce. This increased demand and thus consumption has sparked the stakeholder's need and interest in specialty crop production in northern Nevada. Based on identified needs, a winter squash variety trial was conducted at one of the stakeholders' fields in Fallon in 2020 to test squash varieties for production potential. The objective of this research and the educational project was to evaluate the new variety of winter squash, 898 with concentrated sweetness, flavor, beta-carotene, and mature in 110 days, and compare the outcome with already existing two varieties (Honey nut and Waltham). Based on the results of this trial, the 898 variety yielded the highest with the production of 33 tons/ac of winter squash; however, the honey nut variety yielded the lowest of 24 tons/ac. The Waltham variety produced the largest squashes yielding 30 tons/ac.

MANITOBA MAPLE, ACER NEGUNDO, SYRUP PRODUCTION IN WYOMING

APPLIED RESEARCH
Brian Sebade
Extension Educator
Laramie

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Commercial maple syrup production is nonexistent in Wyoming. Wyoming is host to a native maple tree known as the boxelder or Manitoba maple, Acer negundo. Manitoba maples produce a sap that can be collected and then boiled to produce an edible syrup. Raw sap is boiled to evaporate water from the sap and concentrate sugars to make a syrup. Two sites were used in Wyoming to evaluate the potential of Manitoba maple syrup. Both sites produced raw sap that was processed into a quality syrup. Three different grades of syrup were observed at the Savery, WY site. The amount of sap collected varied at each site with some trees producing very little to no sap. The greatest amount of sap produced from a single tree was 40.4 liters (10.7 gallons). A total of 1 liter of syrup was produced at the Beulah site and 5.4 litters was produced at the Savery site. Based on the results from this project it is apparent future research is needed. Specifically, it is recommended the economic viability of Manitoba maple syrup production be evaluated as a potential commodity in Wyoming. It is also suggested that the potential correlation for sap production related to tree health, age, and size be more closely examined.

COMPARISON OF PUBLIC AND PRIVATE LAB FERTILIZER RECOMMENDATIONS IN FIELD CROPS

APPLIED RESEARCH

Mark Nelson
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UTAH STATE UNIVERSITY
BEAVER

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There are many sources that growers utilize to determine fertilizer needs for crops such as private and public labs. In many cases, these sources provide recommendations for a specific crop that will vary greatly, and the resulting fertilizer and application rates recommended can lead to large differences in costs for the grower. To correct or avoid macronutrient or micronutrient deficiencies in major crops, recommendations sometimes call for fertilizer rates that are excessive or not cost-efficient. Evaluating the effectiveness and economics of current fertilizer guidelines and recommendations will help growers to make better-informed decisions when it comes to choosing recommendation sources and fertilizer levels. An experiment was established in 2021 with 12 sites across the state of Utah in alfalfa, small grains, and corn to test and compare the fertilizer recommendations of five labs. The recommendations tested were from two public labs and three private labs located in the Western United States. A single, large composite soil sample to 12 inches from each site was dried, ground, split, and sent to each of the labs for analysis. The macronutrient and micronutrient rates recommended by each lab were then applied in four replications at each of the 12 sites. All fertilizer products were broadcast-applied in the early spring of 2021 as dry granular products. Results from 2021 indicate that there is little to no difference statistically in crop yield between the five recommendations and the control, where no fertilizer was applied at all. Across the four corn sites, there was no statistical difference in yield between treatments. Likewise, fertilizer recommendations had no effects on alfalfa yield in 14 total harvests at five sites. While very small differences in yield were observed, the cost per acre for each of the treatments from the labs varied greatly. Differences in the costs of recommendations among labs varied from $200 to $800/acre across the 12 sites. With the high fertilizer cost we are currently experiencing, these costs would be much higher this year.


NATIONAL ASSOCIATION
COUNTY AGRICULTURAL AGENTS
RESEARCH
EXTENSION
LAND GRANT COLLEGE
NACAA

Poster Session

Extension Education

2022 NACAA

107th
Annual Meeting
and
Professional Improvement Conference

West Palm Beach, Florida

2022 Poster Session
Extension Education

1st Place

KEEPING LOCAL TRADITIONS ALIVE DURING COVID-19 WITH VIRTUAL FARM TOURS

EXTENSION EDUCATION
Morgan Pinkerton
Sustainable Agriculture and Food Systems Agent
UF/IFAS Extension
Sanford

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In Seminole County, Florida, Farm Tour is a long-time tradition, held for over 20 years, to encourage support of local farms and educate stakeholders on agriculture. Historically, participants attended an in-person educational tour of local farms, but in 2020, this event did not occur due to transition of extension faculty and the COVID-19 pandemic. Nonetheless, the community expressed strong interest and support for continuing the Farm Tour tradition. In 2021, due to continued COVID-19 precautions, Farm Tour pivoted to a virtual format for the very first time. University of Florida, Institute of Food and Agricultural Sciences (UF/IFAS) Extension Seminole County developed six high-quality videos in collaboration with Seminole County Government TV (SGTV). Each video included farmer-led content on topics like organic agriculture, agritourism, livestock, the nursery industry, pollinators and more. Short (<5 min) videos were also paired with an educational blog that dove deeper into the topics. Content was shared and promoted across multiple social media platforms during a week-long event in late Spring. A follow-up survey was used to measure outcomes. The 2021 Seminole County Virtual Farm Tour reached over 2,700 people which greatly exceeded the average 40-50 people at in-person Farm Tours in the past. In a follow-up survey, 100% of survey respondents (n=67) adopted at least one practice to support local agriculture after viewing the Virtual Farm Tour (ie. 83.6% purchased more local agricultural products, 71.6% helped to protect honey bees and other pollinators, 65.7% checked the label of produce in the store to see where it was grown, 55.2% participated in an agritourism activity, and 44.7% encouraged youth to explore careers in agriculture). The 2021 Seminole County Virtual Farm Tour used a novel approach to keep the Farm Tour tradition alive and led to the development of long-lasting educational content focused on local agriculture. Feedback from farmers and viewers was extremely positive and indicated a strong desire for more virtual Farm Tours. Without a doubt, a virtual component will continue to be a part of the Farm Tour tradition into the future.

2nd Place

FEMALE PRODUCERS INCREASE SKILLS AND EDUCATION THROUGH CATTLE W.I.S.E (WOMEN INCREASING SKILLS AND EDUCATION)

EXTENSION EDUCATION
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The United States Department of Agriculture's (USDA) Census of Agriculture reported a 115% increase in farms operated principally by women between 2012 and 2017. Women make up 36% of all operators and 56% of farms have at least one female producer associated with the operation. Female producers are the backbone of many farm families where men are the principal operators. Cattle are ranked second in total sales of Virginia farms. Recognizing the impact that female producers have in the cattle industry (both dairy and beef), our group set-out to provide a female friendly environment to foster learning and to improve and build upon basic skills that may be overlooked in typical programming. This was accomplished by providing a daylong program stacked with cattle related topics taught through hands-on lessons by female instructors. Areas covered included reproductive and calving issues, trailer/tractor driving, and a BQA Certification including chute-side training and low-stress cattle handling. Funds were secured from the Virginia Beef Industry Council to support this program.

We had 47 women participate in the Cattle WISE program held in October 2021 at the Buckingham Agricultural Resource Network (BARN). During a post-conference evaluation, 97% of respondents stated that the program either met or exceeded their expectations. It was reported that 84% of participants indicated that they will or have already implemented some of the suggestions, management skills/techniques, and practices taught at Cattle WISE. One individual stated "I'm so glad I came! This was so empowering, it was so nice to be in a welcoming environment of capable and supportive women!" Based on these results and informal feedback from participants, we plan to conduct an Equipment WISE as well as other commodity specific WISE programs in the future.

3rd Place

NEW EXTENSION PROGRAM HELPS GOVERNMENT AG SERVICE PROVIDERS UNDERSTAND MARYLAND FARMING

EXTENSION EDUCATION
Andrew Kness
Agriculture Agent
University of Maryland Extension
Street

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Government agricultural (ag) service providers are an integral part of the agriculture industry. Employees within these agencies often have degrees in areas outside of agriculture and do not typically receive extensive on-the-job training regarding agriculture or general farming practices. Recognizing this problem, the University of Maryland developed a training program to educate government ag service providers on basics of Maryland production agriculture. The training consisted of a two-day program, with the first day being online virtual classroom education and the second day being hands-on learning on working farms. Participants were able to learn about Maryland's agricultural sectors and common production practices in each sector, and got to experience what production looks like up-close during the farm tours. In total. 126 government ag service providers participated in the program. Post-course survey data indicate Ag 101 significantly improved their knowledge and understanding of agriculture, farming practices, and farm safety; and as a result, service providers will be able to offer better service to the farmers they serve.

National Finalists

BUILDING THE FOUNDATION: CONNECTING MIDDLE SCHOOL YOUTH TO AGRICULTURE

EXTENSION EDUCATION

Rachel Owens
Livestock Agent
N.C. Cooperative Extension
Monroe

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NC Cooperative Extension - Union County Center, along with Union County Public Schools, recognized the importance of agriculture and its economic impact in Eastern Union County. Through this, East Union Middle School was identified as an Agriculture Technology Academy, where students and educators in all subject matter areas would engage with each other through educational facilitation involving an agriculture-based curriculum. N.C. Cooperative Extension - Union County Center partnered with Career Readiness Educators to determine the initial needs of the program and created a development plan for program expansion. This development plan identified several key outcomes and impacts. Goals identified included providing exposure to community-based agriculture and focusing on underserved populations, increasing awareness and appreciation for food production systems, creating community support for the Ag Tech program, and allowing youth to explore local agriculture career opportunities. Programs were then created to develop short, medium and long term goals for the overall program. Action plans were implemented using a variety of delivery methods for student and educator success, including experiential learning, design and construction of curriculum, and professional development for educators. Program evaluations have demonstrated the successful execution of program outcomes. Through program impacts achieved, additional middle schools have been identified to expand the agricultural-based curriculum.

READY SET GROW! GARDENING WEBINARS

EXTENSION EDUCATION

Marisa Thompson
Urban Horticultural Specialist
New Mexico State University
Los Lunas

Authors: Marisa Thompson[1], Emily Bruton[2], Suzanne DeVos-Cole[3], John Garlisch[4], Sara Moran Duran[5], Lynda Garvin[6]

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In response to the public demand for gardening classes, especially for at-home food production, a collaboration of Extension Agents Emily Bruton of Socorro County, John Garlisch & Sara Moran of Bernalillo County, Suzanne DeVos-Cole of Mora County, Lynda Garvin of Valencia County, former NMSU IPM Specialist Dr. Amanda Skidmore, and Urban Horticulture Specialist Dr. Marisa Thompson created the "Ready, Set, GROW!" gardening webinar series (https://desertblooms.nmsu.edu/ready-set-grow.html) with live virtual classes on timely gardening topics. These free monthly classes continue to be popular, with over 2,000 registered participants and over 10,000 recorder views on Zoom, Facebook, YouTube, and the Desert Blooms website between March 16, 2021 and March 15, 2022. Recorded sessions are posted to the webpage and distributed through social media. Webinars are delivered by the Ready, Set, GROW! Team Members, NMSU CES faculty, and invited local speakers. Scheduling, marketing, registration, and the webpage are all maintained by Team members. With the use of online technology, the class attendance increased by 3,150% per class, from an average of 20 participants for in-person classes prior to the pandemic to 650 per Ready, Set, GROW! webinar. Of 418 evaluations completed by participants, 99.5% would recommend the series to others. 90% of participants reported they would change current or implement a recommended gardening practice(s) based on

information learned from a class. Our Team believes that gardening should be as accessible as possible to anyone wanting to learn, implement, and share these science-based practices.

UW EXTENSION OFFERS ARTIFICIAL INSEMINATION SCHOOLS ACROSS WYOMING

EXTENSION EDUCATION
Chance Marshall
Extension Educator
UNIVERSITY OF WYOMING
Lander

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Artificial insemination (A.I.) has been available to cattle producers for decades. Still, less than 10 percent of all beef cattle females are bred via A.I. and just 7.6 percent of operations utilize the technique at all (Hall, 2019). However, by utilizing the technique of A.I., cattle producers can introduce proven sire genetics to realize superior genetic progress quickly and economically. Traits such as weening weight, feed efficiency, and age at puberty can be improved without actually owning or leasing sires. Cattle artificial insemination schools can be found in various locations across the United States. However, the cost of enrollment can be high while travel to these schools for Wyoming cattle producers can also be both expensive and time consuming. To fulfill this educational need, University of Wyoming Extension (UWE) educators and specialists have collaborated to provide 15 beef cattle A.I. schools in seven different locations across the state since 2017. These schools are three days long and include classroom training and hands-on application. Major topics covered are reproductive anatomy and physiology, nutrition, heifer development, semen/equipment handling, genetics, heat detection, and estrus synchronization. In addition to managing reproduction of their own cattle, participants can become certified A.I. technicians for hire and/or receive college credit. Visual teaching aids and harvested reproductive tracts are utilized during classroom demonstrations. Each afternoon, students can develop their skillset and palpate live cattle in custom-made portable chutes that hold up to 16 cows at one time. Each student must pass an insemination rod through the cervix of a cow unassisted in order to receive a “passing” grade. The cost of the schools is $100 and each student receives a training manual. Approximately 225 students have graduated from the schools during the last five years. Graduates of all ages have applied their knowledge gained from the schools to improve productivity and viability of their operations.

DEVELOPMENT OF HEMP PRODUCTION RESOURCES FOR NEW JERSEY

EXTENSION EDUCATION
Michelle Infante-Casella
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RUTGERS NEW JERSEY AGRICULTURAL EXPERIMENT STATION COOPERATIVE EXTENSION
Clarksboro

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Hemp is a new crop for many producers throughout the United States. Recently, the 2018 Farm Bill directed the United States Department of Agriculture to establish a national regulatory framework for hemp production in all 50 states. Rutgers Cooperative Extension Agricultural Agents recognized the need for research, education, and outreach for farmers who were investigating hemp production. The New Jersey Hemp Farming Act was enacted in August 2019 with hemp permits from the NJ Department of Agriculture readying farmers to grow hemp for the . Just prior to the implementation of New Jersey Hemp Farming Act, these agents immediately began answering stakeholder questions, planning field research for hemp, and started working to create hemp resources for agricultural service providers and farmers in New Jersey and others in the region. Two Agricultural Agents on the team were among the first persons in the state to apply for and receive hemp permits from the New Jersey Department of Agriculture. In addition, the team secured grant funds from the USDA Northeast Sustainable Agriculture Research and Education, Professional Development Program grant in 2020-2021 in the amount of $39,462 to create hemp production resources and $54,850 in funding from the Rutgers New Jersey Agricultural Experiment Station, in 2020 -2021, from the Special Funding Initiative to conduct field research studies and outreach. Through their efforts in hemp crop production the team published two extension fact sheets, published a field production guide for commercial hemp, published 2 referred journal articles, 1 professional conference proceeding article, 8 grower conference proceeding articles, conducted 2 replicated field research projects, produced a podcast about hemp production, produced a video about the Rutgers hemp program, developed a Rutgers hemp website, created and

managed a Rutgers hemp Facebook page, and provided 10 presentations to farmers and agricultural service providers on hemp topics. Throughout these efforts the team has provided hemp information, education, and outreach to more than 3,255 persons.

ASSAY FOR DETECTING RACTOPAMINE IN PIG HAIR

EXTENSION EDUCATION
Casey Zangaro
Swine Production Educator
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Alma

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Ractopamine is a feed additive used in the U.S. for 25 years to promote lean muscle growth and feed efficiency in both commercial and show pigs. Responding to global export market demands for Ractopamine-free pork, many large meat packers in the U.S. quit purchasing pigs fed ractopamine in late 2019. In response to this, many county fairs in MI restricted use of Ractopamine in show pigs in 2020 and 2021; that practice will continue in 2022. Fairs are weary of implementing rules that cannot be enforced, and therefore were looking for options to test pigs for the presence of Ractopamine to enforce restrictions that were put in place. MSU Extension's Pork Team worked with colleagues in the Children and Youth Institute to provide education to fair organizers on this market demand change, offered Ractopamine testing options and provided educational opportunities. When no suitable commercially available assay was identified, the team worked with the MSU Veterinary Diagnostic Laboratory to develop a non-invasive assay that measures Ractopamine in pig hair that meets the needs of show pig owners, county fairs and could also be used by packers and markets who need to confirm Ractopamine-free status in pigs they purchase.

SO YOU WANT TO FARM IN MAINE? USING BRIGHTSPACE

EXTENSION EDUCATION
Donna Coffin
EXTENSION EDUCATOR
UMaine Extension
DOVER-FOXCROFT

Authors: Donna Coffin[1], Bee Chim[2], Jason Lilley[3], Rebecca Long[4], Tori Jackson[5]

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The So, You Want to Farm in Maine (SYWTFIM) short-course has been offered as a workshop series through UMaine Extension for many years. Usually offered regionally and in-person, this is now the third year it was available online only using BrightSpace and synchronous Zoom sessions. SYWTFIM is designed to introduce farm business management topics such as enterprise budgeting, cash flow projections, recordkeeping, business planning, insurance, taxes, and regulations to those who are starting farms in Maine. Each class is designed to be interactive and features many guest speakers, including agriculture service providers from an array of sectors and those who are currently farming successfully. The 2022 series offered a different approach as participants included 44 aspiring farmers as well as 13 UMaine undergraduates, providing the opportunity for richer discussions and connections between those interested in starting Maine farms imminently, as well as students, with a variety of backgrounds and experience. The undergraduates were teamed with aspiring farmers to create draft business plans and enterprise budgets over the course of five weeks. Income from those plans totaled over $2 million. All participants had the opportunity to receive USDA Farm Service Agency borrower training credit, with 25 participants receiving this credit. Also, undergraduates receive one course credit for successful completion. This model is new to UMaine and is seen as an innovative way to create deeper connections between Cooperative Extension and the School of Food and Agriculture as undergraduates do not always know what Cooperative is and does, and the aspiring farmers may not have any previous connection to campus.

WOLF REINTRODUCTION IN COLORADO AND EXTENSIONS ROLE

EXTENSION EDUCATION

Robin Young
Extension Director
Colorado State University Extension
Pagosa Springs

Authors: Robin Young[1]

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In 2020, proposition 114 to reintroduce wolves in Colorado was put on the ballot. Restoring wolves advances wolf conservation, but also introduces conflict with groups such as livestock producers, outfitting organizations, urban interface residents, and others impacted by wolves. Extension's response was to collaborate with university partners, state agencies, NGO's, livestock producers, wildlife biologists and other experts across the western US to educate voters on science based facts about wolves through a publication, a video, and a webinar series. The first outcome was the People and Predator Series on Colorado Wolves informational package that provides scientific information on the interactions between humans and carnivores. CSU Extension partnered with Wyoming stock growers to produce the "Learning from Experience – Using Western Rancher's Experience to Prepare for the Wolf's Return to Colorado" video. Extension's partnership with the Denver Museum of Natural History and the Center for Collaborative Conservation developed a special five-part webinar series, "Wolves in Colorado: Science and Stories", explores wolf reintroduction through the lens of science, policy, and lived experiences. The passage of the initiative mandated the Colorado Parks and Wildlife to come up with a management plan to have wolves reintroduced by December 2023. CSU Extension serves on the Technical Working Group. A Western SARE grant will provide funding for educational programming aimed at livestock producers and Extension educators that are embedded in communities where ranchers will have to face the growing presence of wolves. The collaboration among these entities has earned the Warner College of Natural Resources Collaboration Award.

MOTIVATIONAL INTERVIEWING AS A TOOL TO ADDRESS FARM STRESS AND TRANSITIONS

EXTENSION EDUCATION

Katie Wantoch
Associate Professor, Agriculture Agent
UW-Madison Division of Extension
Menomonie

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Educators at the University of Wisconsin Division of Extension developed a professional development program for colleagues from diverse disciplinary perspectives in the use of Motivational Interviewing (MI). The training program was a novel approach to emerging and ongoing challenges with a proven technique to engage clientele on particularly time-sensitive topics. Due to ongoing conditions in agriculture, many farms are facing financial and mental challenges, impacting the farmer and their family. Extension educators are working with farmers, farm families, and rural clientele who have experienced this chronic stress. MI is one communication tool of many techniques that can be applied to educator's effort in supporting farmers and farm families to address emerging and time-sensitive efforts in dealing with farm stress. MI is helpful with increasing the likelihood that educators can assist them in ensuring positive behavior changes that may be impacting stress levels. Titled 'Motivational Mondays,' four-part Zoom workshop series consisted of theoretical introductions of MI, techniques with experiential exercise of different MI skills, group discussion, and case examples. Initial results suggested that participants gained a considerable amount of knowledge regarding MI concepts, with an average increase of 1.05 (based on a 4-point Likert-type scale, 4 being very knowledgeable). After completing the training program, participants reported that they feel more comfortable using the MI skills in their work, with an average increase of 0.86 (based on a 4-point Likert-type scale, 4 being very comfortable). Eight months after the program, a majority of educators reported the knowledge gained had influenced or changed the approach to their work. All respondents reported they incorporated at least one MI skill when working with farmers and farm

families. Overall, participants found the training program to be valuable, an average of 4.08 on a scale of 1 to 5, with 5 being very valuable. The program increased the professional capacity of UW Extension educators by improving their communication and facilitation skills. As a result of this project, educators gained confidence in their ability to engage and respond to sensitive conversations and reported being in a better position to develop strong relationships and presence in communities they serve.

SOUTHERN REGION ENTRIES:

PASSION FRUIT: AN ALTERNATIVE CROP FOR FLORIDA

EXTENSION EDUCATION
Mark Bailey
Sustainable Agricultura & Food Systems Agent
Ocala

Authors: Mark Bailey[1]

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Situation: In 2021 agricultural production costs and land prices increased significantly in North Central Florida. This creates substantial challenges for new farms to begin and existing farms to expand. The need for high value crops on small acreage is increasingly important. Passion fruit is a new high value crop that has not been previously grown commercially in North Central Florida. The objective is to help small farms begin, grow, and become profitable with passion fruit production. Methods: Three key components are necessary to launch passion fruit as an alternative crop: establish production methods, grower adoption of the crop, and effective marketing. Two EDIS publications support current and prospective growers with the fundamentals of passion fruit production. Growers that are seeking alternative crops now have the option of passion fruit. They are also provided with basic marketing options as well as passion fruit market analysis. Growers are directly supported with a recurring site visits and regular communication. Plant pathogen diagnostic services and production recommendations have been provided. A production meeting is planned for both current and prospective growers to share the latest information and encourage two-way communication between IFAS and the growers. Results: Small farms (n=10) in North Central Florida have planted passion fruit on small acreage, averaging ¼ acre, in 2021. Additional small farms are in the process of establishing passion fruit. Small farms that planted in 2021 are beginning to produce an initial crop and those that planted in 2020 have achieved profitability. Conclusion: Passion fruit is an emerging alternative crop that has significant growth potential to generate profitability for regional small farms and benefit consumers with high quality Florida Grown passion fruit.

THE DISRUPTION THAT IS BLOCKCHAIN TECHNOLOGY ON REMITTANCE PAYMENTS FOR FLORIDA'S SEASONAL FARM LABOR

EXTENSION EDUCATION
Christopher Prevatt
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In 2021, the UF/IFAS Blockchain Project began examining the underlying technology that blockchains provide, as well as assessing their prospective impact on society. One use case our team wanted to further evaluate was the potential to reduce remittance fees and provide a digital bank for Florida's migrant farm workers. Florida has over 175,000 seasonal farm workers from the Caribbean and Latin America. While in Florida it is estimated that over $500 million is sent in remittance payments to their families each year. Traditionally, these payments are slow, incur high fees, and safety can be a concern on the receiving end. During 2021, our project estimates that seasonal workers incurred over $27 million in fees when sending remittance payments. Enter new blockchain technologies that allow users with only a smartphone to their name to set up their own digital bank and send money instantly all around the world, at almost no cost. Thus, these individuals are on the cusp of collaboratively saving $26 million in fees over the next several years by adopting new blockchain technology. In early 2022, an effort began to educate farm employees and employers on the ability to send instant low-fee cross boarder remittance payments. Over the course of five Extension programs twenty-two individuals downloaded and adopted their first wallet and can now send cross-border payments instantly anywhere in the world at almost no cost. The average economic impact for the adoption of a new wallet was estimated to be $154 per wallet. Therefore, we estimate to have saved adopters $3,394 in fees thus far. Blockchain technology is and will continue to bank the unbanked and disrupt remittance payments all over the world.

WATER CONSERVATION RESULTS FROM WISER LAWNS PROGRAMS

EXTENSION EDUCATION
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Situation. Sumter County, Florida, is home to a significant part of The Villages, which is identified as one of the largest retirement communities in the country and is growing exponentially. The newest district of the Villages has become home to many of the newest residents of The Villages. Most of the residents who are from other states or countries are unaware of Florida's fragile ecosystem and water resources, including those found in Sumter County. Methods. WISER Lawns and Landscapes for New Residents is offered at two locations every month. This program covers topics designed to educate residents on sound practices for efficiently irrigating lawns and landscapes, implementing integrated pest management, and following proper fertilization practices. Improper use of these practices can adversely affect water resources. Residents learn through this workshop how to conserve and protect water resources. Results. The Villages residents responded to a Qualtrics survey (n=174) which documented a change in behavior resulting in potential water savings and other practices which may lead to protection of water resources. As a result of participant changes in water-saving practices (n=100), they demonstrated an estimated water savings of 3,049,913 gallons of water which represents a water savings value of $10,552.20 based on $3.45 per 1,000 gallons. Participants changed behavior related to pesticide use including identifying a pest before spraying (n=47), reading and following the label before applying the product (n=58), and match the correct pesticide for the pest (n=46). As a result of fertilizer changes, participants (n=80) minimize fertilization in the winter months, and some use a slow or controlled release fertilizer on landscape plants (n=56). Conclusion. Residents of The Villages as indicated by those responding are implementing irrigation, pesticide and fertilization best management practices which lead to significant water conservation and protection.

BABYSIT A SCALLOP!

EXTENSION EDUCATION
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Recreational scalloping is a popular summertime activity and economic driver along Florida's Gulf Coast, including Hernando County. Unfortunately, annual scallop abundance surveys and stakeholder input indicated local scallop populations were declining. Bay scallops are filter-feeding bivalve mollusks that only survive one to two years and are sensitive to environmental factors like salinity and red tide. They reproduce via broadcast spawning after the recreational harvest season closes. Research shows that caging scallops increases the chance of successful fertilization and is much cheaper than investing in hatchery-reared spat. To help boost Hernando's bay scallop numbers, Florida Sea Grant obtained supplies and led a team of volunteers to conduct underwater surveys and care for wild-collected scallops. As a result, 41 volunteers completed the training workshop requirements (88% knowledge gain) and collected over 1,400 wild-caught scallops. Volunteers maintained these scallops in predator exclusion cages anchored in marine waters every month throughout the scallop spawning season. Seven trained volunteers completed 70 underwater surveys before and after the recreational harvest occurred in Hernando County. Volunteers dedicated 520 hours towards the Adventure Coast Scallop Sitter project ($12,501 value). Additional $2,000 of in-kind contributions supported this project.State biologists use data collected during the scallop sitting and surveys to monitor the scallop fishery in Florida. Surveys conducted by the Adventure Coast Scallop Sitters indicated that Hernando County had the highest scallop abundance recorded in nine years, in part due to the success of the scallop sitter program. Because of community support, this program will be continued through this upcoming recreational scalloping season.

CLAY COUNTY 4-H INNOVATIVE ENVIRONMENTAL EXPERIENCES: NATURE RETREAT DAY CAMP

EXTENSION EDUCATION
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Green Cove Springs

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Youth today spend more time indoors and have decreased knowledge of natural environments; combined with quarantine, youth were left at home disheartened in summer 2020. UF/IFAS Extension Clay County partnered with Clay County Parks and Recreation to develop a virtual day camp that took youth to nearby natural locations to connect with nature and learn about local ecosystems. Objectives: 1. Collaboration with local government, 2. Collaboration across program areas within the office, and 3. Increase knowledge of local ecosystems and environmental literacy in youth. Methods: A self-paced summer day camp composed of 6 different days was developed, each highlighting a different Clay County Park and the surrounding natural environment. Google Sites was used as the platform to provide educational content to guide participants through each of the 6 days. Extension and Parks and Recreation staff collaborated to develop videos, activities, and fact sheets to compose each lesson. Participants completed the online portion of each lesson before heading to a Clay County Park to put their new knowledge into action through an activity. Impacts: Youth: Participants spent an average of 37 minutes being physically active at each park, totaling 3.7 hours of physical activity over the course of the program. Participants were able to identify different types of wildlife, including insects, frogs, fish, and birds. Youth were able to identify and use natural resources around them. Youth who participated are more engaged in activities that promote wildlife and habitat care. Adults: Partnerships with local governments was secured and continues to grow. Collaboration among our office staff flourished. As a result of these partnerships, we have been able to extend our stakeholder reach as well as engage in new projects. Conclusion: The Nature Retreat was successful in getting participating families outside to gain knowledge of local environments and ecosystems and build environmental literacy of youth.

CAN DRONE IMAGERY REPLACE VISUAL STAND DENSITY ASSESSMENT?

EXTENSION EDUCATION
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Deland

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Bahia is one of the most utilized forages in Florida. Previous work demonstrated a highly significant difference between treatments. Establishment trails were established in 2020 to see whether incorporating browntop millet was advantageous were done in 2020. Methods: This was completely randomized black design with three replications at 30 square meters each for a total of 12 plots. The plots were evaluated three different evaluation methods: 1. using human estimation of ground coverage of bahia; 2. utilizing enhanced normalized difference vegetative index (endvi); and 3. thermal images from a drone. Results: The plant health algorithm that best highlighted the bahia was the endvi with spectral reverse. Conclusion: While drone images are useful to identify places of concern in pastures using endvi, it does not yield reliable results for estimating percent forage coverage when compared to a visual assessment. Thermal images, likewise, do not correlate to the visual assessment.

SAND MOUNTAIN ELITE HEIFER DEVELOPMENT PROGRAM

EXTENSION EDUCATION
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The Sand Mountain Elite Heifer Development Program was established to demonstrate to Northeast Alabama cattle producers recommended methods for replacement heifer development including use of artificial insemination (AI). The objective of this project is to develop a land-grant university-based demonstration program to educate beef cattle producers on the concepts of developing heifers from the yearling phase to conception on cool-season annual and perennial forages. North Alabama beef producers nominate weaned heifer calves from Fall and early winter calving herds in November each year. Heifers are screened for structural correctness and overall quality by Extension personnel prior to delivery at the Sand Mountain Research and Extension Center in January. Body weights and hip heights are measured monthly and used to adjust nutrition levels and monitor progress. After a pre-breeding exam including pelvic measurements and reproductive tract scores, heifers are synchronized and bred on visual detection of heat to a low birth weight EPD bull. Ten days post-breeding, a low birth weight EPD cleanup bull is placed in the pasture with the heifers until early June. Heifers are pregnancy checked and sent home in mid- to late- June, which is approximately 165 days after delivery. Consignors in the program were surveyed (n = 12; 100% response rate) regarding their perceptions and applications of heifer management information following enrollment in the program. Survey results noted that 92% indicated participating in the program was strongly beneficial or may have been beneficial (8%) to their operation. Participants reported that animal performance data provided by the program was either extremely useful (66%), very useful (16%) or slightly to moderately useful (16%). Producer adoption of practices showcased as part of the heifer development program was high, with 84% indicating they had implemented various management practices after participating in the program. Producers reported that their overall herd management level had increased because of participating in the program (80%), and 60% of the respondents indicated that this program led to new marketing methods for their cattle operation. Eighty percent of consignors reported a return on the investment of consigning heifers to the program.

MARKETING FOR AG PRODUCERS 2021

EXTENSION EDUCATION
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Agribusiness is Georgia's leading industry with over $74 billion in annual economic impact and 9.9 million acres of operating farmland. Georgia's agricultural producers know how to run their businesses; however, many struggle to leverage digital marketing strategies to reach potential customers. Following the onset of the pandemic, many producers sought new avenues for product sales which necessitated digital marketing and connecting with new clientele. University of Georgia Extension – Pike County partnered with the University of Georgia Small Business Development Center to create a virtual marketing series specifically targeting ag producers and their specialized needs. Producers were invited to attend four free, online sessions: Reaching your customers online, getting your business online, telling your story online and putting it all together. Through the series, participants were taught how to set S.M.A.R.T. goals to align business and marketing efforts, techniques to identify their target customer and craft buyers personas, website implementation and design practices, how to create and optimize business accounts for Google My Business, Facebook and Instagram and techniques to respond to negative feedback on social media platforms. Marketing for Ag Producers 2021 educated 76 participants from 41 counties throughout Georgia representing 15 agricultural commodities. Following the series, 100% of participants reported the information was presented effectively, provided practical skills and knowledge to manage their business, helped them to understand their audience and planned to implement skills learned in the series within 12 months. Furthermore, the series acted as a gateway to resources for producers. Prior to beginning the series, ag producers reported less than 20% utilized the Small Business Development Center and approximately 60% utilized their local Extension office. Following the series, 100% of participants reported they would utilize the Small Business Development Center and their local Extension office going forward to help with their agribusiness. This relationship building and access to resources helps to set a foundation for successful agribusinesses.

DESIGNING CLIMATE-SMART EXTENSION FOR THE COMMERCIAL HORTICULTURE INDUSTRY IN FLORIDA

EXTENSION EDUCATION

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Naples

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Florida ranks sixth in the states for total greenhouse gas emissions (Mulkey et al. 2008). Although climate change is expected to impact the performance of plants, there is a dearth of extension programming for the commercial horticulture industry. Green industry professionals such as landscapers and nursery producers are poised to either exacerbate or mitigate greenhouse gas emissions through horticultural practices such as equipment maintenance and plant selection. To develop a state-wide extension program addressing climate change education, mitigation, and resiliency for this clientele, in Spring 2022 our group outlined programming needs, objectives, and products. We designed a needs assessment using focus groups and an online-survey to determine client attitudes towards climate change programming and guide the creation of a state-wide repository of factsheets, blogs, decision-support tools, and resources for both clients and extension educators. This poster will share program objectives and preliminary results from the needs assessment. We also conducted a literature review assessing what is known about the intersection of horticulture and climate change. We present several gaps in knowledge to help guide collaboration with extension researchers.

GREEN INDUSTRY BEST MANAGEMENT PRACTICES TRAINING IN CORRECTIONAL INSTITUTES; REDUCES RECIDIVISM RATES, SAVING THE STATE THOUSANDS

EXTENSION EDUCATION

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Perry

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Situation: A goal of Jefferson County Florida Correctional Institute is to provide enhanced training programs that offer marketable job skills and meaningful work experience for inmates once they are released. One certification that can later be used anywhere in Florida is the science based Green Industry Best Management Practices, a statewide recognized training by UF/IFAS Florida-Friendly Landscaping™ program and the Florida Department of Environmental Protection, on proper landscaping management practices that address protection of water resources where pesticides and nutrients enter ground and surface waters from runoff. More importantly inmates obtaining jobs after release from prison are less likely to return to the correctional system which saves the state money, boosts local economy, and can have positive impacts on the lives of inmates their families and community.

Methods: A total of (5) one day trainings were conducted in the fall of 2021, where (87) men completed the (6) required modules, passed the exam, and received their GI-BMP certification, which allows them eligibility for a fertilizer applicator license in the future. A graduation ceremony allowed each participant to walk up and receive a certification and handshakes from instructors.

Results: An average pre-test score of 75 and post-test of 90, supported the survey questions of was the training a good use of your time, at 90% strongly agreed and 85% they increased knowledge on potential impacts of landscaping activities on water resources.

Conclusion: The cost of one individual in the Florida correctional system is $22,750. per year. If 20% of these (87) trained inmates became employed after release, the state would save $409,500.00 per year, additionally increasing local economy where they and their families will live, work and shop.

DEVELOPING RESOURCES AND PROGRAMMING FOR THE EMERGING CARBON MARKET IN ROW CROP PRODUCTION

EXTENSION EDUCATION
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As the voluntary carbon market gains momentum in the United States, growers and landowners of row crop acreage have increased opportunities to receive payments through carbon capture on the farm. However, like with any emerging industry, information and resources to evaluate the market have been sparse, making it difficult for growers to understand the complexity of carbon credits prior to signing contracts. A collective effort was made by the Farm and Agribusiness Team in 2020 and 2021 to develop resources and implement programming to facilitate grower education and awareness of the carbon market and related conservation practices. Resources developed include two Extension publications, two Extension news articles, one magazine article with statewide distribution, one podcast, and a number of news interviews. Programming has included two in-person meetings dedicated to the introduction of the carbon market, four webinars, and multiple presentations at production meetings and conferences. Carbon marketing will also be included as a highlight topic of 2022 in the Alabama campaign, 'Down to Earth- Agriculture Sustains Alabama.' Although the carbon market has little oversight and regulation, which poses several issues for those developing resources and educational material, it is important to provide comprehensive information, as it is currently understood, to producers considering carbon credit contracts.

PROPER AND CONSISTENT MILKING PROCEDURES IMPROVE MILK PRODUCTION, MILK QUALITY AND PROFITABILITY

EXTENSION EDUCATION
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Mayo

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The purpose of developing an extension program focused on performing proper milking procedures is to help producers improve milking management and produce high quality milk. Proper milking procedures hands-on training offered by extension and the development of supplemental materials has the objective to provide producers with tools to train new and existing employees.

Consistent and efficient milking practices can improve herd performance and milk quality. The main goal of a proper milking management program is to harvest high-quality milk by gently, quickly, and completely milking clean and dry teats, while minimizing intramammary infections (mastitis) and reducing stress on both cows and parlor workers. The first step in having a successful milking management program is to properly establish and understand a standard milking routine. Training parlor workers in following proper milking procedures is critical to maintaining maximum milk quality and can frequently prevent the inconsistent milking practices that can negatively affect production and udder health. Additionally, proper environmental management and cleanliness of the cows, the parlor, and the milking equipment are major determinants of both milking efficiency and control of mastitis.

Improvements in milking procedures results in a substantial impact on both milk production and milk quality. Decreases in somatic cell counts from 400,000 to 200,000 cells/mL of milk due to improvements in milking procedures may increase milk production by 12,250,000 lbs/year. Depending on milk price, this production increase represents about $2,700,000 in additional milk sales. The decreases in mastitis, which is one of the costliest diseases in dairy may also be reduced by training employees to consistently follow milking procedures. The average incidence of mastitis on a conventional dairy operation is about 32%, which means that 32 out of 100 cows on average have a case of clinical mastitis during lactation. Treating mastitis usually costs around $200 per case.

Dairy farms that participate on the proper milking procedures extension program and adopt the proper techniques and materials to train their employees, will have great benefits by increasing milk production, milk quality and farm profitability.

THE NEW NORMAL: EXTENSION EDUCATION USING IN-PERSON AND VIRTUAL DELIVERY METHODS

EXTENSION EDUCATION
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Situation: Delivery of educational extension programs in the post-Covid-19 era creates new challenges for extension personnel. As the new normal continually evolves, clients are requesting educational programs to be delivered in multiple formats. Some prefer to return to in-person classes, while others prefer live virtual classes or on demand virtual classes. The objective of this study was to provide educational programming and determine the participant's preferred delivery method. Methods: A Wildflower Gardening class that was offered in three different modalities: in person, live zoom, and on demand. The in-person class and live webinar were both taught at 10am on a weekday, but on different dates. The webinar was recorded, and registered participants were sent a link to the zoom recording for the on-demand delivery method. Participants were asked to complete a survey at the end of the program and let us know which method they viewed the program. Results: Survey respondents (n=103) indicated that 16.5% of them attended in person, 50 % of them viewed a live zoom, and 33.5% of people watched the webinar recording. Comments included "I appreciate opportunity to watch from home". Conclusion: While some participants are returning to in person, the majority of participants prefer to participate online. This data will be helpful to other extension agents deciding how to offer their program and for extension administrators who are making decisions on how to support agent needs and serve clients.

BROADLEAF WEED CONTROL WITH PROCLOVA™ IN WHITE CLOVER/GRASS PASTURES

EXTENSION EDUCATION
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Weed control is a critical component to producing quality forage for livestock. Weeds, such as chickweed, buttercup, thistles, and plantain, rob desirable forages of water, light, and nutrients throughout the growing season. Choosing the right herbicide and applying it at the right time is critical to successful weed control. A common concern for producers is the fear of killing any white clover that is present. In the past, the options for clover species and herbicides to co-exist has been limited to that of <1 quart/per acre of 2,4-D amine and white clover or lespedeza. Other herbicides will injure white clover.

A new herbicide formulation, ProClova™, from Corteva™, is awaiting registration from the Environmental Protection Agency (EPA) and is anticipated to be released in 2022. Once approved, ProClova™ may be a weed control option in white clover pastures. With the registration pending, in-field demonstrations are needed to provide local results to Arkansas county agents to make recommendations to their producers. To address this need, seven fall demonstrations and seven spring demonstrations were conducted around the state. The weeds most common across all demonstrations were common chickweed, sticky chickweed, buckhorn plantain, musk thistle, and buttercup. Treatments included: 1.5 pt./acre ProClova™, 3 pt./acre ProClova™, 1 qt./acre 2,4-D amine, and 1 qt./acre 2,4-DB (Butyrac).

Weed control was generally consistent across all demonstration locations and treatments. No difference was observed between the fall and spring applications. Common and sticky chickweed control was poor with all treatments. Buttercup, thistle, and plantain control was excellent, with the exception of poor control of plantain with the 2,4-DB treatment. Plots were visually rated on a scale of 0-100, with 100 being excellent, 100% control of the target weed species. White clover had good tolerance to all treatments. Among all treatments, there was some discoloration and lodging, initially, but white clover recovered fully within 4-6 weeks.

2,4-D amine at 1 qt./acre is an economical treatment that provided equivalent weed control for the species present when compared to the other treatments. Cost for ProClova™ have not been released.

GARDENING IN THE PANHANDLE: LIVE! A LESSON IN HARNESSING TEAMWORK AND TECHNOLOGY TO BETTER REACH CLIENTELE

EXTENSION EDUCATION
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Blountstown

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Since the COVID-19 pandemic unfolded in 2020, UF/IFAS Extension Agents have had to adapt to changing clientele preferences by eschewing exclusively in-person educational models in favor of a more virtual approach. This sea change in societal norms caused us to develop an innovative way to reach residential horticulture clientele. Inspired by instances of Agents in other geographic areas offering "Ask an Agent Anything" online seminars as a way to attract home-bound clientele, but wanting to focus more on specific, timely topics, the Northwest District Horticulture Program Implementation Team (PIT) collaborated to create a program series called Gardening in the Panhandle LIVE! Each session covered a seasonally relevant topic with knowledgeable panelists based on their individual specialties. The series was broadcast using both Zoom Webinar videoconferencing technology and Facebook Live to capture the largest possible audience. To comply with ADA guidelines for hearing disabled clientele, episode recordings were edited with closed captioning for YouTube. Delivering each episode requires a team of 7-9 agents in the following roles: 3-4 panelists, an episode "host", a Zoom technician, and several "behind the scenes" moderators. While the episode's host and panelists are answering questions, the moderators are adding resource links to chats, answering pop-up questions, and filtering and forwarding potential on-air questions to the emcee. The innovative collaboration has created 25 episodes and engaged a total of 1,582 live viewers since 2020 on various social media platforms. Follow up survey participation was completed at a rate of 18% (277/1,534). 98% (272/277) of respondents reported knowledge gain in at least one Florida-Friendly Landscaping Principle. 81% (224/277) of respondents reported a plan to adopt at least one Florida-Friendly Landscaping Principle as a result of participation in the program.

DEMYSTIFYING THE GOOD AGRICULTURAL PRACTICES (GAP) AUDIT TRAINING PROGRAM

EXTENSION EDUCATION
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A member of the Southern Farmers Collaborative Group approached the Dougherty County Cooperative Extension Agriculture and Natural Resources County Extension Agent about hosting a GAP Audit training so that members of the group would be able to train others like a Train-the-Trainer program. Most farmers in this group grow some type of produce and would benefit greatly from learning what to expect when they have their farm audited. Therefore, the Good Agricultural Practice Training Program would equip growers with the information necessary to fulfill all requirements of a USDA GAP audit process. However, little is known about whether such a training can positively influence knowledge levels of farmers to perform well during an audit.

ATALA STEPPINGSTONE PROGRAM

EXTENSION EDUCATION
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URBAN COMM HORTICULTURE AGENT
University of Florida
Fr. Pierce

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The purpose of this educational program was to increase public awareness of the conservation efforts for the rare Alata butterfly (Eumaeus atala Poey), deliver education to residents on this rare butterfly's unique conservation needs, and how they can make "Atala-friendly" decisions in their landscape. The original framework for the Steppingstone Program was to create and establish refugia, utilizing landscapes in residential properties. Heathcote Botanical Gardens and Manatee Education and Observation Center are two properties

located in Fort Pierce, FL approximately 2.6 miles away from each other, with known Atala populations. Through research, it is known that Atala butterflies will fly 4 miles from an established area where a population is surviving, in search of its host plant, coontie (Zamia intergrifolia). Participants were asked to incorporate "Atala friendly" landscaping practices. First, locating where Atala butterflies or larvae are currently present and assessing locations for suitability when moving Atala (larvae). Practices in the landscape would include planting coontie (Zamia intergrifolia) and limit their use of insecticides for pest control. Participants were asked to document and report locations where Atala (larvae) were being moved. A total of seven local Atala Steppingstone Refugia have been established and are currently maintained. UF/IFAS Master Gardener Volunteers and Master Naturalists are among those community members involved establishing Atala refugia within local landscapes. Social media, blog posts, publications, press releases, public displays, and outreach presentations on the Atala Steppingstone Program continue to be sources of engagement with community members. Through these efforts, both butterfly enthusiasts and residents interested in learning how to make their landscapes more "Atala friendly" continue to seek out information about this project.

FARM TOUR CREATES AWARENESS IN ONE OF THE FASTEST GROWING COUNTIES IN FLORIDA

EXTENSION EDUCATION
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BUSHNELL

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Agriculture provides a significant impact to the state of Florida. In 2015, agriculture along with the food industry, and natural resources provided over $132 billion to the state's economy. Sumter County is one of the fastest growing counties in Florida. Due to development, the size of farms within the county are decreasing, but the number of small farms is increasing. Total number of farms is approximately 1,307. According to the 2017 Census of Agriculture, market value of all agricultural products sold from Sumter was $54,457,000. Due to the increasing development, agriculture awareness is critical in keeping the population aware of the origin of local food. Objective: Surveyed participants attending Farm City and farm tours will demonstrate at least a 40% gain in knowledge on local agriculture as measured by a pre and posttest. Participants attended a one-day tour at a local farm, hosted by Farm City. Farm City partners included UF/IFAS Extension, Farm Bureau, and Sumter County Economic Development. The location was Whispering Oaks Winery. This local winery grows blueberries on-site to use in their homemade wine. Participants enjoyed a history of Agriculture in Sumter County by Farm Bureau, presentations by UF/IFAS Extension faculty, and lunch provided by Sumter County Economic Development. Participants also toured the distillery and learned the process of making local wine. Results: Surveyed participants (n=53) who attended the Sumter County Farm City Tour demonstrated a 43% gain in knowledge of Sumter County agriculture. As a result of attending the 2021 Farm City Tour, 100% (n=53) of surveyed participants stated they now have a better understanding of agriculture/natural resources in Sumter County and 91% (n=53) of surveyed participants stated they will attend a future Farm City Tour.

GRAIN CORN VARIETY SELECTION IN THE SUWANNEE RIVER VALLEY OF NORTH FLORIDA

EXTENSION EDUCATION
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Jasper

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Grain corn is an important commodity crop in the Suwannee River Valley of North Florida. In 2021, approximately 37,000 acres of corn were harvested in counties surrounding the North Florida Research and Education Center-Suwannee Valley (NFREC-SV). Each year, grain corn producers must choose a corn variety

when making planting decisions. With several available options from multiple companies this can be a daunting task. In the past producers have depended on yield data generated from similar trials conducted by industry and Extension from regions with differing environmental and soil conditions. Objectives: (1) To increase knowledge of Florida Best Management Practices and (2) encourage producers to incorporate new grain corn varieties. Methods: Grain corn seed companies provided two varieties that are recommended for the North Florida area along with $400 to help encumber the cost of incorporating this trail at the NFREC-SV near Live Oak. Current recommended production practices are followed during the production season to manage fertility and irrigation to remain in compliance with Florida Best Management Practices. Harvest data is collected and used to create fact sheets and presentations that are distributed or presented at local and regional production meetings in North Florida. Results: Post-training evaluations from grain corn production meetings showed that 89% of the producers (200 of 225) increased their knowledge of grain corn variety selection and 85% of attendees (191 of 225) increased their knowledge of production practices that encourage Best Management Practices. Conclusions: In 2021 the efficacy of 20 grain corn varieties were compared under management practices compliant with Florida Best Management Practices. This research has allowed Extension agents the opportunity to provide producers with timely information to encourage adoption of Florida Best Management Practices in grain corn production and assist with variety selection. Follow-up discussions with local producers have indicated that this data has been utilized to implement new varieties in their existing production system.

"PLANT THE FIELDS TO ACHIEVE THE YIELDS"

EXTENSION EDUCATION

Olivia C. Fuller
Tuscaloosa

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Pollinating the Field to Achieve the Yield; Program for Native Habitat On-Farm Assistance. Olivia Fuller*1, Anthony Abbate, Camila Rodrigues, Kristin Woods, Ayanava Majumdar, Alabama Cooperative Extension System, Auburn University, Auburn, AL 36049, Department of Horticulture, Auburn University, Auburn, AL 36849.

Many farmers have attained food safety certification which allows them to sell to larger retail and wholesale buyers. Although there are many variations of audit standards, all include Integrated Pest Management (IPM) guidelines. In 2020, the Sustainability Consortium developed a Responsible Pest Management (RPM) framework user guide for best practices in agriculture. This material supports producers to align with industry standards regarding responsible use of pesticides and pest management practices including pollinator health commitments. The Extension program "Planting for Pollinators" was developed to provide technical support to growers needing to meet the guidelines set forth. These programs are aligned with the principles aligned with Global GAP standards and Integrated Farm Assurance (IFA) for crops including fruits and vegetables, flowers and ornamentals, hops, and teas.

RISK MANAGEMENT FOR WOMEN IN AGRICULTURE

EXTENSION EDUCATION
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The objective of Annie's Project is to empowering farm women to be better business partners through networks and by managing and organizing critical information. Programming focuses on five areas of risk management: financial, legal, human resources, marketing, and production. Annie's Level 1 was held in 2018 and Level 2 in 2019. Our third session was cancelled due to COVID In 2020 and rescheduled for August 2021. With the surge of the Delta Variant in July 2021, it was shifted to virtual programming and shortened to an Inspired by Annie's program. Levels 1 & 2 were conducted as six-week programs with participants meeting once a week for three hours. These were discussion and hands on based educational programs. For Inspired by Annie's, we shortened the planned programming to once a week, one hour Zoom sessions, with each week focusing on one of the core risk management topics. The program is scheduled to resume in person in April of 2022.

The biggest changes in knowledge gained were in Production. Post test results revealed that 78% or respondents increased knowledge to know quite a bit or became completely familiar with the production topics presented during Annie's Project seminars, compared with only 13% in pre-tests. After participation in Annie's Project marketing seminars, respondents are in progress or have completed a marketing plan (75%), use reliable sources for market price information (88%), and explore ways to manage price swings in the marketplace (75%). 88% agree or strongly agree that information was valuable and provided in a safe and encouraging environment.

Overall participants have been very engaged in an online social media group to stay connected to Annie's and other Extension programs. This has become a vital group in planning Extension programs and volunteering with demonstrations. These producers have been more confident in taking leadership roles in their farms and continuing to master new skills.

GEORGIA GREEN LANDSCAPE STEWARDS PROTECT OUR NATURAL RESOURCES

EXTENSION EDUCATION
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Woodbine

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The Georgia Green Landscape Stewards certification program provides educational resources that teach Georgians about protecting natural resources, increasing plant and animal biodiversity, conserving soil and water, providing wildlife and pollinator habitat, and improving public and environmental health. After learning about sustainable land management practices, participants can measure their own activities with the program metric scorecard and earn certification status for their landscape.

With a small start-up grant from the University of Georgia Center for Urban Agriculture, the Georgia Green Landscape Stewards program was developed by UGA Extension to provide fact-based information to property managers and help them implement sustainable resource practices in their landscape. A Georgia Green Landscape Stewards website and YouTube video channel were developed for participants with presentations that cover ten educational components of the program: Composting at Home, Invasive Plants in the Home Landscape, Mulching in the Landscape, Encouraging Biodiversity at Home, Protecting Water Quality, Stormwater Management, Water Conservation, Welcoming Wildlife, Welcoming Pollinators to Your Landscape, and Native Plants and Low Maintenance Landscapes.

Since the program launched in March of 2021, 93 landscapes in 32 different counties have been certified through the Georgia Green Landscape Stewards Program (as of March 2022). There have been more than 2152 views of program educational components through the program's YouTube channel, and more than 2981 unique views of the program website (https://site.extension.uga.edu/georgiagreen/). Educational components were also offered as a live webinar series following the program launch. Evaluations from the webinar series stated that 100% of respondents had an increase in knowledge regarding sustainable landscape management due to the series.

PLANTING OF LOW-INPUT PECAN VARIETY TRIAL AT VIADALIA ONION RESEARCH FARM PROVIDES RESEARCH AND DEMONSTRATION FOR SOUTHEAST PECAN GROWERS

EXTENSION EDUCATION
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International competition, increasing storm damage, depressed domestic prices, and lower export prices are challenging to the Georgia pecan industry. Traditional southeastern varieties such as 'Stuart' are being pushed out of the export market due to lower percent kernel. Standard varieties such as 'Desirable' variable cost of production is increases drastically. To continue making profit, growers must produce pecan varieties with a greater than 50% kernel and substantially reduce variable input costs, such as fungicide applications. Fungicides account for 12% of a grower's variable costs. To address this issue, a $27,500 grant from the Pecan Commodity Commission was awarded to the Area Pecan Agent to plant low-input cultivars at the UGA Vidalia Onion Farm in Toombs County, GA. This planting has two purposes: 1) Observation of scab on low-input varieties and 2) provide a site for research and demonstration plots. In its first year of planting, the Area Agent planned and coordinated a field day for Southeast Growers. The field day brought a total of 66 pecan growers and industry from 18 counties in Georgia. Attendees represented 9,179 acres of pecan orchard land. UGA Extension Agents presented information in which they collaborated with the Area Agent. 19 attendees completed evaluations. 88% of responses learned a lot about Ambrosia beetle management and budmoth management and control. 82% of responders learned a lot about the weed control presentation and 80% of responders learned a lot about young tree fertilization and an insecticide drench study. One area of improvement concerns the presentation on moisture sensors. Only 60% said they learned a lot with 26% giving a 2, indicating the need to further understand this topic. The area plans to improve on this topic for next year. Overall, 100% of respondents said they could use this information on their farm.

LINKING SMALL FARMERS TO USDA PROGRAMS IN SOUTHEASTERN NORTH CAROLINA UNDERSERVED COMMUNITIES

EXTENSION EDUCATION
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Many small farmers face challenges in searching for alternative enterprises and opportunities to help diversify their farm operations. Due to the lack of formal education, many small and limited-resource farm families do not know what federal agricultural programs are available or don't understand some of the eligibility requirements. They are also constantly searching for farm programs to keep their land valuable, sustainable, and profitable. The goal of this educational program was to assist small farmers in Southeastern North Carolina Underserved Counties in linking them with federal resources. Outreach Workshops were conducted in 2016 and 2019 with a total of 67 farmers attending. Evaluations conducted after each workshop showed that 79% of the participants said that they improved their knowledge of United States Department of Agriculture and North Carolina Department of Agriculture programs and they were going to apply for at least one USDA program. Follow-up evaluations showed that 10 attendees received NRCS-EQIP cost share grants for high tunnel greenhouses and an irrigation system totaling $74,800. Small and limited-resource farm families also benefited from receiving information on disaster assistance programs being offered by the Farm Service Agency to help recover from losses caused by Hurricanes Matthew and Florence. Information was disseminated through newsletters, news articles, informational fliers, and one-on-one visits. Many of them were able to receive financial assistance that helped recover some of the losses

from the storms. With this knowledge of agriculture programs provided by USDA, these farm families have a new opportunity to make their farms more profitable and sustainable.

DEMONSTRATION OF DRONE TECHNOLOGIES TO IMPROVE CROP MANAGEMENT

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With rapid development of artificial intelligence (AI), the application of drone technologies has shown great potential in agricultural industry. However, growers need to understand the fundamentals, i.e., why it works, how it works, the cost and benefit. The objectives of this extension program are to help at least 60% of participants understand better about the new technology, the affordable cost, advantages, the operation, the government regulation, and the scale of its application by improving their overall knowledge gain by 30% or more. The activities included three field day events with an on-site demonstration and two workshops for data processing and interpretation with pre- and post-tests for the program evaluation. Participants were able to watch the procedures for site selection, the flight parameters chosen, the drone autonomous flight setup, and the operation from the field demonstrations, and to learn the data processing and application from the workshops. A total of 116 participants attended the events and 90 (78%) completed the pre- and post-tests. The result showed that 91% (n=82) had knowledge gain with an increase of 35% in understanding the application of drone technology; 82% (n=74) believed that the application of drone technology would save their time and improve the crop management with the knowledge increase by 42%; and 71% (n=64) would change their practice by implementing the drone technology with the knowledge increase by 30% from the post- vs. pre-pest; 100% (n=90) believed that the various Management Zones derived from the drone and AI technologies based on crop health could provide timely information for their crop management to reduce the yield loss; and 80% (n=72) prefer to use a spray drone for pest management. The impact of this program can provide a platform to help local vegetable growers and stakeholders with the up-to-date technology, improve the application of drone and AI technologies for autonomous farming, and promote the competition of US agricultural industry. The implementation will enhance the Best Management Practice (BMP) for the sustainable agriculture.

WILDLIFE OUTDOOR LEADERSHIP FOCUS (W.O.L.F.) CAMP : VIRTUAL TO PERSONAL

EXTENSION EDUCATION
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Wildlife Outdoor Leadership Focus (W.O.L.F.) Camps incorporated many environmental components for youth and volunteers. This program highlighted the complexity of natural resources and connections to fields of discovery. Objectives: Participants were able to 1) identify Florida wildlife and plants, 2) demonstrate knowledge of best management practices for wildlife, and 3) describe natural resource management. Methods: Agents and volunteers hosted stations that instructed participants on wildlife management, nutrition/health, teamwork, art, and marine science. Results: Over 300 youth enrolled in virtual and in person camps. Evaluations revealed over 80% of participants reported a knowledge increase in concepts and identification. Furthermore, 90% considered the importance of teamwork. Participants self-assessed a knowledge increase of 60%. Participants were inspired to conduct a beach cleanup. All participants indicated consideration of personal impact on wildlife habitat. Conclusion: W.O.L.F. Camp's impact as a high-quality, cross-discipline environmental educational program can be replicated by Extension Agents for years to come.

JOIN THE NORTH CAROLINA AGRITOURISM SPOTLIGHT TOUR!

EXTENSION EDUCATION
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In 2020-21 team members of North Carolina (NC) Cooperative Extension Local Food Program Team developed 13 NC Agritourism Spotlights that served as informal case studies. These spotlights provide an in-depth look at agritourism operations including the agritourism development, challenges and opportunities. These spotlights were developed as a resource for those interested in adding agritourism ventures to their operations and to assist those supporting agritourism and farm development. Local Food Program Team members reached out to those either in their county, region or that they have worked with in other projects to interview a variety of agritourism operations across the state. Each spotlight starts off with an enterprise overview, background information of the farm, the development process then moves into pricing, marketing and promotion information of the agritourism components to the farm. The spotlight wraps up with agritourism business concerns and important considerations when adding these activities to your farm business. Each spotlight also includes quotes and words of wisdom from the operators to convey the personality of the operators. Currently each of the thirteen spotlights are in both front and back pdf form or tri-fold form for ease of distribution. Through the initial spotlight development, a more refined process for development has come about so interested county extension offices can create spotlights of agritourism operations in their area to expand the spotlights available and the geographic representation. The next phase of the project is finding a way to tie together the spotlights via several podcast or virtual live events to take folks on a “road trip” to meet the farmers and learn more about the agritourism operations. An interactive listing of the spotlights can be found here.

PIGWEED CONTROL IN LATE SEASON PASTURES

EXTENSION EDUCATION
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Pigweed (Amaranthus hybridus) is an invasive annual summer broadleaf weed that has no forage quality. It is usually noticed by producers in mid to late summer when it starts reach moderate heights and produce seed heads. It may have up to three germinations in a current growing season so persistence in control is extremely time consuming and important.Forage producers have many herbicide options for pig weed control in forage grass crops. Our objective was to compare the effectiveness of common broad leaf herbicides late in the summer for pigweed control in forage grasses. The demonstration was done late in the summer to see how much maturity and adverse conditions such as heat, and drought effected the control of pigweed. Treatments were applied @ 15 gallons per acre. Nonionic surfactant was added to all treatments at one quart per 100 gallons of spray mix.The best options for pigweed control fall into two options. This is due to the negative effect of Metsulfuron on certain grasses such as fescue. The cheapest option would be to spray Metsulfuron at the rate of 0.3 oz per acre costing $1.92 per acre, but this will cause damage to fescue that is present. If fescue is present and if you are worried about damage to fescue then applying 24D at the rate of 1 quart per acre will provide excellent control at the cost of $6.94 per acre. Both of these applications will provide 100% control of pigweed if applied correctly.The only reason for using more expensive herbicides is if you have additional weeds that are not readily controlled by Metsulfuron or 24D. The cost per acre will increase but you are able to control multiple species with a single application.If pigweed has been allowed to go to seed in previous years, it will require multiple years of herbicide application to establish control. This is due to the amount of viable seed in the soil that has built up to a higher level over years of no management.

ADOPT-A-CALF WITH AREA ELEMENTARY SCHOOLS

EXTENSION EDUCATION
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Traditionally, school field trips have been a rewarding way to introduce and educate young people to the dairy industry and the benefits of including nutritious dairy products in meals. Many schools were unable to go on field trips in 2021 due to budget restraints and persisting covid precautions. I reached out to teachers who had previously participated in dairy field trips to determine if there was an interest in an alternative educational activity. The response was overwhelmingly yes. Through a planning meeting with the teachers, we agreed that the best presentation style to keep their attention and promote interaction was Prezi. The calf was born at the end of September, and I started the monthly segments in October. During the first month, students followed a live link to a Google form to vote on a name for their calf. Embedded videos were used to make the student feel like they were there with the calf. Prezi presentations with videos were sent to 8 classrooms (11 adults,163 students). I worked with a student voluteer to help in some of the videos to create interest. I utilized industry created worksheets and suggested projects to reinforce what they had learned. In follow-up segments, I asked “Do you remember questions?”. Based on teacher feedback, 100% of the students voted on the calf’s name. 90% of students answered questions correctly from past and current segments. Questions related to dairy knowledge, calf care, and dairy product nutrition. Students could submit questions and request what they wanted to see in subsequent segments. Several students requested to see the calf in real life. Two preschool classes and one special needs class was able to visit the calf in February. I am making plans to take the calf to the remaining classes this spring. A final survey will be used to determine how to improve the program in the future.

GRAZIER’S TOOLBOX AND SEED DRILL DEMONSTRATIONS: HANDS-ON FORAGE MANAGEMENT WORKSHOPS

EXTENSION EDUCATION
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In 2021, three Grazier’s Toolbox and Seed Drill Demonstration Workshops were held in Northwest Alabama. A “grazier” is defined as someone who grazes or feeds cattle for the market. This title was chosen to highlight the program’s goal of improving the grazing efficiency in Northwest Alabama. Grazing efficiency is defined as utilizing the optimal amount of available forage while maintaining forage productivity. Program objectives included educating beef cattle producers regarding methods to estimate available forage mass, equipment to aid in forage establishment, and implementing tools that contribute to improved grazing efficiency. The Colbert, Fayette, and Winston County Extension Offices and Regional Extension Agent, Paul Vining organized and implemented these hands-on grazing management workshops, holding each event on a beef cattle producer’s operation. To accomplish program objectives a classroom style PowerPoint presentation was given that offered insight into developing a grazing system, followed by hands-on workshops. Grazing sticks and forage mass estimation worksheets were distributed to each program participant. A grazing stick is a 36-inch measuring stick that provides a detailed estimate of the available forage mass expressed in available pounds of forage dry matter per inch of forage height on a per acre basis. The worksheets contained formulas used to estimate forage mass availability and the amount of forage cattle would consume daily. Using these tools, a producer could make decisions about the proper time to rotate cattle and allow for forage regrowth and pasture recovery. Two workshops featured no-till seed drills. Instruction for using and calibrating these machines was provided. At each workshop temporary fencing and rotational grazing methods were emphasized. At one of the workshops participants physically moved

temporary fence posts and electric wire, allowing cattle to graze a fresh paddock. These workshops hosted a total of 64 Alabama beef cattle producers. Program survey results indicated that 100% of program attendees found the information presented useful and applicable to their operation. Workshop attendees assigned an estimated positive economic impact that totaled $50,000 and averaged $4,375 per response. Knowledge gained from these workshops impacted a total of 2,973 acres and 2,186 head of livestock.

ROOT UP-KIDS

EXTENSION EDUCATION
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Research shows that most U.S. citizens are removed from direct involvement with agriculture and lack knowledge about modern agricultural practices (Duncan and Broyles, 2006). A knowledge deficit regarding the proper preparation, use, and storage of wholesome foods can contribute to poor nutrition. There is a need for educational programs that both provide an opportunity for participants to feel more connected to local agriculture and encourage the use of nutritious and locally available fruits, vegetables, meat, milk, and eggs. Roots Up – Kids is an interactive program designed to educate 4-H youth on research-based information, focusing on food systems related to both production and consumption of local foods.

The program objective is to connect participants to local farms and agricultural commodities while increasing knowledge in healthy food choices, food safety practices, growing their food, and understanding how food originates. The FCS and 4-H Agent developed this program to deliver six unique, 1-hour classes to youth ages 8-12, with each class showcasing a local agricultural commodity. The 4-H agent discussed the production of the selected commodity, the FCS agent taught about the nutrition and health benefits of the product, and the Residential Horticulture agent supplemented agricultural education in conjunction with farmers. Each class concluded with an opportunity for participants to sample recipes featuring the selected commodity, and participants left with recipes that they could try at home.

Evaluation data demonstrated that youth gained knowledge in healthy food choices, food safety practices, and identifying food sources. Evaluation data was collected utilizing surveys, participation comments, observations, and parent interviews three months after the last class. The collected data demonstrated that youth gained knowledge in healthy food choices, food safety practices, and identifying food sources. From participating in Roots Up – Kids, youth reported the following:

- 80% learned how to spend, save, and give money
- 86% learned about new community service opportunities
- 93% reported knowledge gain on financial literacy
- 93% reported learning how to plant vegetables
- 93% learned about local farms and agricultural sources

Parents reported, 3 months after the program, that 93% of participants had revisited local farms introduced during the program.

VIRTUAL WORKSHOPS ON INVASIVE SPECIES INCREASE CEU OPPORTUNITIES FOR PESTICIDE LICENSE HOLDERS

EXTENSION EDUCATION
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Situation: Invasive species pose significant threats including economic losses in agriculture, human and animal health hazards, disruption of native ecosystems and more. In the U.S., losses due to invasive species are estimated to cost over $120 billion annually. Florida has a high risk for the introduction and establishment of invasive species and thus, education on related topics are critical to protecting agriculture and natural resources. Central Florida Cooperative Invasive Species Management Area (CFCISMA) hosts in-person educational opportunities

on invasive species annually, and since the COVID-19 pandemic, UF/IFAS Extension Seminole County has increased collaboration with CFCISMA on virtual education. Methods: In 2021, we hosted two invasive species webinars via Zoom. Webinar agendas were designed for both professional and public audiences. Speakers from multiple agencies were invited, including experts from UF, the Florida Department of Agriculture and Consumer Services (FDACS) and the United States Department of Agriculture (USDA). The webinars were approved for FDACS pesticide Continuing Education Units (CEUs) in 10 categories. Post-webinar and 3-6 month follow up surveys were utilized to measure outcomes. Results: The two webinars were highly successful with over 590 participants from across the state, and more than 450 pesticide CEUs were issued to attendees. In a post-webinar survey, 99.6% (528/530) increased their knowledge on invasive species and 98.3% (521/530) intended to adopt at least one practice learned (ie. reporting suspect pests, use caution to avoid spreading invasive species, employ integrated pest management, etc.). In the 3-6 month follow up survey, 97.1% (304/313) had adopted at least one practice since attending. Conclusion: The virtual webinars increased the capacity to teach larger audiences without geographic limits and offer CEUs to professional clientele. As a result of the webinars successes, CISMAs in other regions have reached out for guidance on hosting similar programs in collaboration with outside agencies.

CULTIVATING COMMUNITIES

EXTENSION EDUCATION
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The purpose of the Cultivating Communities television program is to educate consumers on how their food, fiber, and fuel are grown and raised, where they can purchase locally grown food, and how Extension plays a vital role in helping farmers increase the profitability and sustainability of their operations. We work with a different county Extension Agent each month to highlight farmers and Extension programs in their county. Interviews and footage are filmed in the county we are highlighting and then edited in the Extension office and sent to our television partners. We have a partnership with 3 different telecommunications companies in Middle Tennessee which air the episodes multiple times each month. Episodes are also posted on the Smith County Extension Facebook and YouTube pages. For Season 1, we filmed 8 episodes in 8 different counties. Each episode reaches over 16,000 households in 16 Middle Tennessee Counties. Total social media and television views for the 8 episodes of season 1 is estimated to be over 160,000. Viewers have reacted positively to the show and the stations have asked us to do another season in 2022. Comments submitted to our television partners by their viewers, as well as on social media, indicate that we are reaching our objectives and raising awareness of both the farmers in the region, as well as the Extension Agents who serve them.

SANTA ROSA SMALL FARM SCHOOL

EXTENSION EDUCATION
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The population in Santa Rosa continues to grow. Thankfully the agricultural community is robust due to continued interest from new growers and the willingness to diversify among existing farms. The purpose of the series was to introduce beginning farmers to various aspects of fruit and vegetable production and farm management and promote better business decisions. The five-part, weekly series was conducted for 22 total participants. The series also included a farm tour to give participants firsthand knowledge from local, experienced farmers. Classes started with lectures, followed by open discussion and hands-on activities. Class topics included: Suitable and Marketable Crops for the Florida Panhandle; Fertility and Soils; Irrigation Installation and Management; Whole Farm Pest Management; and Business and Marketing. Participants received a binder with printed presentations and supporting materials, a flash drive with digital copies of printed materials, and a hand lens. Overall self-reported farming knowledge increased by 95% across all topics. Program participants indicated a value of $7,099 per year, in the form of savings or increased profit, from the knowledge they gained from the school. A Facebook group was established to allow networking and collaboration among class participants, established farmers, and the Extension Office.

PRESCRIBED BURN AND LAND MANAGEMENT FIELD DAYS

EXTENSION EDUCATION
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The act of controlled burns or "prescribed fire/ burns" helps restore ecosystems and provides several benefits to landowners that implement this strategy. Prescribed burning is defined as the intentional and strategic application of fire on the landscape in order to achieve specific management objectives. Benefits landowners could gain from prescribed burns include enhancing wildlife habitats, invasive weed suppression, regeneration of native tree seedlings, and reducing the threat of hazardous wildfires. Taking into account the value of forestry products in the counties of Effingham (~$22 million) and Screven (~$31 million), and that the Georgia Forestry Commission reported there are 1.4 million acres per year burned across the state, educating land owners on "Why Burn?", "How to Burn?", and "Resources to Help Burn" is a high priority. Effingham and Screven County Extension partnered to address the needs of our community by offering two Prescribed Burning and Land Management Field Days with one being in each respective county. Inviting speakers from the Warnell School of Forestry and Natural Resources, the Georgia Forestry Commission, the Longleaf Alliance, the Central Savannah River RC&D, and the Natural Resources Conservation Service, the field days delivered timely and relevant information that matched the program's objectives. The field days boasted a combined 83 attendees, with some coming from other states such as Alabama, South Carolina, and Florida.

BEEF QUALITY ASSURANCE TRAININGS FOR MINORITY PRODUCERS

EXTENSION EDUCATION
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Danielsville

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Georgia has the fifth highest number of African-American farmers in the country. This group is traditionally under-served and underrepresented in Georgia Beef Quality Assurance (BQA) numbers. The AgriUnity Cooperative is an African-American member driven group whose goal is to enhance members' skill sets and knowledge through workshops and seminars. The mission of the AgriUnity Cooperative is to build sustainable economic empowerment among historically marginalized farmers so that they may leave legacies for their families, communities and culture.

Collaborating with the AgriUnity Cooperative and Fort Valley State University (FVSU) allowed the Georgia BQA team to reach an under-served community that traditionally does not participate in UGA Extension or Georgia Cattlemen's Association functions or educational events. Historical data and studies have shown that African-American farmers' relationship with public agencies that provide agricultural assistance is marred by a legacy of racial inequities, which makes it difficult for well-meaning projects to establish legitimacy in this community. Objectives of this program are to provide an opportunity for minority beef cattle producers involved in farming to receive an advanced training through a hands-on experiential learning workshop and receive a BQA certification and to conduct a train the trainer opportunity for FVSU faculty.

Georgia BQA coordinators applied for and received a $2,700 State Project Grant from the National Cattlemen's Beef Association to fund these minority specific trainings. Two full-day BQA certification trainings and live demonstrations were held in 2021. Locations: Fort Valley State University and Handy Kennedy Farm in Cobbtown, GA. A third training is scheduled for Green Oak Farm in Albany, GA. A train-the-trainer session was

conducted for Fort Valley State University Extension faculty to assist with the programs and conduct future BQA certification. Participants each received a soft-sided cooler and a sampling of syringes and needles for vaccine administration.

Program participants totaled 53, representing three states. To measure program impact and engagement, a pre and post-test was completed by participants. Based on the paired sample t-tests, the average mean of correct answers improved by 2.73 points. The significant improvement ($P<0.01$) in participant test score demonstrates improved understanding and retention.

PRESERVING HEIRLOOM APPLE VARIETIES THROUGH HYBRID LEARNING

EXTENSION EDUCATION
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Canton

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The apple (Malus x domestica) is one of the top three fruit crops in terms of production and value in the United States. There are an estimated 7,500 named varieties with approximately 1,600 varieties either originating or at one time being grown in the South. Sadly, over the last century most of these varieties have been lost. By 2008 ninety percent of apple production was limited to just 15 varieties, with 'Red Delicious' accounting for 24%.

In 2019 Extension agents began collaborating with University of Georgia Franklin College of Arts and the Georgia Mountain Research Education Center(GMREC) to establish The Georgia Heritage Apple Orchard. The two-acre orchard, was planted in 2021 with 101 rare varieties once common on Georgia farms and homesteads. The Orchard will serve as a vital preservation site and allow for dissemination of genetic material as the only way to reproduce a variety is through asexual propagation-grafting.

Grafting workshops are a great way to share this increasingly rare "heirloom" genetic material. These trainings, which are traditionally in-person, have become a popular Extension program over the years. The COVID-19 pandemic made planning a traditional event challenging and irresponsible given the community spread experienced across the state in early 2021.

BUILDING A UNITED TEAM: INCREASING ATTENDANCE AND PARTICIPATION DURING STAFF MEETINGS

EXTENSION EDUCATION
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Situation

Through evaluation, the new St Lucie County Extension Director (CED) found that staff meetings were not meeting the needs of staff. Communicating with other county extension directors, revealed that many other offices were also having unproductive staff meetings. Many agents scheduled trainings during staff meetings resulted in low meeting attendance. Some CED's had been encouraged by staff members to email information instead of having meetings.

Methods

Support staff sent survey to agents to decide the best day of the month for staff meetings. Survey results determined

that with adequate notice and consistent monthly date, agents could schedule accordingly. After monthly date was decided, each agent was responsible to take ownership of the meeting by providing an off-site meeting location which would highlight their program areas. Each agent provides a 15-minute educational presentation showing direct involvement with selected site and impact created. Upon completion of presentation, agenda items are discussed at the site. Lunch may be provided, depending on availability of CED program development funds. For future meetings, each agent will select a new site and an outside presenter. A CED job performance evaluation was given at the end of six months on the job.

Results

As a result of off-site meetings, there has been an increase in staff meeting participation. Agents attend scheduled meetings, taking ownership, and learn about programs their colleagues offer. Meetings are engaging and staff are learning more about the community they serve. Meetings are providing agents with collaborative opportunities, due to the new awareness of similar programing or community connections being made. Staff commuting together to off-site locations has also created staff unity and teambuilding due to new connections and conversations. Lunch after the meetings gives the opportunity to spend time with each other and increase morale. CED evaluation helps with staff development

Conclusion

Giving agents a role in staff meetings create a sense of ownership, which will result in an increase in participation. Providing consistent meeting dates and times will decrease scheduling conflicts. Lastly, offsite locations encouraged staff members to learn more about their community and what other agents are providing to community members.

RETENTION EFFORTS FOR EXTENSION MASTER GARDENER VOLUNTEERS: A TEAM APPROACH

EXTENSION EDUCATION
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Murfreesboro

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The Extension Master Gardener training provides volunteers with the skills needed to support the mission of Extension and extend the efforts of the County Agent. Recruiting and training new volunteers for the Master Gardener program is both necessary and important for the longevity of the program. However, a tremendous amount of time and effort is put into recruiting and training new volunteers by the Agent and other Extension personnel, as well as volunteers. Therefore, certifying, retaining, and engaging new volunteers has many advantages for the County Agent and the strength of the volunteer program. A team approach to mentorship and retention efforts was implemented starting mid-year in 2017 and has proven successful. A group of volunteers called the “Growth Team” was charged with engaging and encouraging new and experienced members. The Growth Team is made up of volunteer members that are engaged and exhibit the skillset to connect and guide fellow members exceptionally well. Team members interact with new trainees often before and throughout the training and begin assessing their strengths and particular interests. Growth Team members are empowered to intentionally ask both new trainees and other fellow members to attend events and take on leadership positions that align with their interests. The Growth Team plans social events such as garden tours across the state and recognition events such as the annual awards banquet. After trainees become certified, two new members are chosen to join the team. This allows new input from new membership and demonstrates the value of everyone’s voice and ideas. Since utilizing the Growth Team for recruitment and engagement efforts, the retention of new volunteers has increased dramatically from 32% to over 70% within the local program. Additionally, these efforts have contributed to increased diversity within the local Extension Master Gardener Program membership. By intentionally engaging all volunteers and empowering them to connect and lead within the local program, these efforts have created an organizational culture that is welcoming, approachable, and inclusive.

THE TSU EAST TENNESSEE NEW FARMER ACADEMY

EXTENSION EDUCATION
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The East Tennessee New Farmer Academy is part of the TSU Tennessee New Farmer Academy Program that was designed to support beginning farmers, retirees and veterans as they explore agricultural opportunities and enterprises.

The E TN NFA is an 8-month program that meets one day per month March through October and focuses on teaching the basic agricultural concepts, providing research based information, facilitating the hands on experiences and building the relationships and connections necessary to allow participants to create solid and viable agricultural enterprises and businesses in East Tennessee. The program was designed to utilize the hands on kinesthetic, bisual, logical and social teaching styles that work best with this particular group of learners. Participants in the course will evaluate opportunities, set goals, and create thier own farm plans. They will also be introduced to the "Agricultural Players" in our region and learn what those different organizations and individuals provide to the industry. Participants attend a diverse variety of field trips and look at the best management practices and the real world economic snapshots of each of the agricultural enterprises we focus on during the series. One on one site visits to the participant farms to assist with specific needs are also significant to the program.

We have graduated 67 participants who have completed the entire 8-month series in East Tennessee. The TN New Farmer Academy program originated in Middle Tennessee with Mr. Finis Stribling and expanded East and West in 2018. TN NFA has graduated over 280 participants statewide since its inception.

Of the 67 E TN graduates who completed the entire 8-month program, 46 of them have expanded thier livestock operations, 40 have purchased land, 12 have implemented value added enterprises, 18 have built greenhouses, 36 have worked with NRCS on conservation projects for thier farms, 17 have recieved TN Dept of Ag grants, 2 have recieved FVC grants and many have joined thier local agricultural organizations. We continue to check in with our graduates to track thier growth and successes and suport them as they move forward.

EXPANDING LOCAL OUTREACH WITH SMALL RUMINANT PRODUCER AND YOUTH PROGRAMMING

EXTENSION EDUCATION
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Livestock production is a prominent industry in Oglethorpe County with sheep and goat ownership particularly on the rise. Increased numbers of sheep and goat populations along with limited education opportunities in the form of associations or producer groups provided an opportunity for expanded Extension programming. The Agriculture and Natural Resources Extension Agent in Oglethorpe County has observed producers dealing with poor small ruminant animal health as a result of drug resistant parasites and a lack of education on best management practices. In response, the agent coordinated a series of quarterly producer meetings, developed office education resources, contributed news articles, and conducted in person consults and demonstrations. The agent has increased support for local small ruminant livestock showmen and hosts an annual Christmas themed breeding doe show. The small ruminant education efforts by the Extension agent have been well received as demonstrated by verbal feedback, newspaper coverage, positive evaluation responses, and repeat attendance. The agent has observed producers using chemicals more responsibly and seen many indications that small ruminant producers will implement improved production practices in the future. The youth breeding doe show interest, community support, and attendance are steadily increasing.

KEEPING IT R.E.A.L. - READY TO ENGAGE IN ATV LEARNING

EXTENSION EDUCATION
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According to the Shepherd Center, in 2014, ATV accidents caused an estimated 674 deaths, and in 2015, there were over 97,000 ATV-related, emergency department-treated injuries in the United States.Some experts suggest that focusing on educational programs that increase safety practices and reduce risky behavior can be beneficial to reducing ATV related injuries. In order to properly address local ATV safety training areas, a needs assessment was conducted using data collected from 4th, 5th and 6th grade Pulaski County, Georgia 4-Her's. The survey assessment focused on proper ATV size, helmet usage, riding with or as a passenger, on-road usage, and safe riding techniques. Criteria for future ATV programming was established using the results of the needs assessment. In order to raise awareness about the importance of ATV safety, the agent collaborated with Dr. Nick Fuhrman and the Georgia Farm Bureau to produce and film a segment focused on ATV safety for the Georgia Farm Monitor.

ASSESSING THE PIG BRIG TRAP SYSTEM AS A TOOL TO CONTROL FERAL HOGS

EXTENSION EDUCATION
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Feral hogs are a growing problem across Arkansas and many other states. A non-native, invasive species, their agricultural and ecological damage is estimated to cost $1.5 billion each year. Specifically in Arkansas, the damage is estimated at $19 million annually. The impacts on producers include loss of crops, injury and disease transmission to livestock, and property damage. Many methods of control have been used to attempt to control feral hog populations, including individual shooting, airborne eradication, and several trapping systems. Trapping systems like Game Changer and Boar Buster work well, but they require a cellular signal to drop the gate or trap remotely and are expensive and heavy. In rural Arkansas, cellular service is not always available. Our group of southwest Arkansas county agents and UADA Wildlife Specialist Dr. Becky McPeake wanted to test the effectiveness of the Pig Brig Trap System, which does not require cellular service, is thousands of dollars cheaper than other traps, and is lightweight. Three different farms with feral hog damage in Hempstead, Nevada, and Clark Counties were used as our trapping sites beginning in September 2021. Pre-baiting before setting up the trap was conducted to condition the hogs to bait. Game cameras were used to count the number of sounders and the number of hogs in each sounder coming to the bait. The trap was set up according to the included directions. We were successful at trapping the complete sounders at each site. We concluded that the Pig Brig Trap System is an effective, easy to set up, economical option for producers to help keep their feral hog populations in check. However, we did not have any boars or multiple sounders coming to each trap site. More demonstrations will be needed to test the trap's effectiveness in those situations. Also, as the trap is used more and more, the longevity of the net, straps, and anchors can be assessed more accurately. To date these results have been shared with producers at the Four States Ag Expo, at a state-wide in-service for fellow agents, and at row crop production meetings.

PONGAMIA: A POSSIBLE ALTERNATIVE CROP FOR FLORIDA CITRUS GROWERS

EXTENSION EDUCATION
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Citrus growers in Southeast Florida are looking for alternative crops that could be planted in their

current fallow lands and overcome economic losses from the citrus greening disease. Besides maintaining the Ag community's wellbeing, these alternative crops should require low water and nutrient inputs in order to promote environmental sustainability. Pongamia is a new alternative crop for citrus in the Indian River region that is adapted to the climate and conditions of the region. This crop can be planted in previous citrus lands without additional infrastructure or rigorous pest management investment. Pongamia is commonly known to be "lower maintenance crop" compared to citrus. However, there is no field-based scientific evidence that proves this in Florida. In this presentation, we show the preliminary findings of a Pongamia field trial at the Indian River Research and Education Center (IRREC) supported by SEEDIT UF IFAS that looks to provide a first draft of field management guidelines. The experiment evaluated three Pongamia varieties from Terviva and three irrigation scheduling techniques including soil moisture sensor-based, evapotranspiration based, and citrus growing calendar schedule. The water management practices were evaluated based on the plant and root physiological development, pathogens, and soil/water quality. The preliminary data obtained from this field trial will be used to inform existing and new Pongamia growers on the management practices required to maintain sustainable crops and will extend our understanding of pongamia responses to the soil, water, climatic and potential biotic stresses in the region.

USING HORTICULTURE EDUCATION TO IMPROVE POST-RELEASE EMPLOYMENT OPPORTUNITIES

EXTENSION EDUCATION
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Incarcerated individuals who obtain basic education could improve opportunities to obtain employment upon release and possibly help lower recidivism rates. Eighteen pre-approved one-hour classes were presented weekly to selected inmates at no cost to the prison. A 10-question written quiz was given at each class on the previous week's topic. Average quiz scores ranged from 92-99% correct. A written 54 question final exam was given where scores ranged from 69-100% correct. Sixteen of the average final exam scores were similar to or greater than the average quiz scores. Two of the average final exam scores dropped by a significant amount. Insects of Fruits/Vegetables dropped from 96% to 81% correct and Plant Diseases dropped from 95% to 69% correct. Overall average score for weekly quizzes was 96% correct and 93% correct for the final exam. Fifteen of the 16 students scored 87% or higher on the final exam. Lower final exam scores could be due to taking a longer exam versus the shorter weekly quizzes. The length of time since the first class was taught also may have affected knowledge retention. The training was a success as students increased their knowledge of horticulture, hopefully improving the opportunity for future employment and possibly lowering recidivism rates. Classes were recorded with audio and video by the prison. A course DVD was made and shared with numerous other prisons within the same penal system. This type training could be presented at other facilities with other topics, opening many possibilities for Extension to educate unreached and underserved clientele. A point of emphasis with future studies could be to track inmates upon release to see if employment was obtained in a horticulture related position.

F.B.I. FREEZER BEEF INSTITUTE

EXTENSION EDUCATION
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Marketing farm raised calves directly to consumers has gained interest among Tennessee cattle producers recently. Compounding influences for this movement include depressed market prices from the COVID-19 pandemic and a lack of beef on grocery store shelves. While many resources were available on marketing, regulations, and label requirements related to freezer beef production, information on producing a calf that met consumer preferences was lacking. F.B.I. Freezer Beef Institute (FBI) was developed as a multidisciplinary, collaborative program to educate producers on how to raise and feed calves from weaning to harvest to meet this need. FBI is a three-part webinar series that showcased six topics including nutrition, calf selection, marketing, budgeting, carcass quality, and product storage. Producers surveyed (n=73) reported a 25% increase in knowledge about selecting the right calf to feed and a 27% increase of knowledge for both marketing and budgeting. Nearly half (49.3%) of surveyed participants plan to make changes to their nutrition program in the coming year. Self-reported economic impact for FBI totals $210,000. Data suggest

that more education is needed in the future as 80% of participants have fed less than 15 calves for freezer beef production, and only 31% are selling retail cuts off the farm. Expanding knowledge in these areas could increase farm profitability.

VARIABLE FREQUENCY TAIL WATER RECOVERY SYSTEM RICE IRRIGATION

EXTENSION EDUCATION
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Reducing the amount of irrigation water needed for crop production and increasing irrigation efficiency are major goals of Arkansas row crop farmers. Declining groundwater and the increased well pumping costs are long term concerns. Increasing irrigation efficiency to ensure that Arkansas farms have economical water available for future generations are reasons for this research and Extension effort.

Furrow irrigated rice is a relatively new production system for growing rice. The traditional system is to seed the crop on flat ground, construct levees along a specific elevation, and then flood the field, maintaining the flood for most of the growing season. The traditional system called cascade flooded rice uses approximately 30 inches of irrigation water in addition to any rainfall caught by levees.

To address these concerns, we worked with furrow irrigated rice farmers to implement Irrigation Water Management (IWM) practices on their farm by using a variable frequency tail water recovery system. The objective of this project is to conserve groundwater while supplying sufficient water for the growing rice crop to realize its optimum yield.

The following practices were also implemented as a comprehensive approach to IWM for furrow rice irrigation; computer hole selection, flowmeter, FarmLogs, and irrigation termination.

Using this system, the subject field had a yield of 239.9 bushels per acre. Total water use was 24.54 inches, of which 13.47 inches was irrigation water and 11.1 inches of effective rainfall. Water use efficiency was 9.77 bushels per inch of water.

Based on this research we are learning how we can decrease water usage without impacting yield and increase irrigation efficiency overall.

SOUTHEAST TENNESSEE HEIFER PROGRAM

EXTENSION EDUCATION
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Agent's have conducted the Southeast Tennessee Heifer Program for the past fourteen years. Agent's utilize farm visits and group meetings to conduct the yearly program to teach beef producers/consigners the knowledge needed to improve their herd genetics by selecting and raising quality replacement heifers for the program each year. Agent along with local stockyards and cattlemen association's conducts the Southeast TN Heifer Sale at the conclusion of the yearly program to teach area beef producers the knowledge needed such as utilizing EPD's to improve herd genetics by selecting and purchasing quality replacement heifers at the sale each year. The program offers premium heifers to area producers to add superior genetics to their herds and allows local producers a cooperative effort to market their quality animals. For the past fourteen years, bred heifers averaged $1,513, open heifers averaged $1,178 and first calf heifer pairs averaged $1,687 which was above average compared to similar marketing opportunities available regionally. Over the past fourteen years, the sales have grossed an average of $113,177 which has economically benefited local consignors and the area. To participate in the program, participants pay an entry fee of $50 per head which includes all advertising, printed catalog and materials. Fees obtained from the sale have been used to conduct and provide operating and travel funds for the program. Total fees for the past fourteen years has totaled $19,644.

AG EXPLORE: AG CAREER BOOT CAMP

EXTENSION EDUCATION
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Many high school students today have a narrow view of the careers available in agriculture and the vast opportunities available within varying college degrees. "Jobs within agriculture are abundant, according to USDA data, but high school and college students do not have high interest in pursuing a career in the field. Prairie and White County Cooperative Extension Service agents Amy Tallent & Jan Yingling hosted an "Ag Explorer: Ag Career Bootcamp" educational program in June 2021. This program was created to bring awareness about the diverse career opportunities there are in Agriculture in Arkansas. The students learned throughout the 3 day; on-farm tour stops consisting of the following topics: Horticulture, Row Crop, and Livestock. There was a total of 72 participants of youth and adults over the 3 days of learning. Base on an end of tour survey 93% of the students increased their basic understanding careers available in row crops, horticulture, and livestock.

MASTER GARDENER VOLUNTEERS EXPERIENCE INCREASED HEALTH AND WELL-BEING

EXTENSION EDUCATION
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Objective: 75% of Master Gardener Volunteers (MGV) report improved health and well-being as a result of participating in the MGV program. Methods: After participating in an intensive 50-hour training in horticultural principles, participants volunteer a minimum of 35 to 50 hours annually to maintain MGV status. Volunteers are provided continuing education and volunteer opportunities such as teaching and attending workshops; gardening in demonstration gardens and plant nursery; providing diagnostic services at plant clinics and help desk; and mentoring youth in garden settings. An annual survey has been distributed from 2019 to present to access the benefits derived from participating in the program both as a volunteer and specifically as a volunteer in a garden setting. Results/Outcomes: Results from surveys conducted annually from 2019 – 2021, revealed that as a result of participating in the MGV program, 91% (n = 109) feel physically healthier and 81% experience reduced levels of stress; 90% (n=110) experience improved mental health and 87% increased social connectedness; 92% (n=111) increased overall life satisfaction; and 90% (n=112) feel they make a difference in their community. When these MGVs were surveyed about their experience specifically volunteering in a garden setting, 90% (n=87) reported improved mental health; 87% increased social connectedness; 83%; increased energy and vitality; 92% increased sense of well-being; 85% improved outlook on life; 99% (n=88) increased physical activity; and 94% (n=86) improved physical health. Conclusion: MGVs experience improved health and well-being from participating as a volunteer in the MGV program and from gardening opportunities the affiliation provides.

FIELD BASED TRAINING FOR BEAVER AND RACCOON DAMAGE MANAGEMENT

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In the last several years a growing number of raccoon (Procyon lotor) and beaver (Castor canadensis) damage issues have risen across Kentucky. To address the issue, a partnership between a University of Kentucky CES Wildlife Specialist, a county agricultural and natural resources agent, and United Trappers of Kentucky(UTK) formed to lead a joint training effort in southeast Kentucky. In total 17 county agents attended the all-day training. The morning session consisted of an introduction to beaver and raccoon damage identification, non-lethal management strategies including the pros and cons(legal, disease, and social hierarchy) of relocation, lethal strategies, trap selection, and disease concerns. As part of the program, participants taste tested Cook Wild Kentucky recipes for beaver and raccoon to highlight the versatility of the

game species. The afternoon session occurred at a local farm experiencing both beaver and raccoon damage. UTK members were assisting the producer in removing the animals so agents were able to observe active trap sets using cage, dog-proof, foothold, and body gripping traps. Agents also waded in the stream on the property to observe beaver sign and traps placed by UTK members. Multiple animals were captured by UTK that day giving the opportunity to demonstrate multiple methods for a quick and humane dispatching of captured animals. Throughout the session discussion on different options for damage management in each field location occurred to help walk-through real-life scenarios. Overall, 100 % of attendees said they greatly increased their knowledge and awareness of raccoon and beaver issues, damage identification, and control methods. All attendees also stated they would use the knowledge gained from the training in future county programming. Future trainings using this model are being planned for other locations and species within Kentucky.

THE BEES' NEEDS: SURVEYING COMMERCIAL BEEKEEPERS IN SOUTH GEORGIA

EXTENSION EDUCATION
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Colony collapse disorder and colony loss in general has been a problem for beekeepers since at least the mid-2000s. Various organizations have attempted to gather data about beekeeping practices and colony loss through surveying beekeepers, but the majority of responses tend to be from small-scale or hobby beekeepers. Between 2015 and 2020, one of the largest national surveys collected only 20 responses from commercial beekeepers in Georgia. This low response rate indicated a potential gap in important data and programming needs, especially considering commercial beekeepers manage the majority of the colonies in the United States and experience greater financial impact as a result of colony loss and compromised bee health. The county Extension agent developed and delivered a similar management survey specifically for South Georgia commercial beekeepers. This one-year survey collected data from 33 commercial beekeepers operating over 25,000 colonies in South Georgia, a 65% increase over national surveys in the previous five-year period. Data showed that South Georgia commercial beekeepers continue to struggle with varroa mites and are concerned about pesticides. This data will help guide future Extension programming in the area. Additionally, the sheer number of responses to the survey exemplifies how Extension relationships with producers can provide valuable data when conducting needs assessments to better focus Extension programming.

CREATING A 4-H LIVESTOCK CLUB, FROM THE GROUND UP

EXTENSION EDUCATION
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Wewahitchka

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Objectives: A 4-H club experience can help youth find new interests and strengths and grow in ways traditional education cannot offer. Under this philosophy, a newly formed 4-H livestock club was designed to teach youth leadership, self-discipline and responsibility skills through the process of showing a steer at a livestock show. Methods: Utilizing feedback from the Overall Extension Advisory Committee and the Gulf County Cattlemen's Association, an interest meeting was held to recruit youth and adult volunteers. Both in-person and virtual instruction was used to recruit and train volunteers, and teach youth about the care, judging and showmanship of livestock for competition. Results: This newly formed club had twenty-four active members and eight adult volunteers. The club participated in the West Florida Livestock show, with a total of eight youth making up two judging teams and five youth who participated in the steer show. The two judging teams placed 2nd and 5th, respectively. Each youth placed in their steer class and sold their project steer at auction. Five of the members participated in the statewide virtual judging competition held later in the year. All club members ranked in the top ten of their age division for overall placings at this event. Conclusions: Livestock judging and showmanship are learning experiences that provide youth with specific animal knowledge, while adding critical thinking to the mix. Experience in events such as these aid youth in gaining knowledge and skills in leadership, allowing for growth into responsible and productive citizens.

NORTH CENTRL REGION ENTRIES:

ANNIE'S PROJECT IMPROVES RISK MANAGEMENT

EXTENSION EDUCATION
Madeline Schultz
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Iowa State University Extension and Outreach
Ames

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Annie's Project is a national non-profit organization with a mission to empower women in agriculture to be successful through education, networks, and resources. One of the programs offered is an 18-hour Annie's Project agricultural risk management course typically taught over six weeks. There are 1.2 million women producers in the United States, accounting for 36 percent of the country's 3.4 million agricultural producers (NASS, 2017.) To support women producers, many extension professionals across the nation facilitate local Annie's Project risk management courses. Educators in 14 states (AL, AR, CO, IA, IL, IN, MN, ND, NE, NH, OH, OK, SD, VA) participated in a standardized survey between 2016 and 2019 to assess the effectiveness of Annie's Project risk management courses. One purpose of the evaluation was to examine changes in knowledge of agricultural risk management practices in the financial, legal, human resource, marketing, and production areas. Surveys contained knowledge constructs with several questions in each area of risk. Respondents rated their knowledge on a four-point Likert scale. Surveys were designed, collected, and analyzed by the Iowa State University Research Institute for Studies in Education (RISE). To protect respondent identity, participants were assigned ID codes anonymously for matching purposes only. Respondents completed pre-course surveys on week one and post-course surveys on week six. Surveys were offered on-line or as a printed version of the on-line survey. RISE staff entered paper survey data to ensure accuracy. Aggregated data yielded more than 900 matched pre-post responses. These were analyzed by risk area using a compared means analysis. A paired t-test was used to determine significant differences in knowledge from pre- to post- course surveys. The analysis showed statistically significant increases in the mean scores of knowledge in each construct between the pre and post surveys. The results show Annie's Project risk management courses were effective in achieving the goal of improving women's knowledge in all five areas of agricultural risk management: financial, human resource, legal, marketing and production. Extension has an important role in educating and empowering women producers. Empowered women in agriculture are change agents who strengthen their businesses, families, and communities.

IFARM IMMERSIVE THEATRE

EXTENSION EDUCATION
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Hillsboro

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Imagine flying over lush, green fields of corn and soybeans while you ride on a crop duster applying fungicide and learning how to become an agricultural aviation pilot. Then imagine swimming with tilapia in an aquaponics system and learning about hydroponics. Now, imagine being able to experience these sensations, and more, without having to leave your chair. The iFarm Immersive Theatre provides viewers with the opportunity to view these kinds of immersive videos about agriculture, without having to leave a theatre setting. This theatre utilizes projection mapping and 360-degree, virtual reality (VR) videos to provide viewers with an immersive experience similar to an IMAX Theater or a planetarium with 200-degrees of projection. Researchers have found that immersive theatres are more successful in engaging participants than VR headsets (Dorta, Pierini, and Boudharaâ, 2017). Advancements in technologies allow for the creation of these immersive experiences, but are immersive experiences a good way to communicate educational materials related to agriculture? Is the experience of this kind of immersive projection system something participants would recommend to others?

This research presentation analyzes the use of the iFarm Immersive Theatre at the 2021 Farm Science Review, a large agriculture education and trade show. Findings indicate this kind of immersive theatre is a good way to communicate agricultural topics. In total, there were 157 screenings over the course of three days with 861 participants. Participants were asked to participate in a voluntary survey to analyze their experience. Over 96 percent of respondents stated they would recommend the immersive theatre to others. Two-thirds of the respondents stated they learned something new from the

experience. Experiences that offered a new perspective, or something that is not a common occurrence for everyday life, were the most popular virtual experiences with participants. Based on initial reactions from participants, findings indicate that immersive theatres are a viable way to communicate and educate audiences on agricultural topics.

VIRTUAL KITCHEN TABLE CONVERSATIONS FOR OHIO WOMEN IN AGRICULTURE AT THE FARM SCIENCE REVIEW

EXTENSION EDUCATION
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Agriculture & Natural Resources Educator
The Ohio State University Extension
Owensville

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Extension professionals need new and innovative ideas and tools in their program delivery toolbox to keep their programs moving forward and in step with current needs and technologies. As OSU Extension professionals, we are expected to develop programs for historically under-represented and under-served audiences. Creative ways to reach new and existing clientele are critical to maintaining our relevance now and in the future. Ohio has 43,256 female farm operators according to the 2017 Census of Agriculture which aligns with the national average of 1 in every 3 farmers being female. Check out the creative educational outreach approach that OSU Extension's Ohio Women in Agriculture Team used to connect with Ohio women in agriculture during the 2020 Virtual and 2021 In-Person Farm Science Review. These sessions featured a creative twist on virtual delivery of topics that are often discussed around the farmhouse kitchen table. The online platform of Zoom was used to register the participants (20 registered), broadcast the sessions, and record them for future views on YouTube (19 views) and social media such as Facebook (917 likes) and Twitter (269 likes). The recorded sessions were also shared via a weekly email blast to 625 subscribers. This approach has allowed us to reach an audience that may or may not attend the FSR but want to learn more about the "Kitchen Table Conversation" topics. The recorded sessions may be viewed at https://go.osu.edu/fsr_ktc2021.

SPANISH TRANSLATED STANDARD OPERATING PROCEDURES

EXTENSION EDUCATION
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Alma

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Standard operating procedures (SOPs) are essential for livestock production farms to operate and train employees effectively. These documents are used on livestock farms to train new and current employees on daily animal activities. Various quality assurance programs, such as PQA (Pork Quality Assurance) and BQA (Beef Quality Assurance) require these documents for each livestock production phase. The SOPs are used in swine barns to develop and help ensure consistent animal care procedures, employee training and verification of skill sets, and to teach and encourage consistent use of safe and effective practices for various activities. These documents are used by supervisors to train new employees and should be reviewed annually with all swine employees on the farm. Consistent use of SOPs for all critical activities is important, in part, because the relatively high worker turnover rate in the livestock industry.

SUPPORTING TEACHER-LED HORTICULTURAL PROJECTS IN YOUTH EDUCATION

EXTENSION EDUCATION
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The Muskingum County Master Gardener Volunteer Program has supported local youth educators, including teachers and other community leaders, by providing a small financial award and volunteering time assisting horticultural projects. This volunteer driven program links the local Extension office to community educators and extends the reach of the local Land Grant Extension program. An average of 13 projects each year have been funded in the past five years nearing a total of $9600 across 64 projects. Awards are given upto $150 and youth

educators submit applications due in March with projects summaries due in June. A Master Gardener Volunteer partners with each grant applicant to mentor the project participants and provide assistance as needed. Evaluation in 2019 captured project impact in the community with a response rate of 8 out of 12 awardees providing feedback with reach to 193 youth. Funding for the youth education awards was supported by funds accrued during a summer fundraiser which was held annually up until 2016.
The Extension Educator in the Agriculture and Natural Resources post has supported the Master Gardener Volunteer program and promoted this youth education award program. The Youth Education Award program can play a key role in providing an outreach opportunity that is publicly visible and can be an attractive project to new volunteers.

ADAPTING FORAGES FOR HORSES FOR THE MODERN CLASSROOM

EXTENSION EDUCATION
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Steubenville

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The Ohio Forages for Horses program began in 1998 as a collaboration between the Ohio Forage and Grasslands Council and Ohio State University Extension. Over time, additional collaborations with the Natural Resources Conservation Service, Ohio Department of Agriculture and local Soil and Water Conservation Districts expanded the program. At its inception, one to three educators would partner to provide eight hours of in-person lectures followed by a pasture walk to better the management practices of equine enthusiasts. In addition, a binder of resources and certificate of completion were also provided to participants. From 2021 through 2022, the curriculum was adapted for a hybrid classroom and included three 90-minute live webinars featuring nine different presentations followed by online social events and in-person pasture walks. The modifications to the curriculum were made to improve access to equine resources and grazing education across Ohio. The Forages for Horses resources were also updated as part of the process. Modules in Scarlet Canvas provided additional information that was not initially covered in the original curriculum due to time limitations. In total, 37 students registered in the online course and webinars from January through March, 2022 with 24 attending the first live webinar. Enrollees included residents from Ohio, Maryland and Washington. Those who actively engaged with the online modules spent an average of 6 hours reviewing content. All webinars were recorded and will remain accessible until December 31, 2022 in order to allow additional participants to join the course throughout the year. Participants were able to hear directly from more educators than in past iterations of the programming, expanding the depth of knowledge and increasing the opportunities for participation without the location of the class posing a barrier for attendance. Regional pasture walks that will follow allow for in-person learning and networking opportunities. The online course model has expanded program reach and accessibility in the first year of implementation and will continue to be revised over the coming years to remain relevant and accessible to Ohioans.

DAIRY EDUCATION ASSISTS PRODUCERS WITH IMPLEMENTING TECHNOLOGY TO IMPROVE PROFITABILITY AND EFFICIENCY

EXTENSION EDUCATION
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A producer's decision to implement a precision technology is a significant investment. Understanding the challenges, maintenance requirements, data analysis, and technical support are critical factors in the decision. Iowa lost 10% of their dairy producers over an 18-month period. With continued low profit margins, labor efficiency and adoption of profitable technologies will be key factors in farm viability. Combining good management practices with financially sustainable technologies can provide greater levels of farm productivity. With the assistance of an RME grant, this project helped guide the decision-making process for new and current dairy producers to determine if precision technologies were a financially sustainable tool that would improve quality of life for the dairy animal and producer, while increasing labor efficiency.

This project focused on automatic milking systems, low-cost parlor automation, feed mixing automation, automatic calf feeders, and health sensors. With limited interaction in person during the project, more emphasis was put into time lapse camera demonstration to show how it can be used to improve farm productivity.

We completed 31 producer management surveys, 9 on-farm workshops, 4 webinars, 5 best management practice videos, and 18 individual farm visits. We also installed time lapse cameras on 9 farms and captured over 1800 hours of activity in barns and milking parlors on time-lapse video. Over 100 producers and industry partners increased awareness, understanding, and decision-making ability regarding precision technologies. Long term, producers will reduce risk and increase labor efficiency, impacting profitability.

A Qualtrics evaluation was used to evaluate the increase in knowledge gain for the educational topics delivered during the webinar series. Knowledge gain ranged from 30-80 percent knowledge gain in delivered topic areas. As of 3/15/22, there has been 131 archived views of the time lapse webinar, 125 archived views of sensor technology, 95 archived views of the Automatic Milking Systems, and 65 archived views of the Automatic Calf Feeders. The best management practices videos that were posted to you-tube have also received 57 views-Taakes Family Farm Implements Technology and On-Farm Processing; 177 views-Trans Iowa Parlor Design with Schanbacher Acres; 149 views-Dairy Farm utilizing solar panels; and 64 views-Installing Time Lapse Cameras.

IOWA FARMLAND LEASING MEETINGS RESONATE

EXTENSION EDUCATION
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Purpose: Over half of Iowa farmland is owned by someone who does not currently farm, of which 34% is owned by those with no farming experience, and the remaining 24% is owned by retired farmers (Zhang, 2017.) Both landowners and tenants look to the Iowa State University Extension and Outreach Farm Management Team to annually provide un-biased leasing information impacting 16.8 million acres in Iowa. Method: In July-August 2021, Farmland Leasing Meetings were offered across Iowa to address questions from landowners, tenants, and others. Planning for the 2-hour meetings began months in advance. A 100-page leasing guidebook was prepared for attendees and meetings sites were organized with county extension professionals. With uncertainty regarding COVID-19, programs were offered both in-person and virtually. Topics included land values, cash rent trends, rental rate determination, legal updates, carbon credits, cost of production, land improvements, water quality, landowner-tenant communication, and annual reports. Results: The team held 77 in-person meetings and 2 virtual meetings reaching 1,380 individuals from 23 states. Of the 1,380 participants, 738 were invited to complete an online survey after the meetings.

There were 297 responses for a 40.24% response rate. Three key leaning objectives were assessed using a Likert scale: 92.49% 'somewhat agreed' or 'strongly agreed' their knowledge of leasing trends and issues increased; 91.16% 'somewhat agreed' or 'strongly agreed' they can communicate better with their tenant or landowner; and 86.01% 'somewhat agreed' or 'strongly agreed' they are more confident to make changes needed. Top participant goals for applying what they learned were assessed by multiple choice: 51% selected 'increase rent;' 33% selected 'increase the information shared between leasing parties (annual reports;)' 32% selected 'improve communication with other parties involved in leasing arrangements;' 23% selected 'send termination notice to end the 2021 lease terms;' 18% selected 'discuss and/or implement conservation strategies.' Discussion: The Farmland Leasing meetings resonated with Iowa and out-of-state landowners. Meetings were effective in extending knowledge and supporting good decision-making based on un-biased information. When landowners and tenants improve leasing agreements, they can create better economic outcomes, conserve soil and water, and minimize communication stress in the farming community.

SATELLITE MUSHROOM PRODUCTION IN CABINETS AND A PREFABRICATED MUSHROOM POD

EXTENSION EDUCATION
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Oyster mushrooms, Pleurotus spp., and Bella mushrooms, Agaricus spp., are crops that offer profit potential for local Missouri growers through direct-market sales (farmers markets, on-farm sales, CSA). It is difficult, however, for growers to commit time to substrate production and inoculation, operations that require experience. A satellite farming system allows production capability for growers with ready-to-grow production kits produced by Willow Mountain Mushrooms, experienced mushroom producers. This demonstration project compares two production facilities in a satellite faming system – Mushroom Cabinets placed in an available on-farm room with a prefabricated Mushroom Pod. These facilities were developed in response to a pilot mushroom production project funded by the Missouri State University Darr College of Agriculture at the State Fruit Experiment Station in Mountain Grove, MO. The pilot project revealed environment challenges that needed to be overcome in order to optimize production. Data from the Mushroom Cabinets and Mushroom Pod was collected, products were marketed and sold, and the facilities were assessed in 2021. Educational events including a Mushroom Production Workshop, cooking and freeze-drying demonstrations, student and public tours were conducted exposing at least 250 people to the project.

HORSE PASTURE MANAGEMENT & NUTRITION WORKSHOP: EDUCATION FOR HORSE OWNERS

EXTENSION EDUCATION
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According to the USDA National Agricultural Statistics Service 2017 Census of Agriculture, Missouri maintains 85,540 horses on 16,925 farms. With overgrazed horse pastures being a common problem, there is a need to educate horse owners and caretakers about pasture management and proper nutrition. Further, horse owners have historically under-utilized Extension resources when compared to other livestock owners. Responding to the need for pasture management and nutrition education, University of Missouri Extension field specialists developed a pasture management and nutrition workshop for horse owners. This evening workshop combined presentations about pasture management and nutritional requirements of horses with hands-on weed identification and hay evaluation discussions for 19 participants. When surveyed, 86% of respondents planned to make changes to their pasture management after attending the workshop. In addition, 57% of respondents planned to make changes to their nutritional program. Attendees planned to initiate the following practices: soil and hay sampling, pasture rotation, weed control, interseeding grasses and legumes, evaluation of starch levels in feed and forage, purchase more hay, and have Extension specialists out for farm visits. In fact, increased use of Extension resources from

workshop participants including eight phone or in-office consultations and six farm visits occurred in the months following the workshop.

AGRONOMIC AND ECONOMIC IMPLICATIONS OF SULFUR APPLICATIONS TO SOYBEANS IN CENTRAL OHIO

EXTENSION EDUCATION
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Prior multi-year postemergence sulfur trials have produced highly inconsistent results usually resulting in a negative return to sulfur. This study was designed to evaluate preemergence sulfur application to soybeans. In 2020 two replicated trials were conducted in Knox County. Plot 1 harvest results show no statistical difference in yield between the sulfur replications (70 bushels/acre) and the no sulfur (check) replications (67 bushels/acre). These results produced a positive net return of $12.62/acre, which was not statistically different. In Plot 2 the sulfur treatments produced a yield of 81 bushels/acre and the no sulfur treatments (check) produced a yield of 76 bushels/acre. The yield data was statistically different. These yields resulted in a positive net return to sulfur of $27.55/acre. Based upon the 2020 results, three replicated trials were conducted in 2021 in Knox County (Plots 1 & 2) and Delaware County (Plot 3). Harvest results from Plot 1 show sulfur replications produced a yield of 55 bushels/acre, while the no sulfur (check) replications resulted in a yield of 60 bushels/acre. These results were not statistically different and generated a negative return to sulfur of nearly $82/acre. Plot 2 harvest results show no statistical difference in yield between the sulfur replications (55 bushels/acre) and the no sulfur (check) replications (53 bushels/acre). These results produced a negative net return to sulfur of $2.01/acre, which was not statistically different. Similar results are found in Plot 3. The sulfur replications produced a yield of 63 bushels/acre, while the no sulfur (check) replications resulted in a yield of 62 bushels/acre. These results were not statistically different and generated a negative return to sulfur of nearly $11/acre. These research results have been shared with farmers at multiple agronomy meetings throughout Central Ohio during the past two years. Survey data from these meetings show that farmers would require a consistent increase in net return of $5 per acre to adopt a new practice. A series of educational videos were created with the farmers and the Extension Educators explaining the importance of on-farm research. The videos can be viewed at https://www.youtube.com/channel/UCqVwZQCBHpC6yRd6tzOiRmA.

AG BUDGET CALCULATOR WITH BUILT-IN RISK EXPOSURE MODULE

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This poster presentation will provide an overview of the new University of Nebraska online Agricultural Budget Calculator (ABC) with a focus on the Risk Module. Through virtual workshops, tutorial videos, conference presentations and some in-person workshops, producers are currently learning how to utilize the budget calculator program to create and customize their crop enterprise budgets and to use its features in their decision-making processes. With over 400 user accounts established to date and 640 user enterprise budgets entered into the system, the availability of the ABC program to assist producers, bankers, and farm managers with figuring enterprise cost of production is catching on in Nebraska.

The primary objective of the Agricultural Budget Calculator project is to provide an online enterprise budgeting tool for agricultural producers. The ABC program is used to provide easy access to the eighty plus crop budgets for Nebraska. These budgets can be downloaded into the program and serve as a guide for producers to modify those budgets as needed to reflect their own production practices, projected costs, and revenue. Teaching how to use the ABC program to create enterprise budgets and then to use its analysis features like the risk module assists producers in risk management decision making and how crop insurance influences risk exposure.

One of the first components created to enhance the ABC program was the risk exposure module. The purpose of the risk exposure module is to provide additional context to the risky agricultural decision-making environment. The risk exposure module identifies the amount of capital needed if a bad revenue (yield and/or price) event is realized, events that can lead to farm ruin. The module is tailored to the individual producer's characteristics (i.e., expected yield, production costs, crop insurance contract, location (county), crop and practice). Quantifying the capital needed to survive a rare financially devastating event is one of the educational outcomes we strive for. In addition, another educational outcome is to assist producers in understanding the role of crop insurance in managing rare financially devastating events.

GREEN THUMB CLUB – URBAN GARDENING AFTER SCHOOL PROGRAM

EXTENSION EDUCATION
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According to the Iowa Department of Education, Bureau of Information and Analysis, 59% of Mason City youth at Lincoln Intermediate School are on free/reduced lunch. Green Thumb Club is an afterschool program that teaches youth about the development of their food. The Cerro Gordo County Extension and Outreach office partnered with Lincoln Intermediate School in Mason City to offer an after school urban gardening program. Through Green Thumb Club, youth learned the basics of gardening and where their food comes from. The club meets weekly after school and is completely free for all participants. This allows members of the under-represented groups to attend and feel included. Each semester we offer Green Thumb Club, we see an increase in the number of participants. From fall of 2020 to spring of 2021, we saw a 54.5% increase in participant numbers. The student evaluation indicated that 95% of students were more interested in STEM (plant science specifically) after attending Green Thumb Club. Of those students, 97.5% of them expressed interest in attending Green Thumb Club again during the school year. Green Thumb Club is an essential addition to Lincoln Intermediate School that allows youth to learn about gardening and food security through hands on, STEM lessons. Iowa State University Extension and Outreach intends on continuing the Green Thumb Club program in the future, with the desire to educate all Lincoln Intermediate youth about food security.

WOMEN IN AGRICULTURE: ANNIE'S PROJECT INNOVATIVE VIRTUAL DELIVERY

EXTENSION EDUCATION
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Trying to reach a broader audience? Looking to engage women in a new way? Learn how to flip from an in-person to an online virtual farm management education program. The main objective of Annie's Project is to empower farm women to be better business partners through networks and by managing and organizing critical information. Extension educators were faced with the barrier of COVID-19 to holding an in-person program, and therefore adapted Annie's Project to the needs of women during the pandemic by offering an all-virtual program. The program utilized alternative platforms including ZOOM, YouTube, Go-To-Webinar and WebEx (as well as email) in early 2021 to connect and educate women involved in agriculture during this tumultuous pandemic period. Prior to each session, women were provided with one to two hours of pre-session activities and resources to prepare for the topics to be addressed each week. Partnerships between county and state extension educators resulted in successful collaboration and utilization of the online platforms to maximize participants' engagement in discussions and networking. Over a year later, multiple participants reported specific actions taken to improve their farm business and family communication. Examples include establishing a relationship with an attorney, completing estate planning tasks, engaging in financial analysis including costs of production and budgeting, increasing farm decision-making involvement, establishing human resource policies and procedures, evaluating farm insurance options. This all-virtual Annie's Project successfully connected a diverse geographic audience (all with Iowa farm connections) many who would not otherwise have been able to participate in the program.

IRRIGATION SYSTEM DESIGN AND MANAGEMENT INCREASE EFFICIENCY ON NORTHEAST MISSOURI CUT FLOWER FARMS

EXTENSION EDUCATION
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University of Missouri Extension receives numerous inquiries from throughout the state relating to scale, layout, and design of irrigation systems for horticultural operations. The inquires typically come from small commercial scale producers or startup operations searching for ways to establish low cost, low maintenance, low tech systems that allow for enhanced production and system optimization. Small commercial horticultural producers are left to design their own systems as consulting services may be pricy. A properly designed and implemented irrigation system is critical to these small operations for continued harvest throughout the growing season. Three MU State Extension Specialists, were awarded a $40,000 Specialty Crops Block Grant through the Missouri Department of Agriculture to install irrigation systems on farms of horticulture producers. Due to Covid-19, the importation of cut flowers was greatly reduced creating a flower shortage for floral shops and retailers. This cut flower shortage resulted in increased demand for locally produced cut flowers initiating the request for an irrigation system on northeast Missouri cut flower farms in 2020 and 2021. Irrigation systems were set up on the farms, and workshops were conducted in late summer. Eighty-seven individuals from twelve counties and two neighboring states, participated in the workshops. Participants networked with other growers and extension professionals, gaining knowledge of valuable resources. They learned water management, water demand of flowers, water source options, types of systems, scaling systems to match need, and system operation and maintenance. Evaluations indicated participants learned how to setup up an irrigation system, the benefits of using it, and they planned to install one in their garden or on their farm. The producers indicated the irrigation installation cut their watering time and bill in half. “It really helped when we had Covid and barely had the energy to turn the water on and off. We would have lost all the plants if we were watering the way we had been before the drip irrigation.” “It allows us to grow on a much larger scale than we would be able to otherwise”. Good water management directly impacts production and income, creating more competitive, sustainable, and resilient horticultural enterprises.

NORTHEAST REGION ENTRIES:

BACKYARD GARDENING SERIES: FOR GENERAL AUDIENCE ACROSS MARYLAND

EXTENSION EDUCATION
Haley Sater
Agent Associate – Agriculture and Food Systems
University of Maryland Extension
Salisbury

Authors: Haley Sater[1], Emily Zobel[2], Ginny Rosenkranz[3], Rachel Rhodes[4], Meagan Perdue[5], Cheryl Bush[6]

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[5] Extension Educator, University of Maryland Extension , Maryland, 21863
[6] Extension Educator , University of Maryland Extension, Maryland, 21617

Throughout the Covid-19 pandemic gardens became “in Vogue” especially among millennials and consumers who had no previous gardening experience (San Fratello et al., 2022). Americans have turned to gardening as a way to grow their own food, get outside, and take a therapeutic break from the uncertainty and introduced stress that pandemic has brought to their lives. In order to help educate and teach practical gardening skills, without being able to meet in person, University of Maryland Extension Educators generated a virtual series of seven different webinars. This series was geared towards educating new and moderately experienced gardeners. Backyard Gardening, included topic on basic garden planning, composting, fruit and vegetable production, pollinator gardens, herbs and pest management. This curriculum was designed to encompass a wide array of topics to appeal and capture diverse audience of Maryland gardeners.

PEST SCOUTING USING GROWING DEGREE-DAYS – EXTENSION DELIVERABLES AND PROGRAMING TO SOLIDIFY GREEN INDUSTRY ADOPTION

EXTENSION EDUCATION

Timothy Waller
Agriculture & Natural Resources County Agent III
Rutgers
Millville

Authors: Timothy Waller[1]

[1]Agriculture & Natural Resources County Agent III, Rutgers University, New Jersey, 08332-9776

The green industry is a highly diverse stakeholder group that encompasses commercial nursery production, landscape professionals, components of diversified farm stands, municipality and environmental stewards, and multiple sectors of distribution / trucking networks, yet they all utilize the same crops supplied through commercial nurseries. As such, regardless of the green industry sector, plants are damaged by the same or similar pests and therefor the entire green industry stands to benefit from synchronized pest management approaches, via the use of growing degree-days (GDD) and pest scouting guides. If each sector is treated individually, the Extension requirements become exponentially more difficult. In efforts to field requests as an agent related to scouting and management of the extreme diversity of insect pests in this crop system, two scouting guides were compiled (one for nursery and landscape and another for conifers). These deliverables can be viewed online, but also printed and placed into work vehicles, farm equipment, placed in common areas, and posted in the pesticide storage/mixing areas. These pest scouting guides outlines host, pest, vulnerable life stages based on GDD throughout the season, and are broadly applicable to any industry culturing plants obtained from commercial nurseries. Additionally, there are links (online version) and QR codes (physical version) that provide more information or link to how-to instructions generated by the author. The final page of the guide is for taking notes, as this resource is meant to be an opportunity to further engage with our stakeholders by promoting the idea that their observations are valid and welcomed. In promoting these guides, and moreover how to use growing degree-days, multiple educational sessions, twilights, and tradeshow outreach events were organized to promote this cohesive IPM tactic across the green industry. Many stakeholders had previously expressed interest in utilizing GDDs but were concerned with the perceived, yet misleading, level of technical difficulty. Merging outreach efforts surrounding this key IPM tool, has greatly streamlined grower adoption and utilization of print and online resources. Furthermore, every outreach opportunity provided the ability to share other current research and bring more people into the offerings of Extension.

USING SHINY PACKAGE TO CREATE WEB-BASED CROP BUDGET TOOL

EXTENSION EDUCATION

Alan Leslie
Agriculture and Food Systems Educator
University of Maryland
Bel Alton

Authors: Alan Leslie[1], Benjamin Beale[2], Shannon Dill[3]

[1] Agriculture and Food Systems Educator, University of Maryland, Maryland, 20611
[2] Principal Agent, University of Maryland, Maryland, 20650
[3] Principal Agent, University of Maryland, Maryland, 21601

This project has designed and published a web-based budget tool for calculating soybean crop budgets in a way that is user-friendly, flexible, and interactive. The current version of the app can be found using the URL: https://awleslie.shinyapps.io/budget_4/. The web app includes all of the functions of the previous excel-based budget tool, with additional flexibility in the choices that can be made in terms of pest management options and for different genetically modified seed packages. All of the options are available to choose and change on the same page, which makes comparing different production options very easy. The former Excel-based budget tool required multiple spreadsheets to compare production costs of growing soybeans with different herbicide tolerance packages. This version allows you to quickly choose between herbicide tolerance packages and changes to show you the available pesticide options for each variety of soybean seed. The new online tool also simplifies record-keeping with the built-in option of downloading all of the information entered into the budget in PDF format to save for later reference. This PDF printout includes all field information and will include additional recommendations related to pest management that change depending on the choices selected in the online application. To further promote the use of this project, all of the files containing codes used to build this online tool have been published in a public digital repository under a GNU General Public Use license. This will allow other users to discover and share the code and potentially modify it for use in other states or for other crops. As the code is updated through subsequent versions of the web app, these revised codes will also be uploaded to the repository and be made available to the public. Our hope is that this project may provide accessible and intuitive crop budget planning to help support Maryland soybean farmers, especially through unpredictable financial times.

FEASIBILITY STUDY FOR INDUSTRIAL HEMP PROCESSING INDUSTRY

EXTENSION EDUCATION
William Lantz
Extension Educator
University of Maryland Extension
Mt. Lake Park

Authors: William Lantz[1], Cheryl DeBerry[2], Leanna Dubstadt[3], Sherry Frick[4], Darryl Glofelty[5], Andrew Ristvey[6], William Shockey[7]

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[4] Extension Eductor, University of Maryland Extension, Maryland, 21502
[5] Chair, Mountain Maryland Hemp Alliance, Maryland, 21520
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Much interest has been associated with the production of hemp (C. sativa) since the US Agriculture Act of 2014 established a pilot program for research administered by state departments of agriculture and state universities. While a vast majority of the hemp production has focused on CBD, hemp grown for fiber production has great potential. The issue that has arisen with farmers that have interest in fiber production is the lack of available processing. The Mountain Maryland Hemp Alliance (MMHA) along with Extension in Maryland, West Virginia and Pennsylvania received an Appalachian Region Commission - POWER grant to fund a feasibility study for a hemp fiber processing facility. Additional funding for the project was provided by West Virginia Department of Agriculture and Garrett County Economic Development. MMHA members, Extension agents and other interested individuals provided in-kind matching funds. An advisory committee of 12 individuals met with the consulting firm, ACDS, LLC, every other week during the study period. The consultant held a Hemp Industry Round table for advisory committee members to discuss processing with equipment and textile manufacturers. Extension agents created a power point presentation that was used to educate farmers on the growing and harvesting of fiber hemp. After each presentation farmers were asked to complete a survey to indicate their interest in growing fiber hemp. The extension group also planned two fiber hemp on-farm demonstration plots and held a field day at one of the sites. The consultant concluded bottlenecks do exist with very limited processing capacity and that processing capacity needs to be located within 100 miles of hemp fiber production. One other major factor is the lack of standardization of hemp inputs. Success for a processing facility will depend on the ability to market multiple hemp products. While a sizeable investment of over $4 million dollars would be needed to create a hemp processing facility, the facility could be profitable in 4 years with enough production and sales. MMHA members are exploring funding to include grants and industrial partners.

RUTGERS NJAES MASTER GARDENERS OF HUNTERDON COUNTY CITIZEN SCIENCE AND SOCIAL MEDIA

EXTENSION EDUCATION
Rebecca Magron
Horticultural Consultant and Research Associate
Flemington

Authors: Megan Muehlbauer[1], Rebecca Magron[2]

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The Covid-19 pandemic has brought about unprecedented times and difficult challenges to overcome. Beginning in May 2020 and throughout 2021, focus had been on keeping County residents as well as Master Gardener volunteers connected and engaged. The virtual world brought a unique opportunity to re-tool how we connect with each other and our audiences. The Rutgers Master Gardeners of Hunterdon County created a Citizen Scientists group to engage Rutgers Master Gardeners in evaluating horticultural conditions in their surroundings, whether at home or a public park, and communicate findings with residents of Hunterdon County. Choosing Facebook as a Social Medial platform to connect with residents, the Rutgers Master Gardeners noticed, examined, researched, and wrote 300 relevant and timely posts reaching 547,620 users since creating the site in May 2020 through 2021. During 2020 and 2021, there were 50,070 engagements that include 18,130 reactions and shares. The Master Gardener Citize Scienct group continues to post, and in the first half of 2022, have reached 116,682 people with over 8,600 Engagements.

RUTGERS NJAES MASTER GARDENERS OF HUNTERDON COUNTY SENSORY GARDEN: CREATING ACCESSIBLE GARDENING OPPORTUNITIES TO DIVERSE AUDIENCES

EXTENSION EDUCATION
Rebecca Magron
Horticultural Consultant and Research Associate
Flemington

Authors: Rebecca Magron[1], Megan Muehlbauer[2], Linda Klug[3]

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Rutgers Cooperative Extension of Hunterdon County Master Gardener volunteers launched a successful Sensory Experience Garden program. Rutgers Master Gardeners of Hunterdon County extend Cooperative Extension's community outreach though a variety of horticultural programs. Three "Experience" gardens were established in support of the "Rotary and Rutgers Enabling Gardens" initiative to provide audiences of diverse backgrounds, capabilities, and interests with a gardening experience. The primary object was to design a sensory gardening experience for audiences that have special needs, and to facilitate access to gardening opportunities for diverse audiences regardless of physical, cognitive, developmental, and social limitations. Programs were designed to include an interactive, wheelchair accessible outdoor sensory garden, along with indoor educational programs and activities. Planting designs showcased unusual plants, as well as plants to attract pollinators and other wildlife and encourage participatory experiences. Over the course of three years, the program was able to fiscally sustain itself through a nominal registration fee to cover the cost of program supplies, and the program's success in being replicated by other agencies: a nursing home and a wildlife park. Thirty-six on-site visits included outdoor gardening accessibility and indoor horticultural programming. All organizations visiting the sensory garden indicated on the evaluation form that they were 'extremely satisfied' with the visits. The visiting aids fill out the forms on behalf of the visitors. All organizations indicated that they had learned something new and will share what they learned with others. During 2019, this team was recognized and awarded First Place for Special Needs audiences at the International Master Gardener Conference.

DAYS OF LEARNING

EXTENSION EDUCATION
Doris Behnke
AG, Home Horticulture & Master Gardener Coordinator
University of Maryland
Elkton

Authors: Doris Behnke[1]

[1] AG, Home Horticulture & Master Gardener Coordinator, Member, Maryland, 21921

The Days of Learning Extension Program is a pilot program developed by the University of Maryland, Cecil County Extension Office in Elkton, Maryland. This program is in response to the shortage of Agriculture workers in the state of Maryland. Cecil County is lacking in agriculture education for our high school students and is lacking in skilled agriculture workers. The Days of Learning program provides agriculture education and hands-on experience to the Cecil County School of Technology AG students at local farms and agri-businesses. The goal of the program is to increase the awareness of Agriculture in our county to the students, introduce them to how an actual farm/ agricultural business operates on a daily basis, engage them in a hands-on agriculture experience at these operations, and connect the students with the businesses for employment.

The students participate in the program by going on field trips to farms and agri-businesses, by engaging in hands-on activities, and by attending Ag experience informational presentations. Through increased agriculture awareness, the students understand the depth of an Ag business and it introduces them to various fields of agriculture they may not have considered as a future career.

WESTERN REGION ENTRIES:

GROWING A FARM EDUCATION PROGRAM FOR U.S. MILITARY VETERANS

EXTENSION EDUCATION
Iris Mayes
Extension Educator Horticulture & Small Farms
Moscow

Authors: Iris Mayes[1], Ariel Agenbroad[2]

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Some U.S. Military Veterans return from military service and are interested in farming or ranching but may not have had direct experience. Some may not initially have access to land, nor do they want to go into a formal educational program. These beginning farmers want to learn the most efficient and sustainable methods for farming and ranching today and greatly appreciate hands-on learning. Many veterans face physical and psychological issues and disabilities upon leaving the service. Using individual interviews and nominal group technique, veteran stakeholders in Idaho were queried as to their preferences in program design. Through this process, veterans asked for a program specifically for them, to allow them to develop farming and ranching businesses with a supportive cohort of other veterans.

The University of Idaho Extension education program dubbed, "Harvest Heroes," is now in its fifth year, and was funded by the USDA-NIFA Beginning Farmer Rancher Development Program beginning in 2019. The program includes lectures from knowledgeable experts, some of whom are veterans, on a variety of sustainable farming topics as well as providing networking opportunities with other beginning farmer veterans. Each class include hands-on activities such as farm planning, seed starting, developing a flower basket business, growing hydroponic tomatoes, and other activities oriented towards beginning farming business and sustainability, as well as providing opportunities for veterans to find their farming niche. Program participants have donated over 3,000 pounds of produce to local food banks each year.

Over 100 local veterans and family members in Idaho have participated in at least one Harvest Heroes program and many of these veterans have started farm businesses and are selling their farm goods at local farmers markets. Over half of participants who were already farming, or ranching have implemented a new method such as cover cropping, or other sustainable land use technique. This poster shows visual represenations of the program development process, program components and photos of several participants.

CALIFORNIA AND ARIZONA JOINT SOUTH AMERICAN PALM WEEVIL OUTREACH AND EXTENSION WEBINAR SYMPOSIUM

EXTENSION EDUCATION
Sonia Rios
Area Subtropical Horticulture Advisor
University of California Coop. Ext.
Moreno Valley

Authors: Sonia Rios[1], Glenn Wright[2], Mark Hoddle[3], Michael Rethwisch[4], Apurba Barman[5], Petr Kosina[6]

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[3] Extension Entomology Specialist, University of California, Riverside, California, 92521
[4] Crop Production and Entomology Farm Advisor, University of California- Division of Agriculture and Natural Resources, California, 92225
[5] Low Desert Integrated Pest Management Farm Advisor, University of California- Division of Agriculture and Natural Resources, California, 92250
[6] Content Development Supervisor, UC ANR IPM, California, 95618

The South American palm weevil (SAPW), has the potential and is causing significant damage and death of native and non-native palms in California. In addition, SAPW has the potential to greatly impact the commercial date industry in counties adjacent to heavily infested San Diego, as this weevil can attack the agriculturally important date palm Phoenix dactylifera that produces Deglet Noor and Medjool dates. Dates produced near Yuma, Arizona and the Coachella and Imperial Valleys contribute about $30 million to California's economy. Of great concern is the rapid spread of this pest across the southwestern US. South American palm weevils first spread from Mexico's Tijuana area into San Diego County in 2011, where it is now killing Canary Island date palm trees. Surveys also have detected the weevil in California's Imperial County, as well as in Yuma County, Ariz., and Alamo County, Texas. Due to the alarming rates of palm deaths in California, information needed to be distributed to the neighboring state of Arizona. A two-day symposium was created for all ornamental and date palm stakeholders. The aim of this training was to mitigate SAPW's deleterious impacts. Target audiences were native habitat managers from public and private lands, urban ornamental tree growing and management sectors, including homeowners, and commercial agricultural date producers in Arizona and California. The University of California Cooperative Extension and University of Arizona collaborated on

two-half day trainings that were held on May 26th-27th, 2021. The symposium had approximately 80 participants from California, Arizona, and northern Mexico. This online webinar symposia was a two-part series on the SAPW. Day 1, focused on the biology, current status of this new invasive pest of palms. Day 2 consisted of monitoring and management and County updates. On average there were 32 participants that attended each day, with sessions lasting three hours long. The overall goal was to educate all stakeholders on the impotence of staying vigilant for the pest and to educate them on the pest and related damage. Continuing education Units were offered. The majority of classes started with interactive PowerPoint lectures that encouraged student questions along the way and ended with quizzes after each speaker. The effectives of the trainings were measured by participant in a post-survey after the webinars were conducted. Results determined that more than 99% of all attendees gained knowledge from the seminars and would use one or more management practice presented one of the seminars. As part of an Outreach and Extension, Western Integrated Pest Management Grant, two more webinars were also conducted for San Diego and Riverside County in California in 2021-2022 academic year.

AN ONLINE INTERACTIVE APPLICATION FOR SOIL TEST INTERPRETATION IN ALASKA

EXTENSION EDUCATION
Casey Matney
Agriculture & Horticulture Agent
Soldotna

Authors: Casey Matney[1]

[1] Agriculture & Horticulture Agent, University of Alaska Fairbanks, Alaska, 99669

An online interactive soil test interpretation application was created for the University of Alaska Fairbanks Cooperative Extension Service (CES) website in 2018. This application offers the option to have user soil tests interpreted by a CES agent or to complete their own interpretation online. Interpretations can be customized for standard crop/gardens, tree and shrubs, or peony production. A survey launched in 2018/2019 showed that 58 individuals submitted soil tests via this route of delivery for interpretation by an agent, and they completed a brief online survey. Growers/farmers that participated ranged in geographic area from Glenallen in the north all the way to Juneau in the south. Among all 58 participants, 48 identified whether or not they preferred to use organic or conventional fertilizer. Of those responding, 69% of growers prefer to use organic amendments, while only 29% prefer conventional fertilizers. One respondent indicated that they use both organic and conventional fertilizers. Approximately 65% of respondents had never received a soil test interpretation before, while 35% of respondents had previously received CES recommendations. Further results and description of the online application will be presented.

TEACHING GEOGRAPHICALLY ISOLATED NEVADA GROWERS AND RANCHERS VIA VIRTUAL WORKSHOP

EXTENSION EDUCATION
Maninder Walia
Assistant Professor
University of Nevada, Reno
Reno

Authors: Maninder Walia[1]

[1] Assistant Professor, University of Nevada, Reno, Nevada, 89502

Nevada is the driest state in the United States, with an average annual precipitation of approximately 4.5 inches in the south and 7.5 inches in the north. Despite being the most arid state in the nation, agriculture remains one of Nevada's vital industries, with 3,350 farms and ranches contributing $4.7 billion in 2020 to the state economy (NDA, 2021). Geographically, the size and composition of agriculture production and related food industries vary across the state due to differences in climate, natural resources, and population. Agriculture production is a particularly integral part of rural Nevada's economy, with the most significant number of farms and ranches in Elko County (526), followed by Churchill County (504) (USDA NASS, 2017). At the same time, the majority of Nevada's population (92%) lives in the Reno/Sparks and Las Vegas urban areas. Due to the geographic isolation of many agricultural operations across the state or other issues (Covid-19), Nevada growers and ranchers have recently expressed their interest via needs assessment to learn about cover crops and soil health via workshops as one of the preferred communication methods. Based upon identified needs, the University of Nevada, Reno Extension, hosted and offered free virtual workshop series (6 classes, 1.5 hours each) in Fall 2021 to teach producers and ranchers about soil health education. The workshop series was attended by 550 participants nationally and internationally. Participants were in 13 counties statewide (Nevada), six other states (California, Utah, Nebraska, Oregon, Kansas, Wyoming), and three other countries (UK, Scotland, Ukraine). About 72% of participants responded that they had a positive experience with the workshop series, and 82% of participants planned to use the information/skills from this workshop in their operations. Overall, producers and ranchers were highly satisfied with the workshop series, and knowledge gains among participants were significant (P=0.000, n=361).

Award Winners

(Ag Awareness, Search For Excellence, JCEP Creative Excellence, Hall of Fame, Daniel Kluchinski Memorial Scholarship, Distinguished Service Award, Achievement Award, Communications)

2022 NACAA

107th
Annual Meeting
and
Professional Improvement Conference

West Palm Beach, Florida

Agriculture Awareness and Appreciation Award

NATIONAL WINNER

INCREASING AGRICULTURE AWARENESS THROUGH EVENTS, MEDIA AND SOCIAL MEDIA

AGRICULTURE AWARENESS AND APPRECIATION AWARD
Joanna Coles
County Extension Agent for Agriculture and Natural Resources
UK Cooperative Extension Service
BOWLING GREEN

Team Members: Coles, J*[1]

[1] County Extension Agent for Agriculture and Natural Resources, University of Kentucky, BOWLING GREEN, Kentucky, 42101

The purpose of this agriculture awareness effort is to take our current challenges in agriculture and create opportunities to share agriculture's importance. With our population growing at a rapid rate in our community, it is more important than ever that agriculture's economical value and quality of life value are shared. The goal of this effort is to increase social media platforms to reach different audiences, increase outreach on traditional media and social media, increase attendance and participation in agriculture awareness events, and produce more agriculture awareness videos to be shared now and at future events. By adding social media platforms and improving the reach of our current platforms we were able to reach more people with our agricultural messaging. We were also able to secure better traditional media spots by offering good and relevant video and audio content valued at $858,000 a year. Through these efforts, we have witnessed an increase in agriculture awareness and have created solid relevance of the UK Cooperative Extension Service with farmers and consumers.

NATIONAL FINALIST

JOINT EXTENSION AGRICULTURE AND FAMILY CONSUMER HEALTH SCIENCES IN-SERVICE TO PROMOTE AG LITERACY

AGRICULTURE AWARENESS AND APPRECIATION AWARD
Ashley Wright
Livestock Area Associate Agent
The University of Arizona
Vail

Team Members: Wright, A*[1], Evancho, B*[2], Orr, E[3]

[1] Livestock Area Associate Agent, , Vail, Arizona, 85641
[2] Assistant in Extension, Field Crop Systems, University, Tucson, Arizona, 85721
[3] Associate Director for Agriculture and Natural Resources, University of Arizona, Tucson, Arizona, 85719

Rather than a county, this program was an in-service targeting our own University of Arizona Cooperative Extension faculty and staff. While we are the land grant university and serve a large population of Ag stakeholders, we have a significant number of faculty and staff working in Family and Consumer Health Sciences, as well as non-traditional 4-H programs. Only about 25% of our personnel are directly involved in agriculture. This has led to a little bit of a disconnect, with FCHS and 4H programs occasionally clashing with Ag programs and ag stakeholders in rural communities around issues such as water use, organic vs conventional farming, and plant-based diets vs livestock producers. In May of 2021, a virtual joint Ag-FCHS Inservice was held via zoom for University of Arizona Cooperative Extension. This program took place over three days, and each day had a unique theme. Day one focused on Animal agriculture and myths surrounding animal production. We discussed sustainability on a global level, debunked myths on meat packaging labels, examined the safety of hormones and antibiotic use, and looked at some of the regulations around humane harvesting of livestock. Day two focused on farming and covered the differences in organic and conventional production, the science of GMOs, Myths of pesticide use, and a variety of ways producers manage for pests in produce. The final day was a panel discussion from the Department of Nutritional sciences who looked at nutritional considerations for consumers. All presentations were conducted by UArizona Faculty. Finally, the CEO of Arizona Farm Bureau closed out the Inservice with a message about feeding the citizens of Arizona. This program has opened the door and created understanding between the two programmatic areas (FCHS and Ag) that our two programs are really two ends of the same spectrum: Ag stakeholders are creating the food, and FCHS stakeholders are consuming it. This has decreased the conflict between some programmatic communities

and encouraged everyone to be more thoughtful about the sources they use and provide to their stakeholders for information.

STATE WINNERS

Arkansas	Jennifer Caraway
Florida	Lauren Butler
North Carolina	Steve Pettis
Tennessee	Chris Hicks
Texas	Michael Hiller
Virginia	Jennifer Ligon

Search for Excellence in Sustainable Agriculture

NATIONAL WINNER

ADAIR COUNTY ANNUAL PASTURE TOUR
SEARCH FOR EXCELLENCE IN SUSTAINABLE AGRICULTURE RECOGNITION PROGRAM
Jennifer Patterson
Ext Ed Ag/4H
Stilwell

Team Members: Patterson, J*[1], Pugh, B*[2]

[1] Ext Ed Ag/4H, , Stilwell, Oklahoma, 74960
[2] Northeast District OSU Extension Area Agronomist/ANR Program Leader, Muskogee, Oklahoma, 74403

Sustainable agriculture plays an important role in the future of our farmers and ranchers. Good stewardship of the land and animals not only benefits our environment but will increase efficiency and profitability of our local producers. The Adair County Annual Pasture Tour was introduced in the summer of 2021. Program information was shared via social media, newsletter, newspapers, and promotional flyers hung in the community. Producers were able to attend an in the field, hands on program in a comfortable, open setting. It included 3 tours hosted on local producers property. This event had numerous partnerships and cooperators. This program specifically addressed questions and concerns that were pertinent to Adair County OK producers. Producers witnessed firsthand demonstrations and results of proven recommended practices that would enhance long term environmental quality of their operations. Demonstrations included safe cattle handling with tub and bud box systems, cattle health and discussion of parasite resistance to dewormers, in the field presentations covering soil/forage testing, grazing management and its long-term effect on soil and livestock health and fertility, and results of field demo plot and options to consider when making decisions on your operation. Evaluations reported that participants gained a better understanding of soil fertility and health, invasive species, and recommended livestock practices.

NATIONAL FINALISTS

GLEANING MORE THAN KNOWLEDGE: REPURPOSING EXTENSION RESEARCH FOR COMMUNITY HARVEST
SEARCH FOR EXCELLENCE IN SUSTAINABLE AGRICULTURE RECOGNITION PROGRAM
Jessica Kelton
Regional Agent- Farm and Agribusiness Management
Alabama Cooperative Extension System
Headland

Team Members: Kelton, J[1], Kelly, N[2], Carter, J[3]

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[2] Regional Agent-Commercial Hort, Alabama Cooperative Extension System, Headland, Alabama, 36345
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Approximately 30% of produce each year remains unharvested across the United States due to weather, marketability, labor shortages, or other factors. The lack of efficiency and reduced product availability at market threatens the sustainability of our nation's food systems and food access to the population. Unfortunately, University research and extension demonstration contributes to this food waste due to harvest labor requirements, personnel turnover, retirement, trial abandonment or time constraints for harvesting edible produce from trials and demonstration sites. An ongoing project at the Wiregrass Research Center, a 100-acre research farm in Henry County, AL, aims to address this food loss generated by research and demonstration by transitioning existing, but abandoned, research trials into educational plots managed for optimal yield with produce harvested being returned to local food banks and other nonprofit organizations. By partnering with Society of St. Andrew, a non-profit gleaning organization, our project has been able to transition blueberry and satsuma research orchards back to full production that provide a location for educational videos and training while ensuring all harvestable fruit is picked and distributed into the community. The project, established in 2018, resulted in the donation of roughly 100 pounds of produce in the first year but has grown to over 14,000 pounds in 2021 alone. In addition to providing a training location and usable produce, the project has also provided an opportunity to

educate the public about food waste and the chance to be a part of reducing this waste through harvest days. As Extension agents, we are tasked with being a resource for good agricultural practices, successful stewards of the land, and proponents of sustainability; through this project, we have been afforded the opportunity to put into practice the concepts we teach.

COMPARATIVE STUDY OF YIELD, PRODUCTION COST AND WATER USE FOR PRODUCER MANAGED FIR (FURROW IRRIGATED RICE) AND FLOODED RICE IN CLAY COUNTY ARKANSAS.

SEARCH FOR EXCELLENCE IN SUSTAINABLE AGRICULTURE RECOGNITION PROGRAM
Stewart Runsick
County Extension Agent - Staff Chair
University of Arkansas Division of Agriculture
Corning

Team Members: Runsick, S[1], Mane, R[2]

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In Arkansas the FIR production systems, where rice is grown in rows or on beds has increase from 4,156 acres to 200,000 acres from 2012 to 2020. Twenty precent of Clay Counties 75,000 acres of rice is produced this way. The increase in FIR acres is attributed to recent research indicating that FIR can maintain yields and reduce water use when compared to the flooded irrigation system, thus making rice production sustainable. To support the above statement field research on producers' farms was conducted in Arkansas Counties including Clay County. The objective of this research was to study the difference in yield, production cost and water use between FIR and Flooded rice production systems. Based on three years of study (2018-2021) with three different farmers we concluded that average yield of FIR was lower by 15 bushels per acre. The cost of production for FIR was near equal to flooded system per acre whereas FIR fields has lower water usage of 2.5 ac-inch when compared to flooded fields. To summarize it was concluded that there was not much difference in both production systems. High yielding rice can be produced sustainably with less water and tillage.

PRESERVING THE ART, SCIENCE AND LOVE OF BEEKEEPING IN GREENUP COUNTY

SEARCH FOR EXCELLENCE IN SUSTAINABLE AGRICULTURE RECOGNITION PROGRAM
Linda Hieneman
CEA FOR AG & NATURAL RESOURCES
University of Kentucky
Wurtland

Team Members: Hieneman, L[1]

[1] CEA FOR AG & NATURAL RESOURCES, , Wurtland, Kentucky, 41144-1598

According to the US Department of Agriculture, one mouthful in three of the foods you eat directly or indirectly depends on pollination by honey bees. Honey bee populations have been declining nationally and in KY over the past ten years. Education is key to protect honey bees and to teach beekeepers best to care for their hives.

As a needed resource for local beekeepers an association formed in 2017 with a handful of members. The main goal of the association is to educate local beekeepers and to mentor beginning beekeepers young and old.

The association has grown to over forty members with education serving as the main focus. Classes have been held to teach individuals how to purchase a hive or nucleus of bees, observing for mites and treatment, swarm catching, honey harvest and winter feeding. This classes occur at the annual Bee School or on Saturday afternoon in the bee yard at the Greenup County Extension Office.

Greenup County FFA teacher, Ms. Davis joined the Greenup County Beekeepers association to learn more about beekeeping to educate her students. Having a school teacher in the association was the key to being able to educate youth about all aspects of beekeeping. A partnership was born and the Greenup County Beekeepers began working with the local FFA chapter. FFA members began mentoring elementary students about beekeeping in junior bee clubs. Older members were able to teach students starting a beehive to the finished product of harvesting honey.

The association has also been successful in establishing demonstration beehives at every elementary school in the Greenup County school system. Each school has a mentor beekeeper from the Greenup County Association that helps care for the hive and educate youth.

Honeybee education is included in school curriculum and at after school programs. The association has encourage over 300 junior beekeepers annually in 2019-2021.

In 2020 Emma Stevens, FFA student won the National Blue Ribbon Beekeeper award through Bayer Science for efforts in Beekeeping. The award money she received funded a 3-day STEM bee camp for students in 2nd -6th grades in the county elementary schools.

STATE WINNERS

SOUTHERN REGION
North Carolina Janel Ohletz

WESTERN REGION
Utah Jake Hadfield

Search for Excellence in Crop Production

NATIONAL WINNER

DEVELOPING CROP AUDITS (PRODUCTION PRACTICES) TO IMPROVE CROP YIELDS AND PROFITABILITY IN ALABAMA

SEARCH FOR EXCELLENCE IN CROP PRODUCTION
D. Eddie McGriff
Regional Extension Agent - Agronomy
Alabama Cooperative Extension System
Cullman

Team Members: McGriff, D*[1]

[1] Regional Extension Agent - Agronomy, Alabama Extension, Cullman, Alabama, 35055

Northeast Alabama farmers annually plant 86,000 acres of corn; 95,000 acres of soybeans; 87,000 acres of cotton and 30,000 acres of other row crops, including wheat and peanuts, in the ten counties I cover. I, as the regional Extension agent for agronomic crops (row crops), am responsible for the educational programs and on-farm research to aid growers in making not only higher yields but, more importantly, to be more profitable and sustainable.

I accomplish these goals through field visits; production meetings; on-farm research trials; scout schools and field days; Extension publications, newsletters and e-mail updates; and producing crop scouting, as well in-studio and on-farm programs videos entitled “On The Farm in Alabama”.

I have developed an ultra-early and early planted soybean systems for Alabama that has lead to growers following it to have the only two documented 100+ bushel per acre soybean yields in Alabama and a record non-irrigated yield of 94 bushels per acre in the last three years. This system has also produced several growers that have had irrigated and non-irrigated fields to average 80-90 bushels per acre.

I have also developed corn and wheat audits (20+ production practices to higher yields and profits). NInety percent of the corn in NE Alabama is non-irrigated and yields have increased in Alabama’s entries in the National Corn Growers Association (NCGA) yield contest in this category by 26% in my assigned area over the last three years. A state record 355 bushels per acre yield in the irrigated category. All five of Alabama’s first-place winners in the NCGA’s yield contest in 2021 came from NE Alabama.
This year, with fertilizer prices more than doubling, I have developed a seven-step program based on replicated trials, in both irrigated and non-irrigated fields, on reducing fertilizer use without reducing yields. I gave this presentation at our combination Extension auxin trainings and crop production meetings this year. Fifty-three percent of growers in evaluation surveys at production meetings indicate this program will save them between $50-100 per acre and 40% state it will save them $100-150 per acre.

NATIONAL FINALISTS

CROPSTV: A NEW WAY OF DELIVERING AGRONOMIC RESEARCH-BASED INFORMATION TO PRODUCERS

SEARCH FOR EXCELLENCE IN CROP PRODUCTION
Rebecca Vittetoe
Extension Field Agronomist
Iowa State University Extension
Washington

Team Members: DeJong, J*[1], Schmitt, V*[2], Witt, M*[3], Prignitz, B[4], Jonhssen, C[5], Hodgson, E[6], Anderson, M[7], Licht, M[8], Michel, J*[9], Basol , T[10], Saeugling, A[11], Mueller, D[12], Robertson, A[13], Hart, C[14], Mallarino, A[15], Darr, M[16], Janke, A[17], Jha, P[18], Bergman, R[19], Archontoulis, S[20], Ripley, E[21], Dougherty, B[22], Zhang, W[23], Helmers, M[24], Tekeste, M[25], Brown, C*[26], Beck, W[27], Sawyer, J[28], Hartzler, B[29], Nowatzke, L[30], Hurburgh, C[31], Brandbury, S[32], Johsnon, C[33], O’Rourke, M[34], Schwab, D*[35], Shouse, S[36], Lundy-Woolfolk , E[37], Vittetoe, R*[38]

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[2] Extension Field Agronomist , ISU, Muscatine,
[3] Extension Field Agronomist , ISU, Polk City, Iowa,
[4] ANR Programs Manager , ISU, Ames, Iowa, 50011
[5] ISU Extension Store Manager , ISU , Ames, Iowa, 50011
[6] Extension Entomologist, ISU, Ames, Iowa, 50011
[7] Extension Field Agronomist, ISU, Ames, Iowa, 50011

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[10] Extension Field Agronomist, ISU, Nashua, Iowa, 50658
[11] Extension Field Agronomist, ISU, Lewis, Iowa, 51544
[12] Extension Plant Pathologist, ISU, Ames, Iowa, 50011
[13] Extension Plant Pathologist, ISU, Ames, Iowa, 50011
[14] Extension Crop Market Economist , ISU, Ames, Iowa, 50011
[15] Extension Soil Fertility Specalist, ISU, Ames, Iowa, 50011
[16] Professor ABE Associate Chair of Operations, ISU, Ames, Iowa, 50011
[17] Extension Wildlife Specalist, ISU, Ames, Iowa, 50011
[18] Extension Weed Specalist, ISU, Ames, Iowa, 50011
[19] Program Coordinator, ISU, Ames, Iowa, 50011
[20] Associate Professor of Integrated Cropping Systems, ISU, Ames, Iowa, 50011
[21] Conservation and Cover Crop Outreach Specialist, ISU, Ames, Iowa, 50011
[22] Extension Ag Engineer, ISU, Dubque, Iowa, 52003
[23]Associate Professor Economics , ISU, Ames, Iowa, 50011
[24] Director, Iowa Nutrient Research Center Dean's Professorship in the College of Agriculture and Life Sciences, ISU, Ames, Iowa, 50011
[25] Assistant Professor, ISU, Ames, Iowa, 50011
[26] Extension Farm Management Specialist, ISU, Oskaloosa, Iowa, 52577
[27] Assistant Professor; Extension Forestry Specialist, ISU, Ames, Iowa, 50011
[28] Extension Soil Fertility Specalist, ISU, Ames, Iowa, 50011
[29] Extension Weed Specialist , ISU, Ames, Iowa, 50011
[30] Measurement Coordinator for the Iowa Nutrient Reduction Strategy, ISU, Ames, Iowa, 50011
[31] Professor, Ag & Biosystems Engineering, ISU, Ames, Iowa, 50011
[32] Professor, Natural Resource Ecology & Management, ISU, Ames, Iowa, 50011
[33] Extension Swine Specalist , ISU, Ames, Iowa, 50011
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[35] Extension Beef Specalist, ISU, Vinton, Iowa, 52349
[36] Extension Ag Engineer, ISU, Ames, Iowa, 50011
[37] Extension Beef Specalist, ISU, Greenfield, Iowa, 50849
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With the inability to hold the two largest agronomic educational programs normally offered in the winter of 2020 – 2021 due to pandemic restrictions, the ISU Crops team needed to find an alternative method of providing research-based programs during this time. The team pivoted and created a new virtual program called CropsTV. This program was designed to reach people through livestreaming and on-demand viewing. A total of 35 livestreamed topics plus 10 pre-recorded on-demand topics were created and delivered in CropsTV by ISU Extension campus and field specialists. Additionally, all livestreamed topics were available after their initial debut for on-demand viewing. CropsTV subscribers had access to view all 45 topics on-demand until March 15, 2021. Additionally, subscribers had access to additional resources for each CropsTV episode via the viewing portal or the chat box while episodes were being livestreamed. A total of 1,038 registrations were received for CropsTV in 2020-2021, with nearly 50% of participants never having previously participated in either of our two large winter agronomic extension programs. Twenty-two percent of participants came from outside of Iowa. On-demand views totaled 20,275 with an average of 451 views per topic. The total viewing time equaled 1 year, 145 days, 15 hours, 18 minutes.

Additionally, a total of 1,627 Certified Crop Adviser (CCA) credits were provided. At the conclusion of CropsTV, an evaluation was sent to subscribers. From that evaluation, 90% (n=137) of respondents stated they will use information learned from CropsTV in their farm operation, and 78% (n=106) indicated they have shared information learned with others, and when asked how many, the average response was they had shared information with 7.3 other people. This novel, "live and on-demand" programming format allowed the ISU Crops Team to reach more people with research-based agronomic information both in and outside of Iowa. Additionally, the ability to access presentations on-demand provided participants with access to more topics than what they would normally get at an in-person event. With a positive response and success of this program, CropsTV is back for Season 2 this year and has become a part of our Crops Team programing.

UTILIZING THE BLUE-DYE TEST FOR IRRIGATION SCHEDULING AND IDENTIFYING OPTIMUM ROW SPACING FOR BELL PEPPER PRODUCTION IN SANDY SOILS

SEARCH FOR EXCELLENCE IN CROP PRODUCTION
Stephanie Hollifield
ANR Program Development Coordinator
University of Georgia
Tifton

Team Members: Hollifield, S*[1]

[1] Southwest District ANR Program Development Coordinator, , Quitman, Georgia, 31643

Brooks County Georgia produces approximately 700 acres of commercial bell peppers primarily on plastic mulch with drip irrigation, and in loamy sand and sandy soil types. Sand-based soils have low water holding capacity and require frequent irrigation to maintain

adequate moisture and nutrients necessary to potentiate crop yield. Proper scheduling of irrigation events in bell peppers can be identified with implementation of a blue-dye educational field study. The blue-dye field test is an effectual method to demonstrate water movement in the soil by injecting water soluble blue dye indicator into the irrigation water to color the soil. Although effective, a commercial blue-dye field test had not previously been conducted in Georgia. Thus, this field implementation was the first educational blue-dye test conducted in Georgia, with the primary objectives including: assist commercial producers with the scheduling of commercial bell pepper irrigation/fertigation events, utilize the data obtained from blue-dye field test to determine the optimum row spacing for bell pepper production in sandy soils, and share subject matter trial results with colleagues through state/national presentations. Results from Brooks County blue-dye field test indicated that the downward soil water movement linearly increased with irrigation timing and water was moving below bell pepper root zone with 60 minutes of irrigation. Additional data revealed that there was a visual plateau of lateral water movement, 9 inches from the center drip line, at 40 minutes of irrigation. As a result of the blue-dye study, a bell pepper spacing trial was conducted to identify the optimum row spacing within beds for bell pepper production in the sandy soils. The trial consisted of four treatments of different row spacing within a bed: 12, 14, 16, and 18 inches. The trial confirmed the blue-dye test findings, which demonstrated that during irrigation events the 18-inch row spacing (9 inches from center drip line) experienced poor lateral soil water movement resulting in dry periods and negatively impacting the yield. Ms. Hollifield shared results from the blue-dye field study and bell pepper spacing trial with presentations at four National meetings, four State meetings, and two publications in National and State journals.

TENNESSEE STATE UNIVERSITY DRONE PROGRAM
SEARCH FOR EXCELLENCE IN CROP PRODUCTION
Jason de Koff
Specialist
Tennessee State University
Old Hickory

Team Members: de Koff, J[1]

[1] Specialist, Old Hickory, Tennessee, 37138

The purpose of the Tennessee State University Drone Program is to increase farmers' knowledge, awareness and interest in using drones in agriculture. One objective was focused on hands-on drone training followed by discussion about different uses for drones in agriculture, the laws and regulations for using drones, and different types of drone options and their costs. A second objective was to provide drone certification training to agricultural professionals, teachers and students to enhance their ability to pass the FAA certification exam. Multiple fact sheets, videos, publications, and workshops were implemented to assist farmers in understanding the potential use for drones on their farms over the last three years. Workshops were held in 15 counties and reached over 250 participants. There were 97% of evaluation respondents that indicated an increase in knowledge, 71% realized that drones were not as difficult to fly as they originally thought, and 52% indicated an increased interest in purchasing a drone in the next 2 years. Seven drone certification trainings were offered through the American Society of Agronomy and other online and on-ground trainings over the last three years to over 150 participants. There were 84 to 100% of respondents that indicated an increase in knowledge and 70 to 93% felt more confident or had a greater likelihood of getting their certification following the trainings. In this process I realized that many farmers believe that drones are difficult to fly and, without hands-on opportunities like this one, it could be a significant barrier to their adoption of this new technology. Once farmers engaged in operating a drone, this concern was quickly dispelled and they began to think about ways they might use a drone in their own operations.

STATE WINNERS

NORTH CENTRAL	
Minnesota	Lizabeth Stahl
Ohio	Brooke Beam
Wisconsin	Jerry Clark
NORTHEAST	
New Jersey	Stephen Komar
SOUTHERN	
Arkansas	Allison Howell
North Carolina	William Kelley
WEST	
Arizona	Ayman Mostafa

Search for Excellence in Consumer or Commercial Horticulture

NATIONAL WINNER

FORT PECK RESERVATION-GROWING TOGETHER MASTER GARDENER PROJECT

SEARCH FOR EXCELLENCE IN CONSUMER OR COMMERCIAL HORTICULTURE

Wendy Becker
Agent
Montana State University
Culbertson

Team Members: Becker, W*[1], Spotted Bull, S[2], Azure, S[3], Snell, H[3]

[1] Agent, Culbertson, Montana, 59218
[2] Community Services Director, Fort Peck Tribes, Poplar, Montana, 59255
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The Growing Together Master Gardener Project 2021 was a collaborative effort between MSU Extension, the Fort Peck Tribes, Health Promotion and Disease Prevention, NRCS, Tribal Departments of Community Services and Natural Resources. Each department's goals were to educate our people in horticultural practices and new techniques, grow healthy food, learn how to prepare the foods grown, and donate all the food. This was a direct response to combating food insecurity and the global pandemic crisis. The Fort Peck Tribes donated 3 acres of land with access to rural water, an outbuilding, and the NRCS and Natural Resources Department erected two high tunnels. Vegetables grown and donated included tomatoes, lettuce, summer squash, winter squash, peppers, cucumbers, beans, pumpkins, watermelons, melons, herbs, and potatoes. A colony of honeybees was placed near the garden and fifty pounds of honey was collected as well. The squashes and beans are staples of the Native American diet. A large portion of the potatoes grown were a variety that is low-glycemic and is especially promoted for Native American diets that are challenged with diabetes. Despite the worst drought on record, a grasshopper outbreak, and hail, the project produced over 4,694 lbs. of food. The food was donated to the Tribal Elderly Program and to the food bank for use as fresh produce in over 1,000 households. Some of the food was used in cooking demonstrations to promote the foods grown and how to use fresh food. The kindergarten class enjoyed an agri-tourism trip to the pumpkin patch. Two Extension Master Gardeners engaged in the project with 520 volunteer hours contributed and twelve non-extension master gardener volunteers contributed 1,137 hours, representing approximately $55,000 of additional funds. In addition to the food classes, seeds were shared with two other communities to create community gardens, a container garden class for small spaces was held, and 200 seed kits were put together and provided to youth via a "drive-through," system. One student used the produce to create a fully indigenous meal with indigenous ingredients and won a video cooking contest.

NATIONAL FINALISTS

USING TECHNOLOGY TO IMPROVE EXTENSION HOME HORTICULTURAL PROGRAMMING

SEARCH FOR EXCELLENCE IN CONSUMER OR COMMERCIAL HORTICULTURE

Stephen Komar
Agricultural Agent
Newton

Team Members: Komar, S*[1], Chiariello, L[2], Bamka, B*[3], Mangiafico, S*[4], Chester, B*[5], Muehlbauer, M*[6], Errickson, W*[7], Waller, T*[8], Magron, R[9], Nitzsche, P*[10], Los, D[11], VanVranken, R*[12], Infante-Casella, M*[13], Pavlis, G*[14], Bakacs, M*[15], Melendez, M*[16], Servidio, S[17]

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[3] Agricultural Agent, Rutgers Extension, Westampton, New Jersey, 19054
[4] Agricultural Agent, Rutgers Extension, Millville, New Jersey, 08330
[5] Program Associate, Rutgers Extension, Mays Landing, New Jersey, 08330
[6] Agricultural Agent, Rutgers Extension, Flemington, New Jersey, 08822
[7] Agricultural Agent, Rutgers Extension, Freehold, New Jersey, 07728
[8] Agricultural Agent, Rutgers Extension, Millville, New Jersey, 08332
[9] Agricultural Agent, Rutgers Extension, Flemington, New Jersey, 08822
[10] Agricultural Agent, Rutgers University, Morristown, New Jersey, 07963
[11] Agricultural Agent, Rutgers Extension, Morristown, New Jersey, 07963
[12] Agricultural Agent, Rutgers Extension, Mays Landing, New Jersey, 08330
[13] Agricultural Agent, Rutgers Extension, Clarksboro, New Jersey, 08020

[14] Agricultural Agent, Rutgers Extension, Mays Landing, New Jersey, 08330
[15] Agricultural Agent, Rutgers Extension, North Brunswick, New Jersey, 08902
[16] Agricultural Agent, Rutgers Extension, Ewing, New Jersey, 08638
[17] Horticulturist, Rutgers Extension, Toms River, New Jersey, 08755

A hybrid home gardening program was delivered to New Jersey residents through a series of synchronous and asynchronous presentations. The objectives of the program were: 1) to provide scientifically based programs for home gardeners; 2) to quantify improved knowledge and understanding of horticultural science; 3) to document behavior changes based on improved understanding of best practices; 4) to expand programmatic delivery methods to maximize participation by underserved audiences. These programs were conducted in response to needs assessment surveys and through discussions with home horticultural clientele. During the three-year program, 227 home gardeners participated in over 39 synchronous and 75 asynchronous educational programs using a hybrid learning management system LMS. Pre and post tests indicated that students demonstrated significant knowledge gain in covered topics. Respondents to a feedback survey administered after program completion reported being very satisfied with both the educational material and the learning management system (LMS) and reported self-assessed knowledge gain due to participation. Respondents reported behavioral changes and reported that the online hybrid programming format provided convenience and flexibility to meet their learning needs. Reported impacts of the program were realized beyond the participants with 93% of respondents reporting that they shared the information learned during the program with others. Hybrid learning methodologies have proven to be an effective and efficient means to deliver home horticultural programming.

GARDENING IN THE PANHANDLE: LIVE!

SEARCH FOR EXCELLENCE IN CONSUMER OR COMMERCIAL HORTICULTURE

Matthew Lollar
Commercial Horticulture Agent
University of Florida
Milton

Team Members: Lollar, M*[1], Leonard, D*[2], McConnell, J*[3], Anderson, E*[4], Bodrey, R*[5], Bolles, B*[6], Dale, A[7], Dunning, S*[8], Enloe, S[9], Figart, L[10], Freeman, J[11], Greer, S*[12], Harmon, P[13], Hutton, S[14], Hylton, T[15], Jackson, S[16], Jameson, M*[17], Kalaman, H[18], Knox, G[19], Marble, C[20], Martini, X[21], Orwat, M*[22], Oster, C[23], Sprague, D*[24], Stonecipher, A*[25], Stevenson, C*[26], Tancig, M*[27], Unruh, B[28], Wells, J[29], Williams, L*[30], Williams, P[31]

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[4] Horticulture Agent, University of Florida/IFAS Extension - Walton County, DeFuniak Springs, Florida, 32433
[5] County Extension Director, University of Florida/IFAS Extension - Wakulla County, Crawfordville, Florida, 32327
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[9] Associate Professor, University of Florida/IFAS, Gainesville, Florida, 32611
[10] Urban Forestry Agent, University of Florida/IFAS Extension - Duval County, Jacksonville, Florida, 32254
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[13] Professor, University of Florida/IFAS , Gainesville, Florida, 32611
[14] Assistant Professor, University of Florida/IFAS , Wimauma, Florida, 33598
[15] Horticulture/Small Farms Agent, Florida A&M University, Tallahassee, Florida, 32301
[16] County Extension Director, University of Florida/IFAS Extension - Bay County, Panama City, Florida, 32401
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[18] Graduate Assistant, University of Florida/IFAS , Gainesville, Florida, 32611
[19] Professor, University of Florida/IFAS , Quincy, Florida, 32351
[20] Assistant Professor, University of Florida/IFAS , Apopka, Florida, 32703
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[22]Horticulture Agent, University of Florida/IFAS Extension - Washington County, Chipley, Florida, 32428
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[24] Agriculture Agent, University of Florida/IFAS Extension - Jefferson County, Monticello, Florida, 32344
[25] Horticulture Agent, University of Florida/IFAS Extension - Jackson County, Marianna, Florida, 32446
[26] Coastal Sustainability Agent, University of Florida/IFAS Extension - Escambia County, Cantonment, Florida, 32533
[27] Horticulture Agent, University of Florida/IFAS Extension -

Leon County, Tallahassee, Florida, 32301
[28] Professor, University of Florida/IFAS , Jay, Florida, 32565
[29] IT Professional II, University of Florida/IFAS Extension, Quincy, Florida, 32351
[30] Horticulture Agent, University of Florida/IFAS Extension - Okaloosa County, Crestview, Florida, 32539
[31] Agriculture Educator, Purdue Extension Tippecanoe County, West Lafayette, Indiana, 47907

Background: Since the COVID-19 pandemic unfolded in 2020, UF/IFAS Extension Agents have had to adapt to changing clientele preferences by eschewing exclusively in-person educational models in favor of a more virtual approach. This sea change in societal norms caused us to develop an innovative way to reach residential horticulture clientele. Objectives/Purpose: Inspired by instances of Agents in other geographic areas offering "Ask an Agent Anything" online seminars as a way to attract home-bound clientele, but wanting to focus more on specific, timely topics, the Northwest District Horticulture Program Implementation Team (PIT) collaborated to create a program series called Gardening in the Panhandle LIVE! Each session covered a seasonally relevant topic with knowledgeable panelists based on their individual specialties. Method: The series was broadcast using both Zoom Webinar videoconferencing technology and Facebook Live to capture the largest possible audience. To comply with ADA guidelines for hearing disabled clientele, episode recordings were edited with closed captioning for YouTube. Delivering each episode requires a team of 7-9 agents in the following roles: 3-4 panelists, an episode "host", a Zoom technician, and several "behind the scenes" moderators. While the episode's host and panelists are answering questions, the moderators are adding resource links to chats, answering pop-up questions, and filtering and forwarding potential on-air questions to the emcee. Conclusions: The innovative collaboration has created 23 episodes and engaged a total of 1,582 live viewers since 2020 on various social media platforms. Follow up survey participation was completed at a rate of 18% (277/1,534). 98% (272/277) of respondents reported knowledge gain in at least one Florida-Friendly Landscaping Principle. 81% (224/277) of respondents reported a plan to adopt at least one Florida-Friendly Landscaping Principle as a result of participation in the program.

HOME GROWN ONLINE LECTURE SERIES

SEARCH FOR EXCELLENCE IN CONSUMER OR COMMERCIAL HORTICULTURE

Paul Winski
CEA-Hort
Texas A&M AgriLife Extension
Houston

Team Members: Winski, P[1], Keller, B[1], Dietz, S[2]

[1] CEA-Hort, Texas A&M AgriLife Extension, Houston, Texas, 77040
[2] CEA-ANR, Texas A&M AgriLife Extension, Houston, Texas, 77040

The Home Grown Online Lecture Series was created in May 2020, 2 months into the Covid-19 pandemic to mitigate the decline of educational outreach, to capture the growing online presence by residents, and for the Agriculture & Natural Resources (ANR) Unit of Harris County to continue education despite technological unfamiliarity. Lectures are under an hour and allow for interactive participation. Viewers include Harris County residents, but reach extends nationally and internationally. The program's flexibility has allowed us to design a unique collection of resources that has resulted in a positive teaching opportunity. Additional components were added to the series, such as a YouTube Channel, monthly newsletter, and a podcast. It connects participants with their environment, giving them the tools to better understand ag literacy and horticulture for health, savings, and nutrition. The live virtual lecture series has been attended by 4,244 people, with 94% of those surveyed intending to apply the information from the lectures. As all of extension learned how to do virtual programming, the team committed to it and with little guidance built a robust assortment of outreach appropriate for the urban setting. The formats encourage exploration between each platform and strengthen the Extension brand in the community.

STATE WINNERS

NORTH CENTRAL
Minnesota Julie Weisenhorn

NORTHEAST
Pennsylvania Erin Kinley

SOUTHERN
Arkansas Sherri Sanders
Georgia Josh Fuder
Kentucky Macy Fawns
Mississippi Jeffrey Wilson
North Carolina Kathryn Holmes

Search For Excellence in 4-H Programming

NATIONAL WINNER

DRONE DISCOVERY TEACHES STEM SKILLS TO YOUTH
SEARCH FOR EXCELLENCE IN 4-H PROGRAMMING
Kapil Arora
Field Agricultural Engineer
Iowa State University Extension
Ames

Team Members: Arora, K*[1]

[1] Field Agricultural Engineer, Winterset, Iowa, 50273

Unmanned Aerial Vehicles, a.k.a. drones, ignite curiosity to explore with instant spontaneity in youth wanting to learn more about them. Willing to learn, the students participating in the Drone Discovery Camp learn about STEM principles in a fun learning environment. Spanned over three days, the camp lessons and activities are designed to teach the concepts of three-dimensional air space, forces of flight, and the basic skills to control drone flights for aerial imagery. The camp uses a combination of classroom lectures, drone models, gliders, foam planes, prop-copters, hands-on experiments, competitions, interactions with stakeholders using drones, x-y-z coordinate grid, simulations for flight skill development, and actual drone flying to aid in teaching the camp objectives. Thirty-eight youth (both 4-H and non-4-H members) have attended the drone discovery camps held over the last three years. Lessons are taught in a manner so that the students can apply the skills learnt and can readily transfer the learnt skills in real world after the camp ends. In follow-up with students on the phone within 30 days after the camp, over half the participants purchased small drones to continue developing skills for flying drones. End of the camp survey completed by the students has shown over 90% increase in knowledge gained on all lessons taught in the camp. This three-day camp is a fun student-centered learning environment which teaches STEM principles to middle school aged

NATIONAL FINALISTS

HOW TO CATCH AN ELF.... 4-H STYLE
SEARCH FOR EXCELLENCE IN 4-H PROGRAMMING
Jenny Mountford
Abbeville

Team Members: Mountford, J*[1]

[1] 4-H Youth Development Agent, Clemson University, Abbeville, South Carolina, 29620

Statistics are stacked against high success, but this rural school district pours into students, and it shows. Reading levels* at Westwood Elementary are at 49% for grade proficiency, and the entire district has Title I schools, but that doesn't stop the opportunity to be better together in community partnerships! Abbeville County 4-H Program faced statistics by providing innovative ways to bring hands-on learning to classrooms, all while creating lessons that increase literacy and meet grade level educational standards.

In December 2021, after working with district reading coaches, the idea of 4-H STEM and literacy became one of the most successful school enrichment activities, engaging 314 students in building an elf trap from a cardboard box and craft supplies. They listened to the book, "How to Catch an Elf", and used 4-H created student worksheets that engaged them in critical thinking, planning, creative writing and encouraged grade appropriate literacy elements.

STREAM stands for Science Technology Reading Engineering Arts & Math. Similar to STEM or STEAM, but having an emphasis on literacy, reading and writing. This 4-H project was focused specifically to meet STREAM goals that were in place by the 4-H partner.

*Source for statistics: https://www.usnews.com/education/k12/south-carolina/westwood-elementary-278485

BELL-MILAM YOUTH AGRIBUSINESS TOUR
SEARCH FOR EXCELLENCE IN 4-H PROGRAMMING
Whitney Ingram
CEA-NR
Texas A&M AgriLife Extension Service
Belton

Team Members: Ingram, W*[1], Ingram, F*[2], Zoeller, L[3]

[1] CEA-NR, Belton, Texas, 76513
[2] CEA-ANR, Cameron, Texas, 76520
[3] CEA-AG, Belton, Texas, 76513

Today's youth are growing up in a world that is more technologically advanced and faster paced than ever could have been predicted even ten years ago. In a matter of seconds information on just about any topic one can dream up can be found. The difficulty lies in disseminating what is fact and what is fiction, an issue agriculturalist are all too familiar with in the 21st century. To make matters more difficult, the American household is now more disconnected from production agriculture than any other generation has ever been. Less than two percent of our nation's population is directly tied to farming and ranching.

This is the very reason that ag literacy and advocacy among youth is more important than ever before, and first-hand exposure to personnel and operations within the industry is by far the best education platform available. Fortunately, much of Central Texas is still comprised of rural communities. There are youth who have a desire to pursue a college degree or higher education in the field of agriculture and one day have a career in the industry. It was this realization and the support of many industry professionals in Bell and Milam counties, that led to focusing programming efforts on a career oriented, interactive tour of local production agriculture for youth.

The tour provides an in-depth, firsthand look at local ag businesses, the role of community leaders, and a real-world perspective of what it takes to feed, clothe, and fuel the world they live in.

"MEAT AND COMPETE"
SEARCH FOR EXCELLENCE IN 4-H PROGRAMMING
Kari Lewis
Cut Bank

Team Members: Lewis, K*[1]

[1] Associate Professor, Montana State University Extension, Cut Bank, Montana, 59427

The extension agent in Glacier County, Montana, along with two 4-H leaders and two 4-H teen leaders collaborated to host a '''Meat and Compete''' series. The series included four sessions throughout the 2021 summer, funded by a Montana 4-H Foundation Innovative Programming grant. The first three sessions covered cooking lamb, pork, and beef. 4-Hers prepared lamb chops, BLT sandwiches, and meatballs and gravy. At each session, a presenter shared about cooking that meat and then members were assigned to a group of three to four 4-Hers and together cooked the evening's dish. Each session also included information on attractive meal presentation, table etiquette, napkin folding, or setting a table. For the final session, groups randomly selected a meat and then chose a recipe to use, shopped for ingredients within their budget, developed their own place settings, and presented their meal to two judges. Sixteen 4-Hers participated, ranging in age from eight to 18 years old. Participants were both livestock and non-livestock members. As a result of ''Meat and Compete'', 4-Hers said they planned to now use correct chopping techniques, they learned different cooking techniques, proper meat cooking temperatures, and gained confidence in the kitchen. Their familiarity with various meats improved. Prior to the lamb session, participants had cooked lamb an average of 0.3 times, and had eaten lamb just 1.5 times. As a result of the session, 75% of participants said their knowledge of cooking lamb increased somewhat or increased greatly. Prior to the pork session, 25% of participants had never cooked bacon more than once and 80% of participants said their knowledge of cooking bacon increased somewhat or increased greatly as a result of the session. Sixty percent of participants said their knife safety knowledge increased somewhat or increased greatly. Nearly three-fourths of participants said their knowledge of presenting food attractively on a plate increased somewhat or increased greatly. Overall, participants rated the series 4.8 out of 5. They shared that beyond the cooking, they enjoyed spending time with other 4-Hers, learning to adjust to working with others in the kitchen, and "It was really fun."

STATE WINNERS

SOUTHERN	
Alabama	Zachery Brannon
Arkansas	Nicole Nichols
Florida	Jennifer Bearden
Georgia	Savannah Tanner
Mississippi	James Shannon
North Carolina	Lauren Langley
WEST	
Colorado	Brian Kailey
New Mexico	Bonnie Hopkins Byers
Wyoming	Chance Marshall

Search for Excellence in Farm and Ranch Business Management

NATIONAL WINNER

MIDATLANTIC WOMEN IN AGRICULTURE CONFERENCE
SEARCH FOR EXCELLENCE IN FARM AND RANCH BUSINESS MANAGEMENT
Shannon Dill
Extension Educator - AGNR
University of Maryland Extension
EASTON

Team Members: Dill, S*[1], Rhodes, J*[2]

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[2] Extension Educator - AgFS, University of Maryland, Centreville, Maryland, 21617

The objective of this program is to provide farm management education for women involving the five areas of risk management (production, marketing, human resources, legal, financial). Project goals include increased knowledge of risk management education, empowering women to make decisions on the farm and to create a network of women in agriculture.

This regional conference is a combined effort of University of Maryland Extension (UME) as the lead with input and participation from Extension services from University of Delaware, Delaware State University, Virginia Tech and Rutgers University. Through grant funding, sponsorship and fees this two day conference reaches over 200 farm women annually, includes 2 preconferences, 3 keynote speakers, 15 breakout sessions, 28 exhibitor tables and evening reception.

In 2021 the MidAtlantic Women in Agriculture Conference was to celebrate its 20th anniversary. For continuity and time to meet as a network it was decided to conduct a virtual conference. It was a morning session including a keynote speaker, breakout discussion, reflection of 20 years and a closing speaker. There were 155 that attended the virtual event.

The program is evaluated following the conference for outcomes and impacts. Results include: 30% of participants have attended four or more conferences over the years, 36% made changes in their agricultural business as a result of past conferences, 99% rated the event as good or excellent, 96% rated the educational value as good or excellent, 94% rated the opportunity for discussion and networking as good or excellent. Impacts of the program include: 97% felt more prepared to make informed decisions on the farm, 81% gained information on risk management for their farm, 93% networked with other participants and 96% gained resources material including fact sheets, websites, software and contacts. (n=689, 6 years of data).

Evaluations have been conducted through paper, turning point and qualtrics over the years using the same set of questions. The survey is Institutional Review Board (IRB) approved.

NATIONAL FINALISTS

SO YOU WANT TO FARM IN MAINE? USING BRIGHTSPACE
SEARCH FOR EXCELLENCE IN FARM AND RANCH BUSINESS MANAGEMENT
Donna Coffin
EXTENSION EDUCATOR
UMaine Extension
DOVER-FOXCROFT

Team Members: Coffin, D*[1], Chim, B*[2], Jackson, T*[3], Lilley, J*[4], Long, R*[5]

[1] Extension Professor, UMaine Extension, DOVER-FOXCROFT, Maine, 04426
[2] Extension Crop Specialist, UMaine Extension, Presque Isle, Maine, 04769
[3] Extension Professor, UMaine Extension, Lisbon Falls, Maine, 04252
[4] Extension Professional, UMaine Extension, Falmouth, Maine, 04105
[5] Extension Professional, UMaine Extension, South Paris, Maine, 04281

The So, You Want to Farm in Maine (SYWTFIM) short-course has been offered as a workshop series through UMaine Extension for many years. Usually offered regionally and in-person, this is now the third year it was available online only using BrightSpace and synchronous Zoom sessions. SYWTFIM is designed to introduce farm business management topics such as enterprise budgeting, cash flow projections, recordkeeping, business planning, insurance, taxes, and regulations to those who are starting farms in Maine. Each class is designed to be interactive and features many guest speakers, including agriculture service providers from an array of sectors and those who are currently farming successfully. The 2022 series offered a different approach as participants included 44

aspiring farmers as well as 13 UMaine undergraduates, providing the opportunity for richer discussions and connections between those interested in starting Maine farms imminently, as well as students, with a variety of backgrounds and experience. The undergraduates were teamed with aspiring farmers to create draft business plans and enterprise budgets over the course of five weeks. Income from those plans totaled over $2 million. All participants had the opportunity to receive USDA Farm Service Agency borrower training credit, with 25 participants receiving this credit. Also, undergraduates receive one course credit for successful completion. This model is new to UMaine and is seen as an innovative way to create deeper connections between Cooperative Extension and the School of Food and Agriculture as undergraduates do not always know what Cooperative is and does, and the aspiring farmers may not have any previous connection to campus.

ANNIE'S PROJECT

SEARCH FOR EXCELLENCE IN FARM AND RANCH BUSINESS MANAGEMENT
Rachel Bearden
CEA - Agriculture
UofA Division of Agriculture Research & Extension
Malvern

Team Members: Bearden, R[1]

[1] CEA - Agriculture, , Malvern, Arkansas, 72104

The key objective of the Annie's Project is to educate women as agriculture producers in risk management. The five areas of risk management that are taught are financial, human resources, production, legal, and marketing. The objective is that she will finish the program and feel more equipped to manage the farm as an agriculture business. Overall we had 24 participants which attended live sessions. The playlist has 19 videos. The playlist has had 14 views. Evaluation surveys were done for each weekly session and the series as a whole.

FREMONT COUNTY FARM AND RANCH DAYS PROGRAM

SEARCH FOR EXCELLENCE IN FARM AND RANCH BUSINESS MANAGEMENT
Chance Marshall
Extension Educator
UNIVERSITY OF WYOMING
Lander

Team Members: Marshall, C*[1], Cunningham, R[2]

[1] Extension Educator, University of Wyoming Extension, Lander, Wyoming, 82520
[2] Retired Extension Educator, University of Wyoming Extension, Lander, Wyoming, 82520

Farmers and ranchers in Fremont County Wyoming have gathered every February for the "Farm and Ranch Days" tradition since 1984. The Farm and Ranch Days event is two days long and is completely free to the public. The goal of the event is to provide information and resources to assist farmers and ranchers in making important business decisions that will allow their operations to remain viable and sustainable. Farm and Ranch Days is a local tradition and social event, but the focus has always been on education. The event includes 20-30 educational presentations that cover a wide range of topics that Wyoming farmers and ranchers face such as, farm/ranch business management, livestock/crop marketing, livestock nutritional management, grazing techniques, soil health, pesticide usage, local cost share programs, risk management, and much more. The presentations also provide updates about ongoing research in Wyoming. Additionally, there is a full trade show of ag-related vendors, and a free lunch offered each day that is provided by the Fremont County Cattlewomen. During the lunch session, a distinguished keynote speaker is featured each day to discuss trending issues. Attendance ranges between 300-400 participants each year and remains one of the best educational venues for farmers and ranchers in Wyoming. A YouTube playlist of Farm and Ranch Days presentations can be found at http://bit.ly/farm-ranch-days-videos

Search for Excellence in Livestock Production

NATIONAL WINNER

LIVESTOCK WATER QUALITY PROGRAM

SEARCH FOR EXCELLENCE IN LIVESTOCK PRODUCTION
Miranda Meehan
Ext. Livestock Enviromental Stewarship Specialist
NDSU Extension
Fargo

Team Members: Meehan, M*[1], Scherer, T[2], Wald, R*[3], Brummund, P*[3], Leier, E*[3], Nordby, H*[3], Klebe, B[3], Berg, L*[3], Hewson, S*[3], Racine, J*[3], Zimprich, B*[3], Ueckert, A*[3], Landeis, K*[3], Askim, C*[3], Folske, D*[3], Gress, R*[3], Osterbauer, T*[3], Schmidt, R*[3], Leo, D[3], Leo, K*[3], Gerhardt, S*[3], Crimmins, S*[3], Clemens, S*[3], Gale, J*[3], Binde, T*[3], Kralicek, T*[3], Schaunaman, C*[3], Miller, M*[3], Knoke, S*[3], Howard, C*[3], Marxen, H*[3], Kiser, B*[3]

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[2] Agricultural Engineer, NDSU Extension, North Dakota,
[3] Agriculture Natural Resources Extension Agent, NDSU Extension, North Dakota,

Providing adequate water to livestock is critical for animal health and production. Elevated concentrations of total dissolved solids (TDS) and sulfates can be toxic to livestock. Water quality screening and analysis of livestock sources allows ranchers to ensure water quality is not impacting livestock performance and/or health, while aiding in making management decisions. While several agents have training in animal science, many do not, additionally livestock water quality is a minor component of animal science curriculum. The objective of this program were to 1) increase knowledge and understanding of Extension agents regarding water quality and the impacts it has on livestock health and performance, 2) increase the interaction between Extension agents and producers in their county regarding livestock water quality and 3) increase producers' knowledge and understanding regarding water quality issues that can impact livestock performance and health, increase producer screening and testing quality livestock sources, resulting in reduced livestock losses due to toxic water condition and the development of alternative livestock water sources. In 2019 a program was launched to provide Extension agents with the equipment, technical skills and knowledge to monitor and engage with livestock producers on the topic of water quality. The program included in-service trainings, on-farm monitoring and the development of curriculum to share with stakeholders and present at meetings, tours and field days. Extension agents (110) that attended in-service trainings agreed to strongly agreed the training increased their knowledge of livestock water quality. Additionally, 100% of participants intended to incorporate the curriculum into their programing efforts. Extension agents' confidence to engage with stakeholders is reflected the total screenings (1,841), presentations (29), articles (50) and media interviews (25) on the topic. Management changes were made at 10 (24%) and 214 (65%) of the locations with water quality concerns in 2020 and 2021, respectively. Follow-up surveys indicated 50% of participants intended to monitor water quality and/or install water developments and 28 of participants had installed a livestock water development.

NATIONAL FINALISTS

BEEF QUALITY ASSURANCE IN IOWA INCREASES PRODUCER PROFITS

SEARCH FOR EXCELLENCE IN LIVESTOCK PRODUCTION
Denise Schwab
Extension Beef Specialist
Iowa State University
Vinton

Team Members: Schwab, D*[1], Euken, R*[2], Doran, B[3], Clarke, C[4], Lundy-Woolfolk, E[5], Wall, P[6], Reynolds, B[7], Loy, D[8]

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[2] Extension Beef Specialist, Iowa State University, Garner, Iowa, 50438
[3] Extension Beef Specialist, Iowa State University, Orange City, Iowa, 51041
[4] Extension Beef Specialist, Iowa State University, Chariton, Iowa, 50049
[5] Extension Beef Specialist, Iowa State University, Adair, Iowa, 50849
[6] Extension Beef Specialist, Iowa State University, Knoxville, Iowa, 50138
[7] Program Specialist, Iowa State University, Ames, Iowa, 50011
[8] Director, Iowa Beef Center, Iowa State University, Ames, Iowa, 50011

While the Beef Quality Assurance (BQA) program is voluntary, most cattle feeders and many cow-calf producers certify to increase their marketing opportunities. The BQA program is managed and overseen by the National Cattlemen's Beef Association and the Iowa Beef Industry Council, with Iowa ISU Extension beef specialists contracted to provide the educational component to

producers. This partnership has been extremely beneficial to both organizations and to Iowa beef producers. Partnerships with auction markets, cattle buyers, feed dealers, veterinarian clinics, pharmaceutical companies, and county cattlemen groups have also been developed to further the reach of the program. Some auction barns have even taken the step to request all cattle producers, whether fed cattle or cow-calf producers, become BQA certified to sell any cattle through their market. The focus of the BQA program nationally is to ensure consumers that beef is healthy, wholesome, and safe; and that beef producers raise cattle with attention to animal welfare, food and worker safety and environmentally sound practices. In Iowa, we stress the importance of evaluating individual operations and making changes to improve production, management, and profitability. Most programs are typical presentations, we also utilize Stockmanship Clinics with nationally known clinicians on cattle behavior and handling practices, and Feedyard Assessment field days with hands-on activities and the Feedyard Self-Assessment scoresheet. Finally, when Covid limited face-to-face opportunities, a webinar was held which included quiz questions throughout to ensure participant attendance. The partnership with the Iowa Beef Industry Council was developed in 2017. In the last three years (2018-21) 174 programs have been held with more than 11,000 producers attending. A 2019-20 survey of beef producers attending Extension programs showed that 68% of respondents learned something new at a BQA training, half changed cattle handling practices, 40% changed record keeping and 40% changed animal health practices, all resulting in a safer, higher quality beef product. Thirty-four percent also shared information about beef production practices with consumers. When averaged, the BQA program added $430 to the beef producers' operations. Because of this program, consumers can be assured the beef they consume is responsibly raised and safe to eat.

PROVIDING EDUCATION TO WESTERN SHEEP AND GOAT PRODUCERS

SEARCH FOR EXCELLENCE IN LIVESTOCK PRODUCTION
Carmen Willmore
Extension Educator Livestock & Forages
University of Idaho Extension
Shoshone

Team Members: Willmore, C[1], Ellison, M[2], Page, C[3], Stewart, W[4]

[1] Extension Educator Livestock & Forages, , Shoshone, Idaho, 83352-0608
[2] Extension Sheep Specialist, University of Idaho, Carmen, Idaho, 83462
[3] Sheep and Goat Specialist, Utah State University
[4] Sheep Extension Specialist, University of Wyoming

The sheep and goat industry in the West and across the country is on the rise. In the spring of 2020, University of Idaho extension faculty Melinda Ellison and Carmen Willmore had planned two in-person workshops to provide hands-on education to Idaho sheep and goat producers. Because of the pandemic, these in-person workshops had to be moved to an online format which began the University of Idaho Sheep and Goat Extension webinar series. The program was very popular from the start and so the program was expanded to include Extension specialist Whit Stewart from Wyoming and Chad Page from Utah State University. Bringing in these additional specialists brought more connections, ideas, and programming outlets for the webinar series. A total of 50 webinars have been offered between April 2020 and March 2022 by 86 speakers to a total of 4,115 live viewers (average 82 individual attendees per webinar). Attendees joined from across the U.S. and Internationally. Each webinar was also uploaded to the YouTube channel for people to view at their leisure and links were shared to the Facebook page and with the email listserv. By March 2022, there have been a total of 55,235 views of the uploaded videos online. Additionally, of 586 post-webinar survey participants, 84% indicated that their knowledge of sheep and goat production had increased and that they would adopt new information or techniques in their operation as a result of the webinar. Non-producers made up 9% of the survey participants. The team also began a quarterly newsletter in 2021 to provide additional educational material to the clientele that was seasonal and related to the current topics of the season. With the success of the program, the extension team has plans to continue to provide the webinar series well into the future, bringing in more experts and expanding their audience.

CATTLE ARTIFICIAL INSEMINATION AND REPRODUCTIVE MANAGEMENT SCHOOLS

SEARCH FOR EXCELLENCE IN LIVESTOCK PRODUCTION
Chance Marshall
Extension Educator
UNIVERSITY OF WYOMING
Lander

Team Members: UW, D[1]

[1] Extension Educator, Lander, Wyoming, 82520

Artificial insemination (A.I.) has been available to cattle producers for decades. Still, less than 10 percent of all beef cattle females are bred via A.I. and just 7.6 percent of operations utilize the technique at all (Hall, 2019). However, by utilizing the technique of A.I., cattle producers can introduce proven sire genetics to realize superior genetic progress quickly and economically. Traits such as weening weight, feed efficiency, and age at puberty can be improved without actually owning or leasing sires. Cattle artificial insemination schools can be found in various locations across the United States. However, the cost of enrollment can be high while travel to these schools for Wyoming cattle producers can also be both expensive and time consuming. To fulfill this educational need, University of Wyoming Extension (UWE) educators and specialists have collaborated to provide 15 beef cattle A.I. schools in seven different locations across the state since 2017. These schools are three days long and include classroom training and hands-on application. Major topics covered are reproductive anatomy and physiology, nutrition, heifer development, semen/equipment handling, genetics, heat detection, and estrus synchronization. In addition to managing reproduction of their own cattle, participants can become certified A.I. technicians for hire and/or receive college credit. Visual teaching aids and harvested reproductive tracts are utilized during classroom demonstrations. Each afternoon, students can develop their skillset and palpate live cattle in custom-made portable chutes that hold up to 16 cows at one time. Each student must pass an insemination rod through the cervix of a cow unassisted in order to receive a "passing" grade. The cost of the schools is $100 and each student receives a training manual. Approximately 225 students have graduated from the schools during the last five years. Graduates of all ages have applied their knowledge gained from the schools to improve productivity and viability of their operations.

STATE WINNERS

NORTHEAST

New Jersey	Henry Bignell

SOUTHERN

Mississippi	James Shannon
North Carolina	Sara Drake
Oklahoma	Augustus Holland
Virginia	Jennifer Ligon

Search for Excellence in Young, Beginning, or Small Farmers/Ranchers

NATIONAL WINNER

GROWING FORWARD FARM

SEARCH FOR EXCELLENCE IN YOUNG, BEGINNING, OR SMALL FARMERS/RANCHERS
Bonnie Hopkins Byers
County Extension Agent/Agriculture
New Mexico State University
Aztec

Team Members: Hopkins Byers, B*[1], Medlock, W[2], Webster, Z[3], Griffiths, R[4]

[1] County Extension Agent/Agriculture, New Mexico State University, Aztec, New Mexico, 87410
[2] Program Specalist, NMSU, Aztec, New Mexico, 87410
[3] 4-H Agriculture Agent, New Mexico State University, Aztec, New Mexico, 87410
[4] San Juan County FCS Agent, NMSU, Aztec, New Mexico, 87410

Growing Forward Farm is a cooperative project between the San Juan County Cooperative Extension, San Juan County Government, and NMSU Cooperative Extension to create an outdoor agricultural classroom and new farmer training area. The mission of the farm is to connect youth and community members to the legacy and future opportunities for agriculture in San Juan County and beyond. With our population ever increasing while simultaneously farm land decreasing, there becomes a great demand for agricultural education in order to sustain as a population. Especially sense it is shown that so many individuals lack the knowledge of where their food comes from, not to mention lacking the knowledge of how to grow one's own food. With that information in mind, San Juan County Cooperative Extension set out

to create an outdoor agricultural classroom to target community members to help promote agriculture, empower individuals with the knowledge to grow their own food, teach sustainable farming practices, and hopefully create future agriculturalists through hands on learning opportunities. The target audience for this project is community members, but more specifically, programs are targeted towards youth, specialty crop farmers, and produce consumers.

The 2021 accomplishments also included: hosted fourteen workshops with an average of fifteen participants; facilitated three new farmer training plots where community members where given plots of land to be trained how to farm effectively; built infrastructure for future programs including barn, and four healthy soils demonstration areas; hosted ten volunteer events totaling over 300 community members; hosted a 4-H agricultural summer camp which 23 youth attended; and hosted an open house which 107 people attended. The team also garnered $254,334 in funding for farm projects and events. The farm and new farmer training participants sold produce at a weekly farmer's market for county employees. In total, between workshops, volunteer work days, camps, and our open house, Growing Forward Farm has impacted well over 1,000 people in its first year of life.

NATIONAL FINALISTS

BEGINNER BEEKEEPING SERIES
SEARCH FOR EXCELLENCE IN YOUNG, BEGINNING, OR SMALL FARMERS/RANCHERS
Kimberly Post
County Extension Agent
University of Georgia
Lakeland

Team Members: Post, K[1]

[1] County Extension Agent, University of Georgia, Lakeland, Georgia, 31635

Honey bee pollination contributes nearly $20 billion to United States agriculture every year through increased quantity and quality of a variety of fruits, vegetables, nuts, and seed production. Honey bees also produce valuable products within the hive, including honey, beeswax, pollen, and propolis. With honey bees facing a myriad of pest and disease challenges, beekeeping has garnered much attention in recent years. The Lanier & Clinch County Agriculture & Natural Resources (ANR) Agent set out to provide educational programming related to honey bee physiology, health, and management. The program was named the Beginner Beekeeping Series. Overarching objectives were to show consumers how honey bees contribute to agriculture through pollination, provide enough knowledge for beginner beekeepers to start their own hive of bees, and share ways that students that positively contribute to pollinators. The ANR Agent developed curriculum for a series of six once-per-month classes that aligned with the seasonal needs of the honey bee colony, including hive assembly, bee biology, nectar sources, and more. Face to face classes, hands-on skill lessons, and in-hive site visits were utilized to introduce information, create muscle memory for certain beekeeping tasks, and reinforce knowledge gained. A pre- and post-series survey was administered to gauge self-indicated knowledge of beekeeping topics. Between 2019 and 2021, 43 students participated in the Beginner Beekeeping Series. Prior to the class, an average of 9.1% said they were knowledgeable about beekeeping topics. After the class, this figure increased to 81.4% stating they were knowledgeable about basic beekeeping topics. One student is a local educator who has even gone on to teach hundreds of elementary students about honey bees, and the children assist with managing hives at their school. The Beginner Beekeeping Series has been successful in meeting program objectives, meeting participant expectations, and impacting the honey bee awareness of future generations.

FARMING 101: FARMING BASICS FOR SUCCESS
SEARCH FOR EXCELLENCE IN YOUNG, BEGINNING, OR SMALL FARMERS/RANCHERS
Joanna Coles
County Extension Agent for Agriculture and Natural Resources
UK Cooperative Extension Service
BOWLING GREEN

Team Members: Coles, J*[1], Drake, G*[2], Martin, L*[3], Huber, A*[4], Phillips, J*[5]

[1] County Extension Agent for Agriculture and Natural Resources, University of Kentucky, BOWLING GREEN, Kentucky, 42101
[2] County Extension Agent for Agriculture and Natural Resources, University of Kentucky, Morgantown, Kentucky, 42261
[3] County Extension Agent for Agriculture and Natural Resources, University of Kentucky, Russellville, Kentucky, 42276
[4] County Extension Agent for Agriculture and Natural Resources, University of Kentucky, Scottsville, Kentucky, 42134
[5] County Extension Agent for Agriculture and Natural Resources, University of Kentucky, Franklin, Kentucky, 42134

Supporting beginning farmers is a topic identified by stakeholders across Kentucky. The covid shutdown allowed county agents to interact with new clients who wanted to begin farming for a variety of reasons. A committee of agriculture agents from the Mammoth Cave Area of Kentucky worked together to develop a 4-session program that would provide a sound foundation for clients that want to start a farming operation. The sessions were delivered via ZOOM. Each session was 1 hour long. Sessions were developed to address questions that many beginning farmers have and provide beginning farmers with information about resources that are available to them. Sessions were designed to be delivered online, and the program will be developed into an online class that clients can take as they become interested in starting a farm.

Sessions were a mixture of live online instruction and video clips. Agents created a series of educational videos using multiple resource professionals: USDA: Farm Service Agency CED and NRCS District Conservationist, county soil conservation district technician, local banker, local insurance agent, and a vehicle enforcement officer from the KY State Police. Extension Professionals provided videos to cover EIN#s, pesticide use, farm taxation basics, basic equipment needs for a farm, and land use planning. An agent presented information on enterprise selection using budgets from UK Ag. Economics. Marketing, presentation materials, and online background graphics were created to give a consistent look to "Farming 101" materials.

44 people registered for the program. The average attendance was 28. Each session was evaluated using the Qualtrics online survey platform. 96% of survey responses indicated an increase in knowledge of the information presented. 88% said they would use the information to make changes or improvements to their farm. Participants provided a lot of feedback, here is a sample: I will create goals and execute them, be more involved with the extension office, secure tax exemption and verify my insurance coverage, and develop a business plan. A six-month follow-up survey of participants is being developed and mentoring visits will take place during the spring of 2022.

TEACHING LIVESTOCK AND HORTICULTURE PRODUCTION AND FINANCIAL RISK MANAGEMENT TO NEW AND BEGINNING OKLAHOMA VETERAN FARMERS

SEARCH FOR EXCELLENCE IN YOUNG, BEGINNING, OR SMALL FARMERS/RANCHERS

Josh Campbell
Extension Educator, Ag/ 4-H
Oklahoma State University
Oklahoma City

Team Members: Campbell, J*[1]

[1] Extension Educator, Ag/ 4-H, , Oklahoma City, Oklahoma, 73111

This project began in Summer 2020 has addressed production, marketing and financial risks generally experienced by socially disadvantaged, beginning and veteran farmers and ranchers as they seek to establish viable family farm enterprises. The USDA defines beginning farmers as having less than 10 years of farming experience. In Oklahoma, a growing interest in farming and ranching by traditionally underserved populations and specifically veterans has led to an emerging need for Educational support for beginning farmers. Specific emphasis for this progrm has been on financial management challenges for navigating business planning and determining available services and support available to new, beginning, underserved and veteran farmers and ranchers through USDA agencies, as well as state and local resources.

The program was offered through a series of "boot camp" style programs that include classroom instruction and farm tours for participants to experience timely, hands-on vegetable crop and livestock production training. Each program includes 4-5 hrs of classroom training from Extension specialists providing food safety, marketing, and financial enterprise analysis training, along with 2-3 hrs of on-farm experience. The program has served more than 100 Oklahoma beginning farmers and ranchers with a specific emphasis on recruiting veterans. Participants in the program received classroom and on-farm instruction to address production, marketing, and financial risks. Production risks addressed included integrated pest and disease management, season extension, and other diversification methods as well as food safety and handling practices. Marketing risks addressed included education about marketing strategies, branding, and market identification. Financial risks were addressed by assisting participants with utilizing enterprise budgets to inform the viability productions methods and developing business plans to establish financially sustainable farm operations.

STATE WINNERS

NORTH CENTRAL

Iowa	Jennifer Bentley
Ohio	Brooke Beam

SOUTHERN

Alabama	Ken Kelley
North Carolina	Nelson Brownlee
South Carolina	Zachary Snipes
Texas	Zachary Davis

WEST

Wyoming	Chance Marshall

Search for Excellence in Environmental Quality, Forestry and Natural Resources

NATIONAL WINNER

PENN STATE EXTENSION BACKYARD STREAM REPAIR PROGRAM

SEARCH FOR EXCELLENCE IN ENVIRONMENTAL QUALITY, FORESTRY AND NATURAL RESOURCES

Danielle Rhea
Extension Educator
Penn State Extension
Brookville

Team Members: Rhea, D[1], Boser, S[2], Fetter, J[3], Yencha, A[4], Groh, T[5], Koch, K[6], Sjolander, S[7], Mansberger, J[8]

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The Penn State Extension Backyard Stream Repair Program was developed to educate and empower small-scale landowners to make simple but effective stream improvements on their property that result in improved water quality. Penn State Extension Water Resources Team's Program Development Process identified a lack of educational and financial resources for landowners with short sections of streams and the opportunity to develop State-specific programs and publications related to improving stream health. The Backyard Stream Repair Program development began in 2019. The following year the publication, Simple Solutions for Your Eroding Backyard Stream, was finalized and then served as the backbone for program presentations. In 2021, Penn State Extension's Backyard Stream Repair Program Team delivered two, five-part webinar series to 608 participants supplemented by three in-person field days. Program participants were evaluated several times using Qualtrics surveys to assess knowledge gain and actions resulting from participating in the program. Overall, average confidence in understanding topics covered by this program increased after completing this program. Evaluation responses (N=70) indicated that as a result of participating in this program, participants installed 14.5 acres of riparian buffers and 2,746 linear feet of live stake plantings. The riparian buffers planted because of this program are estimated to remove 1,450 pounds of nitrogen, 116 pounds of phosphorous, and 36,000 pounds of sediment annually, providing a potential value ranging from $6,035.50 to $87,516.50 each year.

NATIONAL FINALISTS

EARTH DAY, EVERY DAY

SEARCH FOR EXCELLENCE IN ENVIRONMENTAL QUALITY, FORESTRY AND NATURAL RESOURCES

Steven Yergeau
Environmental and Resource Management Agent
Rutgers Cooperative Extension
Toms River

Team Members: Bakacs, M*[1], Mangiafico, S*[2], Rowe, A*[3], Yergeau, S*[4]

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In spring 2020, as people across the state were adapting to living with COVID-19, Rutgers Cooperative

Extension (RCE) faculty and staff were creating online content to provide learning experiences while people were in lockdown at home. RCE launched its "Earth Day, Every Day" weekly webinar series of one-hour presentations delivered via both Webex and Zoom. The topics included simple actions that people can take to make their lives more sustainable from environmentally-friendly lawn care, to reducing plastic waste and energy waste, to creating wildlife habitat at home. The 2020 and 2021 series spanned 35 weeks with a different topic each session. The program was promoted via email to similar program participants, to Rutgers Master Gardeners, to Rutgers Environmental Stewards, and through County press releases. The webinar series was also advertised on social media, with Facebook events created for each session. The series was a success, gathering an audience of 4,358 attendees representing all 21 counties in New Jersey, as well as 30 other states and several areas outside the United States. Since its start, the recordings have been watched more than 15,500 times, with one video being viewed 4,712 times (Safe Soils for Urban Gardening). The "Earth Day, Every Day" website has been visited more than 24,000 times. Overwhelmingly, the audience indicated that the instruction and teaching, overall content and presentation was either 'Good' or 'Excellent' with over 75% of attendees rating the webinars as such. Over 90% of the participants indicated that they would adopt at least one of the actions suggested during each webinar. A follow-up survey of attendees to the 2020 "Earth Day, Every Day" webinars was conducted in 2021 to determine if any participants initiated the actions they expressed an interest taking. Almost 60% of respondents stated that they initiated new actions, or improved actions they were already performing. An additional 11% said they hadn't undertaken any of the suggested actions but were planning to in the future. The RCE team is happy with the progress of the "Earth Day, Every Day" program and looks forward to continuing and/or adapting it into the future.

CONSERVATION FOR GENERATIONS

SEARCH FOR EXCELLENCE IN ENVIRONMENTAL QUALITY, FORESTRY AND NATURAL RESOURCES

Kalyn Waters
CED/Agriculture Agent
University of Florida
Bonifay

Team Members: Waters, K*[1]

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The U.S. has one of the most established wildlife conservation plans in the world. Regulated hunting and fishing are a key part of the management strategy. In 2016, 40% of the entire population participated, however there is a concerning downward trend in this critical population. Hunting, fishing, and outdoor recreation are a key component to wildlife conservation within the United States. According to data published by the U.S. Fish and Wildlife Service, there were 11.5 million hunters in 2016, representing a decline of 2.2 million from 2011, with the populations of those participating continuing to age. This aging trend of the hunting population causes a critical need for youth to become involved in wildlife conservation. Objectives: To address these issues the agent has developed a Progressive Natural Resource program with the objectives to: 1) increase the knowledge of conservation in the county/region, 2) increase the number of youth who participate in natural resources management and conservation minded hunting and fishing, and 3) provide platforms that facilitate multigeneration interactions and education that will increase mentorship of youth in conservation, while encouraging the aging populations of outdoorsmen/women to continue to participate in outdoor reaction and conservation activities. Method: A series of innovative programs were hosted that facilitated conservation education. These programs included: a catfishing tournament that required participants to have team member 16 years of younger, turkey calling and call makers contest, webinars/ workshops, hunter education certification events and a social media platform. Results: A total of $61,025 of revenue enhancement was generate. Program participants reported a 91% gain knowledge of natural resource management, 100% reported participating in outdoor activities with youth improved their quality of life, 89% of participants, including youth intended to increase their conservation practices. In addition, 14 youth have received lifetime hunting/fishing licenses as a direct result of the Conservation for Generations Program. Conclusion: This natural resource program has increased the participation of area youth in conservation-based hunting and fishing, increased client's knowledge of natural resource management and created a source of funds to purchase lifetime hunting/fishing license for youth. This strengthens the future of conservation in this region.

INTEGRATED PEST MANAGEMENT FOR INVASIVE PLANTS OF PIEDMONT N.C.

SEARCH FOR EXCELLENCE IN ENVIRONMENTAL QUALITY, FORESTRY AND NATURAL RESOURCES
Phyllis Smith
Asst. Ext. Agent, Natural Resources and Environmental Systems
N.C. Cooperative Extension, Forsyth County Center
Winston-Salem

Team Members: Smith, P*[1]
[1] Asst. Ext. Agent, Natural Resources and Environmental Systems, N.C. Cooperative Extension, Forsyth County Center, Winston-Salem, North Carolina, 27105

According to NC State Extension, non-native plants are present in one out of every ten acres in southern forests with the potential to double over the next 50 years. They become invasive when they adapt to local conditions while lacking the natural pest controls of their original home range, enabling them to spread quickly and out-compete native plants. As a result, wildlife habitat diversity is diminished and the value of commercial timber lots is reduced.

A study by the University of Massachusetts concluded that eighty-eight percent of all invasive plants in the United States were intentionally introduced, many as ornamentals, and continue to be planted. Others were introduced as forage or cover crops, for medicinal purposes, or for environmental restoration during a time in which the environmental consequences of such actions were poorly understood.

In response, A PowerPoint presentation was developed in 2020 offering Best Management Practices for invasive plant control through Integrated Pest Management (IPM). IPM serves as a framework to provide a cost-effective, comprehensive, low-risk approach to achieve long-term results. Participants earned credits for N.C. Pesticide License, N.C. Landscape Contractors, and N.C. Environmental Education Certification. The initial presentation in 2020 was virtual due to COVID-19. It was repeated (virtually) on two occasions in 2021. Polling responses revealed that participants significantly increased their knowledge of non-native invasive plants, their ecological impacts, and IPM strategies that can be used for their eradication. Eighty-one percent indicated they would participate in future efforts to implement a best management plan for non-native invasive plants.

Individuals reached out to Extension post-program for technical assistance resulting in three in-person workdays to remove invasive plants at different locations. A small grant was received for the purchase of high quality tools and livestakes (dormant plant cuttings) to restore native vegetation at two of the work sites.

An in-person workshop is scheduled for April 2022 with a PowerPoint, demonstrations, and a hands-on session to allow participants to identify invasive plants, formulate a plan, and perform seasonally appropriate eradication. (https://www.eventbrite.com/e/ipm-for-invasive-plants-of-piedmont-nc-registration-288572316567). The workshop will build on the success of earlier programs ongoing volunteer workdays for invasive plant removal.

STATE WINNERS

NORTH CENTRAL

Iowa	Ron Lenth

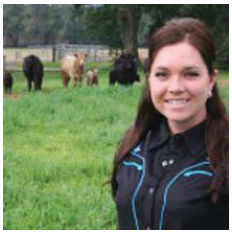
SOUTHERN

Georgia	Brooklyne Wassel
Mississippi	James Shannon
South Carolina	Ryan Bean
Texas	Chase Brooke

WEST

Utah	Randall Violett

JCEP CREATIVE EXCELLENCE AWARD



Kalyn Waters
CED/Agriculture Agent
University of Florida
Bonifay

Kalyn Waters[1]

[1] County Extension Director, Agricultural and Natural Resources, UF/IFAS Extension Holmes County

PROGRAM OVERVIEW: CONSERVATIONS FOR GENERATIONS

The United States has one of the most effective and established wildlife conservation plans in the world. Regulated hunting and fishing are a key part of the management strategy. While being regulated by scientific research, the purchases of conservation stamps and licenses provide nearly 60% of the annually funded U.S. Fish and Wildlife service's budget. Wildlife related recreation is a $156.9 billion industry in the United States. In 2016, nearly 40% of the entire population participated, however there is a concerning downward trend in this critical population. Hunting, fishing, and outdoor

recreation are important parts of the heritage of many families and a key component to wildlife conservation within the United States. According to the most recent figures published by the U.S. Fish and Wildlife Service, there were 11.5 million hunters in 2016, representing a decline of 2.2 million from 2011. According to the survey, in 1991 28% of U.S. hunters were 25-34 but in the 2016 survey there was a decrease to 16% in that age category. Similarly, an aging trend is seen in the overall population, with the population of hunters 45-64 years of age increasing from 23% (1991) to 46% (2016). Hunters and anglers play a vital role in wildlife conservation by harvesting surplus animals to sustain healthy populations. In addition, they provide survey data, samples from animals harvested and support wildlife management through license fees.

This aging trend of the hunting population causes a critical need for youth to become involved in wildlife conservation.

Objectives of Program

To address these issues the agent has developed a Progressive Natural Resource program with the objectives to: 1) increase the knowledge of conservation in the county/region, 2) increase the number of youth who participate in natural resources management and conservation minded hunting and fishing, and 3) provide platforms that facilitate multigeneration interactions and education that will increase mentorship of youth in conservation, while encouraging the aging populations of outdoorsmen/women to continue to participate in outdoor reaction and conservation activities.

Program Activities

The Conservation for Generations program is innovative and multifaceted program. Through both formal and informal learning models the UF/IFAS Extension Holmes County director works to facilitate generation to generation knowledge dissemination, access to science-based natural resource management training and build a network of mentors for youth conservationists in the region. The following platforms/programs are used to accomplish the programs objectives:

- Panhandle Outdoor Connection: A social media page is an intensive marketing program for UF/IFAS Extension Holmes County natural resource programming and provides science-based educational material. Page reach includes United States, Canada, Germany, Afghanistan, and Philippines. In addition to typical social media use, the page also hosts educational series such as Fish Camps, a virtual workshop on fishpond management that was viewed by 2,289. Overall, the page has had a total reach of 744,768 and 87,985 video views.
- Holmes County Outdoor Expo: An interactive educational Expo that focuses on hunting, fishing, and conservation. Vendors offer goods and services in a typical Expo fashion, while state specialists and agents provide hands-on learning experiences that are participated in through a scavenger hunt for attendants. This program has generated

$45,325 in program enhancement and attended by 2,932. This program was cancelled in 2021 due to COVID restrictions.

- Long Spur Shootout: A National Wild Turkey Federation Grand National Qualifying/Sanctioned turkey calling contest and custom call makers contest that serves as the Florida State Championship calling contest is used as a platform to introduce new/youth hunters to turkey calling and increase turkey conservation in Florida. In addition, the custom call makers contest receives custom made turkey calls from across the nation, judges them, and then offers them for auction. Total revenue enhancement totals over $12,000 since 2016.
- Bad Cat Classic: A catfishing tournament that is hosted in the Choctawhatchee River. Team are that participate in the tournament are required to have a youth 16 years of age or younger on their team to facilitate youth participation. Total revenue enhancement to date is $3,700.
- Hunt Holmes: A program that develops relationships between youth and mentors who hunt and fish while teaching hunters safety certification for the state of Florida. A total of 88 participants have become certified in hunters' safety.
- Randy Adams Memorial Lifetime Hunting/Fishing License Scholarship: This program is the combined effort of all programs and uses the revenue enhancement funds generated from the creative and progressive Extension programs to offer scholarships that award Lifetime Hunting and/or Fishing License for the state of Florida to youth. This program incentivizes youth who participate in natural resource programming. A total of 14 youth has received lifetime hunting/fishing licenses in the state of Florida.
- In person and Virtual Workshops: Virtual and traditional workshops are hosted to provide formal educational platforms for the agent, state specialists and other agents to teach from. These workshops are hosted in person, as webinars, and broadcast virtually via social media platforms. These programs were viewed by 2,289 clients.

Impacts

Through programming that increased time spent participating in wildlife conservation via wildlife recreation, the family unit of the county was strengthened. A total of 81% of participants in programming indicated they take part in outdoor activities with youth, and research shows

that positive time spent with youth results in positive youth development and reduction in risky behavior. In addition, ensuring and educating the next generation of hunters is critical for population management and wildlife viability in an ecosystem. In states such as Michigan, a lack of youth hunters and a declining number of overall hunters have resulted in disease issues that are spurred by over population.

Through programming provided, participants increased their knowledge of natural resource conservation and management. In addition, clientele planned to increase their time spent with youth in the outdoors as well as increased their knowledge of best management practices related to natural resources. Adult clientele stated that spending time in the outdoors and teaching youth about conservation increased their quality of life, and 100% of the youth said they increased their knowledge of conservation practices from their adult mentors they were spending time with.

Through program enhancement funds generated from this program the CED has given 14 scholarships to youth in the state to purchase lifetime hunting licenses and the $61,025 of revenue enhancement has been used to facilitate the mission of Conservation for Generations in Holmes County and the surrounding areas.

These programs challenge the means in which traditional Extension programming is being delivered. They are innovative in their ability to attract non-traditional audiences, generate revenue enhancement for program support and are impactful. Extension must continue to evolve to remain relevant. Programming platforms like Conservation for Generations proves that we can take Extension of the box and still be wildly relevant, science-based, and attractive to our clientele.

DAN KLUCHINSKI MEMORIAL SCHOLARSHIP AWARD

Douglas Zemeckis
Ocean, Atlantic and Monmouth Counties Ag and Resource Management Agent
Rutgers Cooperative Extension
Toms River

Description of Training Event

I am submitting a self-nomination for the Dan Kluchinski Memorial Scholarship Award to apply the funds to partially support my travel to attend the 2022 Annual Meeting/Professional Improvement Conference (AM/PIC) of the National Association of County Agricultural Agents (NACAA) in West Palm Beach, FL, July 17-22. I've been working as a County Agent III with Rutgers Cooperative Extension since 2017 and have also since been a member of NACAA and the Agricultural Agents Association of New Jersey (AAANJ). I attended my first AM/PIC virtually in 2021 and the 2022 meeting will be my first in-person meeting with NACAA. I have submitted a proposal to deliver an oral presentation on my marine Extension programming in New Jersey which will offer the opportunity to obtain valuable input on my programming. Additionally, I have been selected for an Achievement Award – Regional Winner that I will be receiving at the 2022 AM/PIC. Having the opportunity to attend other oral and poster presentations at the AM/PIC, as well as networking face-to-face, will provide valuable training and professional improvement as I learn more about the field of Extension and programming offered by colleagues from throughout the country. The opportunity to learn more about my colleagues' work in my areas of expertise of natural resource and aquaculture, but also other subjects related to agriculture, will be valuable so that I can bring new knowledge and programming approaches back to New Jersey to better serve my clientele in fisheries and aquaculture. For example, I am looking forward to learning more about the educational programming and research in areas such as forestry, livestock and farm management, and economic development given the anticipated application to the needs of my clientele in New Jersey and valuable examples to be captured from other Extension professionals.

I understand that there are many similarities among forestry management and fisheries management, and learning more about Extension programming in this area can help inspire some innovative programming and creativity to address issues in New Jersey. Additionally,

learning more about the programming going on around the country in areas from general agriculture to livestock management to economic development will also help me to address the many issues impacting the development and expansion of shellfish aquaculture. New Jersey is the most densely-populated state and there are many competing users for our marine waterways. Furthermore, the development of shellfish aquaculture in New Jersey relies on the adoption and application of many policies and practices from terrestrial agriculture, so learning more about the Extension programming in these areas will be helpful for improving my Extension programming that can bring innovative solutions and greater impact to New Jersey. Being chosen for the Dan Kluchinski Memorial Scholarship Award would be a great honor and help to make my travel to the 2022 AM/PIC possible so that I can have this valuable professional development opportunity that will aid in strengthening my Extension programming to meet stakeholder needs in New Jersey.

2022 NACAA
Distinguished Service Award Winners

SOUTHERN REGION


Alabama
Cynthia Knowlton


Florida
Karen Stauderman


Mississippi
Melissa Morgan


Tennessee
Christopher Cooper


Alabama
Joshua Elmore


Georgia
Justin Shealey


North Carolina
Colby Lambert


Tennessee
Chris Hicks


Alabama
Bethany O'Rear


Georgia
Andrew Sawyer


North Carolina
Paul Smith


Tennessee
Anthony Shelton


Arkansas
Brad Runsick


Georgia
Lucy Ray


North Carolina
Allison J. Brown


Texas
Joshua Blanek


Arkansas
Sherrie Smith


Kentucky
Courtney Jenkins


North Carolina
Mark Seitz


Texas
Sam Womble


Arkansas
Shawn Payne


Kentucky
Amanda Sears


Oklahoma
James Lee


Texas
Phoenix Rogers


Florida
Keith Wynn


Louisiana
Tara Smith


South Carolina
Terasa Lott


Texas
Justin Hansard


Florida
Norma Samuel


Mississippi
Eddie Smith


South Carolina
Millie Davenport


Texas
Pasquale Steve
Swaner

Texas
Frank Escobedo

Nebraska
Brent Plugge

New Hampshire
Jeremy Delisle

New Mexico
Chase Elkins

Virginia
Brad Mullins

North Dakota
Penny Nester

Pennsylvania
Stacie Hritz

Oregon
Jay Pscheidt

Ohio
James Jasinski

West Virginia
Brandy Brabham

Utah
Taun Beddes

NORTH CENTRAL REGION

Indiana
Amy Thompson

Ohio
Pam Bennett

Washington
Don McMoran

WESTERN REGION

Iowa
Fred M. Hall

South Dakota
Laura Edwards

Arizona
Ayman Mostafa

Wyoming
Brian Sebade

Kansas
Carla Nemecek

Wisconsin
Aerica Bjurstrom

Colorado
Robin Young

Michigan
Christina Curell

Idaho
Mario E. de Haro
Marti

NORTHEAST REGION

Minnesota
Julie Weisenhorn

Maine
Ellen Mallory

Montana
Sharla Sackman

Missouri
Amie Schleicher

Maryland
William Lantz

Nevada
ML Robinson

2022 NACAA
Achievement Award Winners

SOUTHERN REGION

Alabama
Heidi Tilenius

Florida
Yvette Goodiel

Mississippi
Zach Yow

Tennessee
Sarah Orr

Alabama
Zachery Brannon

Georgia
Ashley Hoppers

North Carolina
Travis Birdsell

Tennessee
Rachel Painter

Alabama
Alice Moore

Georgia
Josh Fuder

North Carolina
Karen Blaedow

Tennessee
Jenni Goodrich

Arkansas
Rachel Bearden

Georgia
Jay Porter

North Carolina
Colby Griffin

Texas
Landen Gulick

Arkansas
Allison Howell

Kentucky
Jessica Bessin

North Carolina
Andrew Baucom

Texas
Justin Hale

Arkansas
Adam Willis

Kentucky
Chris Schalk

Oklahoma
Jennifer Patterson

Texas
Stephen Brueggerhoff

Florida
Matthew VanWeelden

Louisiana
Randall Mallette

South Carolina
Amber Starnes

Texas
Whitney Ingram

Florida
Bonnie Wells

Mississippi
Jessica Sibley

South Carolina
William Hardee

Texas
Allen Homann

Texas
Corena Fitzgerald

Missouri
Jennifer Lutes

New Hampshire
Jonathan Ebba

Idaho
Carmen Willmore

Virginia
Jeannie
Layton - Dudding

Nebraska
Erin Laborie

New Jersey
Douglas Zemeckis

Montana
Katie Hatlelid

North Dakota
Angie Johnson

New York
Mary Kate
MacKenzie
(Wheeler)

New Mexico
Donald,
Don Martinez

NORTH CENTRAL REGION

Indiana
Sara Dzimianski

Ohio
Mark Badertscher

Pennsylvania
Cassie Yost

Oregon
Andony
Melathopoulos

Indiana
Gina Anderson

Ohio
Sarah Noggle

West Virginia
Emily Morrow

Utah
Reagan Wytsalucy

Iowa
Samuel Genson

Wisconsin
Kaitlyn Davis

Wyoming
Chance Marshall

WESTERN REGION

Kansas
James Coover

Arizona
Blase Evancho

NORTHEAST REGION

Michigan
Heidi Lindberg

Maine
Jason Lilley

California
Daniela Bruno

Minnesota
Nathan Hulinsky

Maryland
Emily Zobel

Colorado
Jenny Beiermann

2022 NACAA
Hall of Fame Award Winners

2022
Southern Region
Hall of Fame Award

Eugene McAvoy

Florida
25 Years

Eugene (Gene) McAvoy has provided an exemplary role model during his 25-year career with the UF IFAS Extension service beginning in 1997 when he joined the Hendry County Extension Office as the Vegetable/Horticulture Agent providing direction and leadership to the Vegetable Horticulture Program.

In 2004, Gene became one of University of Florida IFAS' first Regional Specialized Extension Agents (one of 2) in which role he continued to provide direction and leadership for the development, implementation, and evaluation of Extension educational programs for vegetable producers in the five-county area of Southwest Florida in the following areas: crop production efficiency and sustainability, farm safety and regulatory compliance, integrated pest management, post-harvest quality, and food safety, and vegetable nutrition and irrigation management as well as planning and implementing the Environmental Horticulture program in Hendry County where he delivered Extension programming to area homeowners, civic groups, and 4-H youth.

McAvoy became the County Extension Director for Hendry County in 2005 and continued to serve in that role as well as Regional Specialized Vegetable/Horticulture Extension Agent IV until he retired in 2019.
Gene did not stay retired long and after 19 days he was invited back to join UF IFAS as the Associate Director for Stakeholder Relations at the UF IFAS Southwest Florida Research and Education Center a position in which he continues to serve the agricultural community of Southwest Florida and beyond.

During his Extension career, McAvoy served as President of the Florida Association of County Agricultural Agents and was President when Florida hosted the NACAA annual meeting in 2004. His dedication to agriculture and penchant for professionalism and service did not stop there, Gene went on to become President of NACAA in 2019 and was influential in helping steer the association through the Covid 19 pandemic helping transition the 2020 Annual Meeting and Professional Improvement Conference to the first-ever virtual AMPIC attended by nearly 1500 county agents from across the Country. As NACAA President, McAvoy welcomed Guam into the association.

He currently serves as the President of the Joint Council of Extension Professionals.

McAvoy was a late comer to Extension and in some ways an unlikely candidate to achieve all that he has during his career. Born in Orange, New Jersey, McAvoy spent his formative years in East Orange, New Jersey, just a few blocks from Newark, NJ. From his first part-time summer high school job on a farm, where he picked strawberries, peppers, and tomatoes, McAvoy developed a love for his lifelong passion - agriculture.

Gene received his BS (Plant Science) and MS (Horticulture) from Rutgers University.

After graduating from Rutgers, McAvoy joined the Peace Corps, serving in Niger. This led to 12 years with the US Agency for International Development, working with vegetable growers in Niger, South Africa, and Jamaica before moving his family north to Florida to join UF.

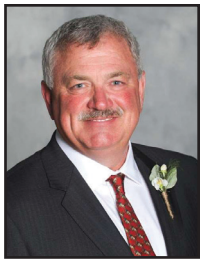
Gene has received multiple awards during his years of service and has spent over 50 years supporting and advocating for the agriculture industry in Florida and beyond.

DSA awarded in 2008.

2022
North Central Region
Hall of Fame Award

Karl Hoppe

North Dakota
32 Years



Karl began working with North Dakota State University Extension in 1990 as Extension Associate at the Carrington Research Extension Center. His efforts were to increase sheep and goat production in North Dakota through collaborative programming with county extension agents and direct producer education. Sheep and goat numbers increased by 11% during this grant funded effort. In 1992, Karl's position transitioned to an Area Livestock Extension Specialist focusing on beef cattle nutrition and management for cow calf and feedlot.

With experiences in both livestock development and cattle feeding, cattle feeding education was delivered with several cattle feeding producer participation projects like the 'Dakota Finishers Project' which was a 1996 NACAA Search for Excellence National Finalist. The North Dakota Cattle Feedlot School was started in 1996 and has continued yearly for over 26 years showing the commitment to growing the cattle feeding industry in North Dakota. In 1997, Karl was recipient of the NACAA CME Chicago Mercantile Exchange Livestock and Dairy Hedging Seminar Award and in 2000 received the NACAA Achievement Award. He developed a deep appreciation for the nationwide efforts that extension professionals deliver as the 2001-2002 NACAA North Central Vice-Chair for the Search for Excellence Committee. His leadership experiences grew as a NC-NELD - North Central Extension Leadership Development recipient and as acting Extension District Director. Karl held various other leadership positions including election to the Midkota School Board and Grace City Park Board, and appointed as City Auditor-Grace City and Foster County Soil Conservation District Supervisor (16 years).

His involvement in farming, conservation and sustainability led to an additional appointment as SARE (Sustainable Agriculture Research and Education) State Coordinator for North Dakota. Education in sustainability led to outreach with 1994 land grant colleges and development of the North Dakota SARE Discovery program. Livestock production is a major emphasis in Karl's life with sole ownership of a cattle and sheep ranch. Ranching led to a 31-year member of the North Dakota Stockmen Association where he was a director on the NDSA Feeder Council and as Director for the ND Lamb and Wool Growers Association. Karl attended his first NACAA AMPIC at Little Rock, AR in 1992 and 24 years later received the NACAA Distinguished Service Award in Little Rock, AR. Karl participated or coordinated in seven NACAA AMPIC Animal Science Preconference Tours and was NACAA North Central Vice-Chair for the Animal Science Committee 2019-2021.

Karl continues to provide nutritional and management education for beef cow calf and feedlot as Extension Livestock Systems Specialist. For 28+ years, he has conducted cattle feedout projects where cow calf producers experience custom feeding, carcass data, and profitability of feeding cattle. He has worked with producers to develop a cattle finance cooperative, cattle feeding partnerships, and cattle slaughter and processing businesses. Working with agents, producers or youth, Dr. Hoppe provides a well-balanced extension program in livestock production. Karl serves in his state Association (NDAAEA) as chair and past-chair for the Search for Excellence, Professional Excellence and Animal Science committees.

DSA awarded in 2016.

2022
Western Region
Hall of Fame Award

Woods Houghton

New Mexico
44 Years

Woods Houghton served New Mexico State University and the Cooperative Extension Service for 43 years as an employee and agent. Woods spent his career helping all citizens no matter their background, occupation, or creed and was often the key antagonist putting together coalitions to solve problems. He worked tirelessly on a wide variety of programming efforts which included natural resources, agronomic production issues, along with animal and human health.

New Mexico is an arid state and water is the lifeblood of the people. Woods helped establish the Lower Pecos River Water Users' Organization, which developed the Regional Water Plan for the southeastern portion of the state. He also facilitated the formation of the Lower Pecos River Watershed Alliance, a group dedicated to watershed health for the Pecos River. Additionally, he was nominated by the governor to serve on the Agriculture Water Conservation Task Force.

Woods worked to positively impact cotton and was instrumental in the Boll Weevil Monitoring and Eradication Program, Pink Boll Worm Monitoring Program, and facilitated the formation of the Boll Worm Eradication Committee. Woods promoted the permanent date for cotton plow-down completion for the Pink Boll Worm

program and worked with the New Mexico congressional delegation seeking restitution for the farmers after catastrophic pesticide damage in the county.

Woods is steeped in tradition and firmly believed that an extension agent is an educator. Woods wrote over 650 articles since 1999 and did a weekly radio program and has delivered educational information through local television programming, newsletters, and email. He delivered the Worker Protection Standard trainings in Spanish as well as English to accommodate his diverse audiences. Woods headed a coalition of agencies to address the treatment and removal of over 300,000 acres of brush and weeds in the county. He also helped develop a coalition of agencies to establish noxious weed management activities throughout the county. Woods headed up community action groups to educate local producers and communities on Trichomoniasis and rabies education and prevention programs in the county.

Woods was a career member of the NACAA and NMACAA and has held all offices within the organization and served as president when New Mexico hosted the AM/PIC in 2001. Woods received the DSA in 2004, served as the state association Awards Committee chair for 15 years, and attended multiple AM/PIC conferences through the years.

Outside of his Extension role, he made an impact on the community. Woods played a key role in organizing three anti-drug coalitions in and around Eddy County since 2004. The purpose was to bring together stake holder groups and focus efforts to identify and solve drug-related problems. Woods used his experience as an Extension educator to provide classes on health, finances, and youth leadership. These coalitions are self-sustaining and have contributed to a decrease in drug and alcohol use in the county. Due to his anti-drug and anti-gang work in Eddy County, Woods was appointed by two separate governors to the New Mexico Behavioral Health Council.

DSA awarded in 2004.

2022
Northeast Region
Hall of Fame Award

Eugene Schurman

Pennsylvania
34 Years - Retired

Eugene Schurman's Extension career began in 1974 in a new Dairy Educator position in Franklin County, Pennsylvania. Gene quickly started educational programs for dairy producers and 4-H dairy youth. One program was the creation of a 4-H Dairy Quiz Bowl Contest, which was the first in the state. In Virginia's 1977 Eastern Dairy Bowl Contest, the team represented Pennsylvania, placing fourth.

Gene left Franklin County to pursue her career as a 4-H Educator in Indiana County. Before rejoining Extension in 1982, Gene taught Vocational Agriculture and conducted the Young Farmer Program at Purchase Line High School.

Gene partnered with a fellow educator to conduct an intensive dairy calf and heifer growth study after returning to Extension in Indiana County. The study concluded that dairy calves and heifers in Southwest (SW) Pennsylvania were well below the standard growth charts, with delayed age at first calving well above the 24-month standard. This discovery led to creating programs to improve dairy calf and heifer nutrition, housing, and health care. As a result, the Regional SW Dairy Day Program was designed (continues today) to help educate area dairy producers. The study led to a new Extension and Research Position in the Dairy/Animal Science Department focusing on Dairy Calf and Heifer Management and developed national growth standards for dairy calves and heifers from the findings. Gene and his collaborator were award winners in the NACAA Search for Excellence in Livestock Production. The results of their study were published in "Successful Farming" magazine and "Hoard's Dairyman."

Gene's work with dairy producers was aimed at helping them remain profitable, improve efficiency, and adopt innovative technologies. He did this by developing dairy nutrition, calf and heifer, dairy cattle breeding/reproductive management, labor management, milk pricing/risk management, milk quality/milking management, and dairy herd management workshops. He organized and moderated three SW Pennsylvania dairy discussion groups and six dairy profit teams. Gene coordinated the formation of county animal response teams in two counties.

He successfully obtained grant funding (NESARE) for two on-farm demonstrations and research projects to reduce excessive phosphorus and protein in lactating cow diets. He received funding from the Northeast Extension Risk

Management Education Center to conduct programming to transition from conventional dairy production to organic and monitor income over feed cost to improve dairy farm profitability.

Gene developed extensive educational programs for southwest Pennsylvania youth in dairy production and management and farm, tractor, and equipment safety. He served as chair of the Pennsylvania 4-H Achievement Days Safe Tractor and Skid Steer Contest Committee for 20 years. Gene coordinated the Pennsylvania state delegation to the National 4-H Engineering Event for 20 years, with Indiana County sending 21 members to the contest. Active in encouraging young people in their 4-H projects, he worked on the Pennsylvania 4-H Animal Science Program Policies and Guideline Committee and served on the Pennsylvania Junior Dairy Show Advisory Committee. Gene's career focused on helping dairy farmers be profitable was the focus and gratification.

DSA Awarded in 1995.

2022 SERVICE TO AMERICAN/WORLD AGRICULTURE AWARD RECIPIENT

Dr. Robert Kemerait,
Professor and Extension Specialist
UGA Department of Plant Pathology

Dr. Robert Kemerait, a professor of plant pathology at the University of Georgia (UGA), has spent his career at the Coastal Plain Experiment Station in Tifton, where he is an extension specialist responsible for management of diseases affecting agronomic crops. Dr. Kemerait has integrated international programming into every aspect of his work as an extension plant pathologist. It is this passionate dedication to agriculture outside of the U.S., and especially to students and poor farmers in developing countries struggling to provide for their families, which makes Dr. Kemerait deserving of the award.

As a professor at the University of Georgia, Dr. Kemerait is charged with providing extension outreach to agents and farmers for disease and nematode management of peanut, corn, cotton, and soybeans. These crops are planted on approximately 250 million acres annually and UGA Extension agents in well over half of Georgia's 159 counties must be able to effectively address pest management issues that affect them. Twenty years ago, this assignment was shared among three specialists. In addition to Extension agents, Dr. Kemerait has demonstrated extensive and sustained commitment to training graduate students to pursue careers in public service and outreach and to serving the needs of economically challenged farmers in developing countries across the globe.

Previous Recognitions Presented to Dr. Kemerait

In 2015, Kemerait was named a Fellow in the American Peanut Research and Education Society. This honor is bestowed on those who have made "outstanding contributions in an area of specialization whether in research, Extension or administration and whether in public, commercial or private service activities." In 2016, Kemerait received the "Peanut Research and Education Award" from the American Peanut Council, national recognition for sustained and significant contributions to the peanut industry. In 2017, Kemerait was presented with a Plaque of Appreciation by the President of Benguet State University, Republic of the Philippines, for his role as invited plenary speaker at the 1st International Conference on Food, Environment and Culture. In 2017, Dr. Kemerait was selected to serve as a board member in the Office of International Programs in the American Phytopathological Society. In 2018, Dr. Kemerait became the first nonFilipino to be elected to the Philippine Phytopathological Society Board of Directors. In 2019 Dr. Kemerait received the Research-Extension Award from the Georgia-Florida Soybean Producers Association for the second time.

Dr. Kemerait's Support of Extension agents

UGA Extension has undergone significant changes since 2013, most notably the retirement of many senior agents who have been steadily replaced by young agents with great enthusiasm but often little experience. Dr. Kemerait passionately believes that one of the most important aspects of his career is to mentor these agents, new to the system or otherwise, through his position as an Extension plant pathologist and professor at the University of Georgia. Since 2013, he has developed and conducted inservice trainings in each of the four districts to prepare agents for issues they will face with growers and homeowners regarding disease diagnosis and disease management. He has also developed a lecture, "How to survive your first troubleshooting visits without feeling like an idiot" which is presented multiple times in different districts as a part of "new agent training". Kemerait sends frequent updates to the agents through email and Twitter to ensure that they have the information they need to have the confidence to do their job.

Dr. Kemerait takes great pride in the UGA ANR Extension agents and collaborates closely with them to assist in their professional development and also their recognition on state, regional, and national levels. Every year, Dr. Kemerait works with agents to develop, plan, establish, rate and harvest disease and nematode management trials appropriate both for the growers in their county and for presentations at professional meetings. He assists in defining objectives, acquiring needed seed and agrichemicals, establishing treatments and experimental design, rating for disease severity, and collection of yield at harvest. Dr. Kemerait also assists in statistical analysis of the data and with review of publications and presentations for professional meetings.

In addition to the information the agents acquire from these collaborative research projects that can help to improve management recommendations for growers, these efforts are also important for professional development through formal oral and poster presentations. As a sample, for the period from 2014 to 2019, UGA ANR agents reported at least 11 oral presentations and at least 19 poster presentations that included Dr. Kemerait as a co-author, based upon collaborative, on-farm field trials. Presentations

were made at state, regional and national meetings and are critically important for success in the promotion process. Dr. Kemerait strives to provide leadership to all county agents in the UGA Extension for improved management of diseases and nematodes affecting agronomic crops in Georgia, especially when previously unknown situations arrive. In 2015, bacterial blight, a disease of cotton until recently of minimal significance in Georgia become of tremendous concern to cotton farmers in the state. The cause of the increase was primarily the introduction of new, more susceptible varieties. However, the reemergence of this disease coupled with the possibility that contaminated seed was the reason for the issue led to fear-mongering by some and unnecessarily extreme concern by some farmers. Dr. Kemerait assumed leadership of the situation and worked closely with researchers and Extension specialists in other states to both better understand the reasons for the new outbreak and to provide growers with answers for management. Kemerait also included UGA Extension agents and other specialists in his efforts. He played a significant role in the development of Extension material for growers and presented at multiple meeting both on the reality of bacterial blight and on the management options. By the 2017 season, growers have become much more comfortable with the reality of the disease and with management options available to
them. In 2018, the presence of the Cotton Leaf Roll Dwarf Virus was confirmed in Georgia's cotton crop. Again, Dr. Kemerait has teamed with colleagues on the UGA Cotton Team, Auburn University, and other public institutions to address this issue through meetings, e-mails and newsletters and to keep our UGA ANR agents informed
in current developments.

International Work: Dr. Kemerait's Heart

Dr. Kemerait is deeply committed to helping those less fortunate around the world and it was, in large part, this passion which led him to a career in plant pathology. He has been actively engaged in international programs, working to improve the lives of poor and impoverished farmers and their families, especially in the Philippines and in Haiti. Prior to that, he worked for years on a USAID CRSP project in Guyana. Haiti and Guyana are two of poorest countries in the Americas and the Philippines is one of the poorest in Asia. Today, Kemerait is the only member of that original Peanut CRSP project from the University of Georgia still participating in USAID programs. Dr. Kemerait has been an integral part of these programs, serving as the co-PI from the University of Georgia. In total, work in Guyana (2001-2012) was funded for $950,000, work in Haiti (2007-2017) was funded for $1,000,000, and work in the Philippines was funded for $180,000. Dr. Kemerait has been a leader and essential part of all of these projects funded by USAID since their inception.

Conclusion

In conclusion, although Dr. Kemerait is assigned as an extension specialist domestically, his passion and dedication to the farmers, students, agricultural professionals, and families in developing countries is evident in every aspect of his program. From training graduate students and farmers to conducting applied research and producing Extension materials, he is absolutely dedicated to the welfare and future of those domestically andin the developing world. His efforts demonstrate that the difference one makes has less to do with where one lives and all to do with the passion and creativity used to address the challenges faced by farmers throughout the world.

2022 ABSTRACTS OF THE NATIONAL WINNERS AND FINALISTS COMMUNICATIONS AWARDS CONTEST

AUDIO RECORDING

National Winner

Emily Krekelberg
Extension Educator
University of Minnesota Extension
Rochester

Krekelberg, E*[1], Armstrong, J[2], Heins, B[3]

[1] Extension Educator, , Rochester, Minnesota, 55904
[2] Extension Educator, Cattle Production, University of Minnesota Extension Center for Agriculture, Food, and Natural Resources, St. Paul, Minnesota, 55108
[3] Professor and Extension Specialist, University of Minnesota Department of Animal Science, Morris, Minnesota, 56267

The Moos Room is a weekly podcast from University of Minnesota Extension. Hosts include Extension Educators Emily Krekelberg and Dr. Joe Armstrong, as well as Extension Specialist Dr. Bradley J. Heins. The Moos Room's focus is to provide our listeners with informed conversations to help beef and dairy producers be more successful. Episodes focus on a wide range of production and business topics. Although the focus is cattle production, we also dive into topics like mental health, wellness, and farm safety. For National Farm Safety and Health Week 2021, we recorded a special episode featuring a dairy farmer that had been injured in a farm accident in the early 1970s. That person happened to be my dad, Dale Krekelberg, who lost his leg in an accident with an auger. In the episode, I interviewed my dad about his accident, what he learned from it, and how it changed his life. It was a powerful episode and provided an important point of view on farm safety, and the mental toll of farm accidents. The episode premeried on September 20, 2021 and has been downloaded over 300 times. The response to the episode has been overwhleming; many listeners have contacted the podcast about how powerful and educational the episode was. Our goal with this episode was to promote farm safety and encourage farmers to think critically about the decisions they make while working on the farm and especially around dangerous equipment. The opportunity to share my family's story was powerful for me as well; my family allows people into our darkest days with the hopes it prevents them from walking the same path. This podcast episode was a testament to the power of storytelling, healing, and learning. The Moos Room is recorded via Zoom, and editing is completed by Joe Armstrong in Audacity; all episodes are hosted on Transistor.fm. Episode 84 can be found at https://moosroom.transistor.fm/episodes/episode-84-dale-krekelbergs-story-national-farm-safety-and-health-week-2021-umn-extensions-the-moos-room. Please consider 5:20-20:20 in the recording for judging.

National Finalists:

ASK THE AGENT EDUCATIONAL PODCAST
AUDIO RECORDING

Stephen Komar
Agricultural Agent
newton

Komar, S*[1], Bamka, B*[2], Chiariello, L[3]

[1] Agricultural Agent, Newton, New Jersey, 07860
[2] Agricultural Agent, Rutgers Cooperative Extension, Westampton, New Jersey, 19054
[3] Agricultural Agent, Rutgers Cooperative Extension, Newton, New Jersey, 07860

A team of Rutgers Cooperative Extension faculty developed a series of podcasts to diversify programmatic delivery options for clientele. The podcasts were developed in response to clientele interest in a wide variety of agricultural topics and expressed time constraints to attend traditional Extension programs. The team secured funding to purchase the equipment needed for the project. The first podcast entitled, "What the hemp is Going On?" focused on the emerging hemp market in New Jersey, based on common clientele inquiries. Total elapsed time of the entire podcast was 42 minutes.The podcast was recorded in the Rutgers Cooperative Extension office, Sussex County on february 4, 2022 and and was published to the web using Libsyn.com. The podcast was recorded, edited, mixed, and prepared for distribution on various podcast hosting sites by a member of the team. The team promoted the podcast through various Extension

outlets including social media, e-mail blasts and other outlets. The team developed the "Ask the Agent" podcast logo and other materials using Microsoft Publisher. A specific promotional piece was developed for each outreach effort by a member of the team. These materials were distributed to clientele, partner agencies and other venues. The podcast has reached more than 350 Extension clientele in North America and Europe. The team has several more podcasts scheduled on various agricultural and horticultural topics.The podcast is published on the Rutgers Cooperative Extension Agricultural and natural Resources webpage: https://njaes.rutgers.edu/anr/ .

EXTENSION CALLING
AUDIO RECORDING
Karen Cox
Extension Assistant Professor / County Agent
West Virginia University
Wheeling

Cox, K*[1], Lima, D[2]

[1] Extension Agent, Wheeling, West Virginia, 26003
[2] ANR Extension Educator, The Ohio State University, St. Clairsville, Ohio, 43950

The Extension Calling program is a weekly radio show that was adapted to a podcast at the end of 2018. The objectives of this project include increasing awareness of Extension as a reliable and helpful resource, improve listener confidence in scientific information, and share timely information on a variety of agricultural and gardening topics. Shows help advertise local and state programming, pest and disease alerts, and emergency response information. Recognizing the wide distribution of the program across the east coast, listeners are always directed to contact their local Extension resources. The audience of this program includes an estimated 20,000 AM and FM radio listeners (as reported by WWVA and WWOV) and approximately 50 unique podcast listeners. We receive feedback from listeners across the East coast including a broad variety of farmers, gardeners, and the general public. Many people reach out to us with questions following the shows. One farming listener said we, "provide a lot of good information on a level I can usually understand," a non-farming listener stated, "although I am not 'Mega-Ag' in any way, I can always glean from you what is pertinent to my raised bed/container gardening." The show is recorded online using ZenCaster, edited using Adobe Audition, and transcripts produced by Otter.ai. Hosting and distribution are done via the Libsyn platform and notifications are pushed out through multiple podcasting apps and social media. Funding comes from the Ohio County Commission. The edited .mp3 is emailed to two local radio stations every Friday. The show chosen for this entry was downloaded 41 times within the first 7 days. This entry was edited down from 28 minutes. Karen and Dan solicit guest speakers, conduct research, and host. Editing, transcribing, evaluation, and posting are managed by Karen. Most listeners indicate they enjoy the show while doing chores and driving, times where reading a factsheet is not convenient. This project's unique format allows a marriage between broad radio outreach and targeted podcasting thus engaging a broad range of listeners who may otherwise not know the value of Extension resources.

Link to show: https://www.dropbox.com/s/57ycrhjt4fw1du6/2022%20NACAA%20Audio%20Entry%20CoxLima.mp3?dl=0

Regional Winners

EXTENSION UPDATE – JUMPING WORMS
AUDIO RECORDING
Ken Johnson
Horticulture Educator
University of Illinois Extension, Calhoun/Cass/Greene/Morgan/Scott Unit
Jacksonville

Johnson, K*[1]

[1] Horticulture Educator, Jacksonville, Illinois, 62650

The Extension Update airs twice weekly at 11:45 am on WLDS radio in Jacksonville, Illinois. These short (two to three minute) radio spots provide updates on agricultural, horticultural, and natural resources topics—this radio spot aired on October 13, 2021. The purpose of this radio spot was to alert people that invasive jumping worms had recently been found in Morgan County. The spot discusses what jumping worms look like, how they act, the problems they can cause, and steps that can be taken to avoid spreading them. The spot was recorded by the educator using Audacity and a USB microphone and emailed to the radio station. WLDS reaches listeners in west-central Illinois and has a reach of around 10,000 listeners.

AS THE GARDEN GROWS: A RESEARCH-BASED HORTICULTURAL PODCAST

AUDIO RECORDING

Ariel Whitely-Noll
County Extension Agent, Horticulture
K-State Research and Extension
Topeka

Whitely-Noll, A*[1]

[1] County Extension Agent, Horticulture, KACAA, Topeka, Kansas, 66604

As the Garden Grows is a research-based horticultural podcast created and produced by Ariel Whitely-Noll, horticulture agent for Shawnee County Kansas. This podcast was created as an effort to reach new audiences, specifically, people between the ages of 18-59 years old. Launched on January 12, 2022, the podcast series has reached 34 unique listeners with 168 total plays. The podcast is streamed on Anchor, Spotify, Google Podcasts and Facebook Podcasts. The current audience has 64% of the listening audience falling between 18-59 years old.

Each podcast is recorded by the agent, primarily using content from a newspaper column written by the agent. The episode submitted, Creating an Integrated Pest Management Plan, was published on January 24, 2022. It is episode 2 of the 7 that have been published in 2022. The episode was recorded in the home of the agent using Anchor as the recording platform and a Yeti microphone as the equipment. The segment was recorded in a single setting without post-recording edits. Anchor provided transitional music. Below is the link to the individual episode but I have also included it as an MP3 file. Promotional graphics for the podcast that are visible on the streaming platform were also created by the agent.

https://spoti.fi/3u0NSmw

NORTH COUNTRY FRUIT AND VEGETABLE PODCAST

AUDIO RECORDING

Heather Bryant
Extension Field Specialist, Food and Agriculture
UNH Cooperative Extension
North Haverhill

Bryant, H*[1], Rowley, N*[2], Saunders, O*[3]

[1] Extension Field Specialist, Food and Agriculture, UNH Extension, North Haverhill, New Hampshire, 03774-4909
[2] Extension Field Specialist, Food and Agriculture, UNH Extension, Lancaster, New Hampshire, 03584
[3] Extension Field Specialist, Food and Agriculture, UNH Extension, Conway, New Hampshire, 03818

Fruit and vegetable farms in the North Country of New Hampshire tend to be small, grow a range of crops, and utilize a diverse set of agricultural practices. These farmers have indicated they value opportunities to learn from each other. They also value educational programming tailored to the specific challenges of farming in the northern half of the state, which experiences a 2–4-week shorter growing season. Additionally, consumer demand and market trends are very different than the southern, more populous area of the state.

For over a decade, the North Country Fruit and Vegetable Seminar and Tradeshow, an in person daylong conference helped fill the need for tailored education and created an opportunity for farmer networking. However, COVID-19 necessitated our team to come up with a remote alternative.

In 2021, UNH Extension Field Specialists Heather Bryant, Nick Rowley and Olivia Saunders hit the road to interview six leaders in New Hampshire's agricultural community to better understand what it takes to succeed at farming in the North Country. Each interview is featured in a 20–60-minute episode of the North Country Fruit & Vegetable Farmer podcast.

The podcast series was launched using our Extension website https://extension.unh.edu/north and podcasting apps such as Apple Podcast, Stitcher and Spotify. We also held a lunch-time discussion sessions via Zoom that allowed farms to discuss the podcast topic and ask their own questions of the people interviewed in the episode. The audio file submitted with this application is a "greatest hits" compilation of some of the most interesting observations made by the people we interviewed.

The podcast received 226 downloads in the first two months after its launch in the fall of 2021 and 71 people participated in the discussion sessions and 24 of the participants indicated an intent to make a change on their operation based on what they learned in the discussion sessions.

Special thanks to UNH Extension's MARCOM team for technical assistance and editing.

TWO BEES IN A PODCAST Q&A
AUDIO RECORDING
Amy Vu
State Specialized Program Extension Agent
University of Florida
Gainesville

Vu, A*[1], Ellis, J[2]

[1] State Specialized Program Extension Agent, University of Florida Institute of Food and Agricultural Sciences, Gainesville, Florida, 32611
[2] Gahan Endowed Professor of Entomology, University of Florida Institute of Food and Agricultural Sciences, Gainesville, Florida, 32611

"Two Bees in a Podcast" is a podcast recorded at the University of Florida by Professor Dr. Jamie Ellis, and UF/IFAS State Specialized Program Extension Agent, Amy Vu, in their office at the UF Honey Bee Lab. The podcast is published on Anchor.fm and distributed on Apple Podcasts, Spotify, Anchor, Podbean, Google Podcast, Facebook, Twitter, an e-mail listserv, and the honey bee lab's website: https://entnemdept.ufl.edu/honey-bee/podcast/ . Currently, there have been 93 weekly episodes released, with over 340,000 plays, and an estimated audience of 2,368 weekly. Each episode includes a "Q&A" segment, where the hosts answer questions from beekeepers from around the state of Florida, and beekeepers around the world. The objective of this weekly podcast is to invite honey bee researchers from around the world to discuss current and recently published research, expose listeners to the honey bee research, and to answer questions related to honey bee management, pests, disease, nutrition, queen issues, and pesticides. All podcast episodes are 1 hour, with a Q&A segment between 10-15 minutes. Each episode has additional notes and resources available on the honey bee lab's website.

"Episode 55: 2021 New Ruling on Oxalic Acid and Marking Queens" was released on April 22, 2021. This 13:13 recording is the Q&A segment, part of a 41:01 episode with 4,232 total numbers of plays from over 100 countries around the world. The Q&A are:

How long do you wait between catching a swarm and putting it in their permanent hive?
How long does sugar water last in the refrigerator?
What is washboarding?

EXTENSION EXPERIENCE PODCAST
AUDIO RECORDING
Josh Bushong
NW AREA AGRONOMIST
OKLAHOMA STATE
ENID

Bushong, J*[1], Milacek, T*[2]

[1] NW Area Agronomist, Enid, Oklahoma, 73701
[2] Area Ag Economist, , Enid, OK, Oklahoma, 73701

The Extension Experience Podcast is a bi-weekly produced podcast developed by Oklahoma State University area extension specialists stationed in Enid, OK. These specialists include Trent Milacek (Area Ag. Economist), Dana Zook (Area Livestock Specialist, and Josh Bushong (Area Agronomist). The first episode was published in May 2020. There have been 28 episodes published since March 15, 2021 totaling at least 2,500 listen sessions. Our main goal is to deliver an educational program to beginning and experienced farmers and ranchers in northwest Oklahoma. The episodes are a conversation starter of current and developing issues that our clientele will follow up with their local Ag. Extension educator to provide solutions to their production questions. We keep the episodes entertaining by making it more of a conversation, based on experiences rather than just discussing data from a factsheet. The three specialists share responsibilities to record, edit, publish, and distribute on social media platforms. Episodes are uploaded on WordPress at https://spotlight.okstate.edu/experience/podcast/ and published on Spotify, Apple Podcasts, and Google Podcasts. Episodes are kept brief and usually last 15 to 30 minutes in length. We deliver a variety of topics including livestock, crops, soil fertility, markets, risk management, and government programs. We also have produced episodes to interview and showcase other specialists and extension educators to broaden the impact of the podcast and to promote our colleges in agriculture.

AG TODAY RADIO PROGRAM
AUDIO RECORDING
Mitchell Mote
Extension Agent III
MURFREESBORO

Mote, M*[1]

[1] Extension Agent III, Murfreesboro, Tennessee, 37129

The Ag Today program is a long-running segment aired on Saturday mornings during the 7:00 a.m. hour by WGNS Radio in Murfreesboro, TN to an estimated

listenership of 45,000 on AM 1450, FM 101.9, and FM 100.5. ANR agents on staff in the UT/TSU Extension office in Rutherford County take turns recording the weekly 5 minute segments at the Extension office using Adobe Audition. The intended audience is row crop and livestock producers as well as homeowners. The general format of the program is to begin with an update of grain and livestock market prices in Tennessee to benefit local producers followed by comments to homeowners and residents in general addressing current seasonal topics or issues common to local lawns, gardens, and landscapes. Since the amount of information provided in the segment is limited due to available time, listeners are encouraged to contact the Extension office for more information. This submitted segment aired on June 5, 2021. Following the regular farm market report, comments were directed to area homeowners regarding Japanese beetle control options available to them.

WASHINGTON STATE UNIVERSITY, COUGS TALK STOCK PODCAST, EPISODE 006: LIVESTOCK USE FOR FIRE MITIGATION

AUDIO RECORDING
Hannah Brause
Washington State University
Goldendale

Brause, H*[1]

[1] County Director , Washington State University , Goldendale, Washington, 98620

Audio File: https://soundcloud.com/cougstalkstock/cts-006-chris-schachtschneider-fire-mitigation?utm_source=clipboard&utm_medium=text&utm_campaign=social_sharing

Aired on: June 16th 2021 Recorded in: Agents Office Posted to: Sound Cloud and available at https://extension.wsu.edu/animalag/cougs-talk-stock-podcast/

Washington State University Faculty member Hannah Brause invites Oregon State University Livestock and Range Management Field Faculty, Chris Schachtschneider, to the Cougs Talk Stock podcast to discuss utilizing livestock for fire mitigation. Chris shares one of his field study findings about using livestock grazing to effectively prevent fire spread. Hannah and Chris discuss how this applies to the wildfires that we are seeing in recent years and how livestock producers, landowners, and public lands can work together to stop the spread of fire using livestock.

State Winners

NORTH CENTRAL

Michigan	Marianne Buza Murawski
North Dakota	Angie Johnson
Ohio	Amanda Douridas
South Dakota	Olivia Amundson
Wisconsin	Jerry Clark

NORTHEAST

Pennsylvania	Brittani Kirkland

SOUTHERN

Arkansas	Shaun Rhoades
Georgia	Sydni Ingram
Kentucky	Kristin Hildabrand
Mississippi	Heather Jennings
North Carolina	Jenny Carleo
South Carolina	Zachary Snipes
Texas	John Villalba
Virginia	Theresa Pittman

WEST

New Mexico	Jessica Swapp
Utah	Jake Hadfield

Computer Generated Presentation with Script

National Winner

WILDFIRE DEFENSIBLE SPACE ON THE FARM PRESENTATION

Jacob Powell
Assistant Professor (Practice)
OSU Extension Service
Moro

Powell, J*[1]

[1] Assistant Professor (Practice), , Moro, Oregon, 97039

This presentation is part of an online course, Wildfire Preparedness for Agriculture (https://beav.es/w7b), created by Jacob Powell in March 2022 and managed by Oregon State University Professional and Continuing Education program. The audience for this presentation is crop and livestock producers, along with rural residents living in fire prone areas. Jacob Powell created this presentation providing an in depth overview of how defensible space for wildfire protection can be created on farms and ranches. Often defensible space education focuses on structures and forested environments, but

agricultural areas have unique challenges that this presentation was designed to address. This presentation has also been given to in person and virtual audiences during February 2022, reaching 43 individuals. The presentation can be accessed here: https://oregonstate.box.com/s/ryikdklubb1ier5d8a8ssr2vb5h0i675

National Finalists:

TINY BUT MIGHTY: HOW SOIL ORGANISMS INFLUENCE SOIL HEALTH

COMPUTER GENERATED PRESENTATION WITH SCRIPT
Anne Sawyer
Extension Educator, Watershed Education
University of Minnesota Extension
Farmington

Sawyer, A*[1]

[1] Assistant Extension Educator, University of Minnesota Extension, Farmington, Minnesota, 55024

This program was created and presented at a soil health meeting in Northfield, MN on July 13, 2021, and again as part of a soil health session during the University of Minnesota's Field School for Agricultural Professionals, held in St. Paul, MN on July 20-21, 2021. The target audience for the soil health meeting was local producers, and there were 27 in attendance. The Field School target audience was early-to-mid career Certified Crop Advisors, agronomists, and conservationists, many of whom have only a basic understanding of soil science. Approximately 60 people attended the soil health session and heard this talk. Soil biology and soil health is a complex topic, and one that requires a leap of faith to make the invisible (soil microbes) visible. Incorporating soil health practices into conventional agriculture often requires a fundamental shift in mindset as well as logistics, and it can feel overwhelming. Unlike fertilizer best management practices (BMPs), for example, where a yield gain is anticipated if fertilizer is applied at a certain rate for a given crop and soil nutrient status, soil health BMPs require a more holistic approach that incorporates soil physics, chemistry, and biology. This talk is unique among Extension presentations. It's not about research, charts, or graphs. Instead, the intent is to foster a fundamental understanding of "why" soil health practices work, so that farmers and their advisors can start down the path of soil health in a way that best suits their individual operation, their climate, and their soil. I created this talk in PowerPoint and the script to accompany each slide is written in the slide notes within PowerPoint.

THE BEST TREE FOR YOUR SITE: FIND YOUR MATCH

COMPUTER GENERATED PRESENTATION WITH SCRIPT
Carrie Brown
ANR Extension Educator
Ohio State University Extension
Lancaster

Brown, C*[1]

[1] ANR Extension Educator, , Lancaster, Ohio, 43130

On February 9, 2022, I collaborated with Tommy Springer, Wildlife and Education Specialist of Fairfield Soil and Water Conservation District (SWCD), to present a virtual program that we titled, "The Best Tree for Your Site: Find Your Match!" Zoom was our platform of choice to present our PowerPoint presentations. Nineteen Fairfield County residents with interest in adding new trees to their landscapes joined us on Zoom, 6:00-7:30pm. With the advent of the 2022 Fairfield SWCD Annual Tree Sale, the objective of our program was to help participants identify their own site conditions and then share information on the growing requirements of the trees offered in this year's tree sale. I covered the second half, providing an overview on all offered species and then taking a closer look at six species. I then shared guidelines for planting a bare root seedling, including a short demonstration video, and then covered ordering information. Throughout the presentation, I engaged the audience by providing poll questions that related to the slide content and provoked discussion. The program was recorded to be made available on the Fairfield SWCD website, shared on social media, and has since been viewed 45 times.

DEER SUMMER FOOD PLOT RESULT DEMONSTRATION

COMPUTER GENERATED PRESENTATION WITH SCRIPT
Matthew March
County Extension Agent- Agriculture
Texas AgriLife Extension
Livingston

March, M*[1]

[1] County Extension Agent- Agriculture, , Livingston, Texas, 77351

During the summer of 2021, the Polk County extension office conducted a result demonstration over whitetail deer summer food plots for Polk County and east Texas. This presentation reviews why summer food plots are important for deer management, results from the demonstration, and recommendations for landowners and wildlife managers. The result demonstration was coordinated by Matthew March with help of a

landowner cooperator. The presentation was developed by Matthew March using power point. The presentation has been presented in person to 20 participants during a result demonstration field tour day. A recording of the presentation has also been posted on the Polk County extension You Tube Channel and Facebook page where it has reached 179 people. The slides have also been emailed to approximately 400 recipients on the Polk County extension email list. Slides and the script can be viewed on the Polk County AgriLife Extension Website under result demonstrations. https://polk.agrilife.org/agriculture-and-natural-resources/result-demonstrations/

Regional Winners

FARM PULSE FINANCIAL MANAGEMENT MODEL PRESENTATION

COMPUTER GENERATED PRESENTATION WITH SCRIPT
Katie Wantoch
Associate Professor, Agriculture Agent
UW-Madison Division of Extension
Menomonie

Wantoch, K[1]

[1]Associate Professor, Agriculture Agent, UW-Madison Division of Extension, Menomonie, Wisconsin, 54751

Farmers are experiencing prolonged periods of significant financial stress. This stress has contributed to farmers reevaluating their financial situation and business plans. The target audience consists of beginning, women, and traditional farmers who are reflecting on their farm business and exploring financial management curriculum to evaluate and improve their financial health. Beginning and women farmers are particularly interested in this material as it will explore basic financial management concepts and provide them with an opportunity to implement newly learned concepts into their decision-making process. This presentation (slides 1-50) educates farmers about the components of the farm financial model and assists them in evaluating their finances, taking the pulse of their farm business, and setting goals for the future of their operation. The presentation includes an overview of the financial model, farm records, accounting systems, and financial statements (balance sheet, income statement, statement of cash flow, statement of owner equity). A team of University of Wisconsin (UW) Extension educators collaborated to develop the Farm Pulse: Financial Management and Analysis curriculum. This presentation and script were written by Katie Wantoch in January 2022. The presentation was designed in Google Slides, using high quality stock, royalty free or clipart images and graphics designed by UW Extension graphic designers. The presentation was utilized during a Farm Management Financial program webinar on 01/21/2022, with 80 live attendees and viewings of the recorded session. Participants who completed the post-webinar evaluation (n=44) indicated they learned about the purpose and value of financial and risk management practices (61% strongly agreed, 39% agreed). This presentation will be recorded into short videos on each topic and published as a playlist to UW Extension's YouTube website. The videos will be linked to related articles on the UW Farm Management website under the Farm Pulse program page (link). The Farm Pulse: Financial Management and Analysis videos will be utilized with future in-person teaching and an on-line course. This curriculum will assist farmers in identifying strengths and weaknesses of their business in order to assist them in making decisions that will improve their farm profitability.

OBSERVE, ENGAGE AND SHARE. STRESS MANAGEMENT RESOURCES TO BUILD FARM RESILIENCE

COMPUTER GENERATED PRESENTATION WITH SCRIPT
Emily Zobel
Associate Agent for Agriculture and Food Systems
University of Maryland Extension
Cambridge

Zobel, E*[1], Ketterman , J*[2], Chan, A[3]

[1] Associate Agent for Agriculture and Food Systems, , Cambridge, Maryland, 21613-0299
[2] Agent for Family & Consumer Sciences., University of Maryland Extension , Cumberland, Maryland, 21502
[3] Agent for Family & Consumer Sciences., University of Maryland Extension , , Maryland,

Farm communities have always dealt with the stress of an uncertain world: fluctuating prices, unforeseen weather events, and other unexpected incidents. In 2021, the 'Observe, Engage, Share' presentation was created by the author, along with colleagues, Jesse Ketterman (family and consumer sciences, UME, Allegany County,) and Alex Chan, (UME, mental health specialist). The 'Observe, Engage, Share' presentation is designed for ag service providers, and farmers. The goal of the presentation is for participants to learn what to look for that may indicate stress on the farm, how to engage in communication with someone under stress, and what resources are available to assist in alleviating that stress. This presentation can be presented as is, shortened or with additional slides and activities that allow participants to practice skills learned during the presentation. This presentation was created in Microsoft Powerpoint. Some versions of this presentation was presented 5 times in 2021, with over 400 participants. Post-program evaluation conducted via online surveys indicated a positive response to the educational workshops from different audience groups.

TRANSITION COW TUESDAYS: MONITORING TRANSITION COWS

COMPUTER GENERATED PRESENTATION WITH SCRIPT

Margaret Quaassdorff
Dairy Management Specialist
CCE NWNY Dairy, Livestock, and Field Crops Team
Batavia

Quaassdorff, M*[1], Lynch, R[2], Lutz, K[3]

[1] Dairy Management Specialist, Cornell Cooperative Extension NWNY Dairy Livestock and Field Cropst Team, Batavia, New York, 14020
[2] Dairy Herd Health and Management Specialist, Cornell PRO-DAIRY, Ithaca, New York, 14424
Bilingual Dairy Specialist, Cornell Cooperative Extension [3] NWNY Dairy Livestock and Field Crops Team, Canandaigua, New York, 14424

This PowerPoint presentation was one of a series of seven total webinars that were created for New York dairy producers and their employees who have been working with their farm's transition cow program but wanted to learn more about the "how, what and why" of transition cow management. It was also relevant to those who wanted to improve transition cow performance of their herd, or those wanting to increase the skills they bring to the farm. For various reasons, many dairy farm workers do not have the luxury of leaving the farm to attend courses and workshops, though they are required by their employers and milk cooperatives to participate in annual continuing education. This series was created to provide a virtual opportunity for dairy farm employees to increase their knowledge of transition cow management as their schedule allowed. Participants who attended the entire "Transition Cow Tuesdays" Webinar Program received a certificate of completion. The presentation, "Monitoring Transition Cows", was created by all authors and presented equally by authors Quaassdorff and Lynch on December 7, 2021, to educate dairy farm employees, including herd managers and herdspersons, about the important reasons to monitor transition cows post-calving, several options and techniques for doing so, and the technology, and equipment needed to successfully monitor transition cows for common metabolic diseases and disorders. Evaluations indicated that most participants rated the presentation as "excellent", and attendees' knowledge of the topic increased after participating in the webinar presentation. The recorded presentation is currently publicly available and can be accessed on the Cornell CALS PRO-DAIRY YouTube channel (https://www.youtube.com/watch?v=gM6-ethnGaQ&list=PLYUz8jwQQ_TvTRlcCWfMyBHhatVT1fSgg&index=2 ; posted December 13, 2021) for those who would like to use it as a training tool, view it for the first time, or as a refresher. The initial presentation attracted over 100 dairy employees and industry personnel, and since posting date, it has received 114 additional views.

KEEPING YOUR HORSE HEALTHY: THE BASICS OF EQUINE HEALTH

COMPUTER GENERATED PRESENTATION WITH SCRIPT

Brittani Kirkland
Extension Educator- Equine
Penn State Extension
Washington

Kirkland, B*[1]

[1] Equine Extension Educator, Penn State University, Washington, Pennsylvania, 15301

The recent COVID-19 pandemic increased interest in horse ownership in Pennsylvania and nationwide as individuals had more time for recreational activities. In response, the Penn State Extension Equine Team created a three-week webinar series for new horse owners on what they should know when buying a new horse. One of six thirty-minute sessions, the "Keeping Your Horse Healthy: The Basics of Equine Health" presentation offered detailed information for new horse owners on the primary health needs of horses. This presentation aimed to educate on horse health and how care and management practices can help increase well-being. The presentation contained information on assessing horses for illness, monitoring vital signs, determining body weight and body condition, and the need for routine health care, including vaccinations, parasite control, and hoof and dental care. This presentation was given on April 22, 2021, with 142 registered attendees who viewed the presentation live or were sent a link to the recording. Evaluations indicated that 61% of respondents felt the program would impact their horse buying/care decisions by a "great deal" or "a lot." Also, 62% of respondents said they would monitor vital signs, body weight, and body condition regularly as a result of the program.

MONARCHS & 4-H
COMPUTER GENERATED PRESENTATION WITH SCRIPT
Mallory Maher
4-H Extension Agent
Clemson Extension
Walhalla

Maher, M[1]

[1]4-H Extension Agent, , Walhalla, South Carolina, 29691

Monarch butterflies (Danaus plexippus) are the most easily recognized butterfly species worldwide. Although they are the most recognizable, the monarch butterfly faces serious threats, and their population has declined by 90% since the 1990s. What would a world look like without the most recognizable butterfly in the world? Because of this, monarch butterflies can serve as an ambassador for conservation for themselves and other pollinator species from around the globe. Pollinator education, primarily focused on monarch butterflies, fits perfectly into 4-H programming and can help create a new generation of environmental stewards. The purpose of the Monarchs & 4-H presentation was to teach South Carolina 4-H Agents about monarch butterflies and how to incorporate monarch and other pollinator-related activities into their county programming. The program's goals were to increase the number of pollinator programs, camps, and other pollinator-related 4-H activities in the state and teach other 4-H Agents how to incorporate monarch programming into their county programs. The program was held on Zoom and had 16 4-H Agents in attendance. The program featured monarch tagging demonstrations and provided Agents with the information needed to replicate the programming in their counties. Of the participants that completed the survey, 100% of participants agreed or strongly agreed that they felt comfortable teaching youth about monarchs and pollinators as a result of attending the program, and 100% of participants indicated that they would incorporate monarchs and pollinators into their future 4-H programs.

DRONE OPTIONS AND COSTS
COMPUTER GENERATED PRESENTATION WITH SCRIPT
Jason de Koff
Specialist
Tennessee State University
Old Hickory

de Koff, J[1]

[1]Specialist, Old Hickory, Tennessee, 37138

The Drone Options and Costs computer generated presentation is used with my drone program for farmers to discuss some of the different types of drones, sensors, and applications available. This is paired with a hands-on training that allows farmers to fly a DJI Mini 2 drone. Fixed wing and multirotor drones are discussed along with their advantages and disadvantages and examples of each. An explanation of sensors and how they work and different types of software that can be used to analyze images is also included. This presentation was used in six different counties in Tennessee (Blount, Maury, Morgan, Rhea, Shelby, Van Buren) to train 124 farmers in 2021.

State Winners

NORTH CENTRAL

Michigan	Marianne Buza Murawski
South Dakota	Adele Harty

SOUTHERN

Arkansas	Amy Simpson
Florida	James Davis
Georgia	Heather Kolich
Mississippi	Brady Self
North Carolina	Lauren Langley
Oklahoma	Shannon Mallory
Virginia	Andrea Davis

WEST

Idaho	Carmen Willmore

Personal Column

National Winner

"HOUSEHOLD WASTEWATER SYSTEMS" AND "DIVERSIFYING LANDSCAPE PLANTINGS IS A GOOD INVESTMENT"

Heather Kolich
County Extension Coordinator
University of Georgia
Cumming

The purpose of my newspaper columns, published in the weekend issues of Forsyth County News (circulation 18,000), is to increase awareness, provide information, and recommend management practices to county residents about commonly encountered aspects of daily life. With "Household Watewater Systems," published July 18, 2021, my objective was to help new county residents who had never lived in a home with a septic system understand how these systems work and how to maintain them to prevent wastewater issues in the home and yard. I wrote "Diversifying landscape plantings is a good investment" in furtherance of my educational focus areas of sustainable landscapes and restoring biodiversity to developed areas. In this article, I use financial investing language to convey to homeowners the idea that landscapes are long-term investments with financial – as well as natural – rewards. This article also helped promote the Forsyth County Extension Fall Plant Sale, through which I make available some of the harder-to-find native and fruit plants that I recommend for increasing landscape biodiversity and sustainability. The 2021 fall plant sale enjoyed a more than 30 percent increase in client numbers than the previous sale, resulting in 338 fruit plants and native fruits, shrubs, trees, and grasses planted in landscapes around the county. For both articles, I researched materials, wrote the content, and provided the images, including one of the photographs in "Diversifying landscape plantings," and wrote text for image captions.

National Finalists:

THE GARDENER STATE
PERSONAL COLUMN
William Errickson
Agriculture and Natural Resources Agent
Rutgers Cooperative Extension
Freehold

The Gardener State is a monthly column that is published by The Gannett News Network on their website MyCentralJersey.com, as well as other affiliated websites, such as Yahoo News. Rutgers Cooperative Extension has been contributing to this column for over fifteen years and it is currently being written by William Errickson, who is the Agriculture and Natural Resources Agent for Rutgers Cooperative Extension of Monmouth County. Errickson is responsible for 100% of the content development and writing for The Gardener State. The purpose of The Gardener State is to communicate seasonally relevant horticultural stories, factual information, and educational opportunities to the residents of Central New Jersey. The column has an audience of approximately 8,000 readers per month and is published twelve times per year. The audience for the column is primarily the general public, with a focus on individuals and families who are interested in exploring garden-related activities both in their own backyards and throughout the state of NJ. Recent articles have included "9/11 Memorial Gardens Help us to Heal and Remember," "A Jersey Guide to Real Christmas Trees," "How to Attract More Birds to Your Garden this Fall," and "Winter Farmers Markets in Central New Jersey."

YOUR FRIENDLY NEIGHBORHOOD GARDENING COLUMN
PERSONAL COLUMN
Cynthia Nazario-Leary
Environmental Horticulture Agent
UF/IFAS Extension Alachua County
Newberry

The UF/IFAS Horticulture and Agriculture & Natural Resources Extension Agents for both Marion and Alachua counties, share a rotating gardening column in the Gainesville Sun and Ocala Star-Banner newspapers. Daily circulation for both newspapers combined is estimated at 100,000 and average online view is 500,000. The gardening column provides agents an opportunity to provide science- and place-based horticultural, landscaping, and other plant-related information to residents in an informal and familiar format. The column is limited to around 500 words, which means articles need to be brief and concise while also piquing interest and providing useful information. I typically author two articles a month, covering both landscape and edible gardening topics. Articles address general gardening tips, landscape advice, such as Florida-Friendy LandscapingTM practices; and timely or seasonal concerns for plants, such as the onset of freezing temperatures or cool season gardening. In November 2021, I published an article on cold protection for potted plants since we were experiencing an early cold snap heading into the winter season. In January of 2022, I wrote another article about the beautiful saucer magnolia which was blooming earlier than normal this year. Both articles strove to provide timely information with a casual and conversational tone that provided easy to understand advice and kept the reader engaged. By including personal observations and stories my aim was to share knowledge

as if it was coming from a friend or neighbor. Feedback from readers has been positive, and I generally receive several phone calls or emails requesting gardening or landscape advice based on the articles written that month.

BEEF CATTLE MYTHBUSTERS
PERSONAL COLUMN
Donald Llewellyn
Livestock Extension Specialist
Washington State University
Pullman

In the late summer of 2021, I embarked on an endeavor to provide a monthly personal column to the Washington Cattlemen's Association (WCA) to premier in their official publication, the Ketch Pen, which is in magazine format. Washington State University (WSU) Extension has a long history of working with the WCA and providing educational programming to their membership and allied industries and providing science-based solutions to contemporary production issues facing cattle producers in the Pacific Northwest. The column, entitled Beef Cattle Mythbusters, addresses common misconceptions about beef cattle, forages, nutrition, and feeding technologies and systems just to name a few and is mailed to 1,700 WCA members each month and resides on a WSU Department of Animal Sciences website. To expand the audience, Beef Cattle Mythbusters is now available monthly to all county WSU Extension and Tribal offices (40), WSU CAHNRS Twitter, WSU Veterinary Extension newsletters, WSU Irrigated Agriculture, and social media posts and list serves across WSU that carry beef cattle-relevant educational materials. In addition to social media posts in the National Association of County Agricultural Agents (NACAA), and across the WSU system, the column is available to an additional 6,000+ producers through e-mail list serves and web pages. It is very focused and geared to cattle producers of all levels of experience. Recent topics have included the following and are part in this application: Is it true that very low-quality forages are only "fillers" in beef cow diets? (Published in November 2021 issue of the WCA Ketch Pen); and Myth: Cheatgrass (Downy Brome) provides equal nutrition throughout the grazing season compared to native and improved bunchgrasses (Published in the February 2022 issue of the WCA Ketch Pen). The monthly Beef Cattle Mythbusters column provides monthly visibility for WSU Extension and makes available an easily accessible source of information to this important clientele and related stakeholders.

Regional Winners

WEEKLY VEGETABLE UPDATES, UNIVERSITY OF MINNESOTA FRUIT AND VEGETABLE NEWS
PERSONAL COLUMN
Natalie Hoidal
Extension Educator
University of Minnesota Extension
Farmington

In 2020 I started writing weekly vegetable updates throughout the growing season via the University of Minnesota's Fruit and Vegetable News Blog. I base these articles on field visits and technical assistance calls, and they include a wide range of content including a weekly forecast, information about insects and diseases as they emerge, and guidelines about nutrient management and irrigation. I try to get ahead of issues to give growers proactive advice about what to focus on in the week to come. While the weekly updates are technical, I maintain a conversational tone to make the content approachable, often sharing fun anecdotes from field visits. The average update had 140 readers in 2020 and 163 readers in 2021. Readers were primarily farmers who grow food for hundreds, sometimes thousands of people, collectively managing thousands of acres. In a 2020 newsletter survey, 97% of readers said that the articles helped them during the growing season. One farmer said the weekly updates make them feel less alone. Throughout the growing season, farmers periodically reach out with comments like "I had a nice conversation with [other farmer] today… and we both agree, Natalie, that your work going around to visit farms and then sharing what everyone has been doing/seeing has been greatly beneficial. Especially when we are all stuck on our own farms wondering if we are the only ones experiencing disease and pest pressure." I write twenty updates each year, spanning from early May to late September. Updates from June and September 2021 are attached as examples of the column. Please note that these are online updates, and the scanned PDF versions of the published articles lost some of the original formatting.

VALLEY GROWS - Q&A COLUMN
PERSONAL COLUMN
Eric Barrett
Associate Professor
Ohio State University Extension
Canfield

OSU partners with the Youngstown Vindicator and the Warren Tribune Chronicle to publish Valley Grows, a full page of gardening and horticulture information every Monday in both newspapers. It is managed by OSU Extension, Mahoning County. The focus is to reach

local gardeners, horticulturalists, and the general public in the Mahoning Valley. The page features articles, a weekly Q&A, and a calendar of local events. The Q&A Column educates the public about best practices for home gardens. It includes questions asked by local gardeners. The circulation of the two newspapers is just over 35,000 daily. Even more residents of the Mahoning Valley view the page on the internet for free at vindy.com and tribtoday.com. The page is celebrating nearly 10 years, with the first dedicated page printed in 2013. The page is a go-to informational source for local gardening information and local food information. The goals include: 1) To provide accurate information that is unbiased, and research based to counter 'common myths' about certain topics; 2) To answer questions relating to timely topics; and 3) To provide examples that relate to the everyday gardener.

SOW AND GROW WITH SARA
PERSONAL COLUMN
Sara Bauder
SDSU Extension Agronomy Field Specialist
SDSU Extension
Tyndall

In June 2020, I began writing a bi-weekly Extension column entitled "Sow and Grow with Sara." This printed column extends the reach of SDSU Extension Agronomy's educational content, and allows me to be more personally connected with growers across South Dakota. In addition, the column fast-tracks updated agronomy content directly to agriculture producers whose primary source of news comes from print publications. The publication schedule and length is determined based off the preferences of South Dakota publication companies that showed interest in printing my content (800-1200 words published every other Friday by 3pm, year-round). In an effort to expand content reach into areas without local SDSU Extension agronomists, the column is disseminated state-wide and written to reflect a wide range of growing conditions and commodities. Throughout the growing season, articles include production-management related content for multiple commodities (row crops, small grains, pastures/forages) as well as up-to-date pest alerts for growers; upcoming agronomy Extension events and reminders are often listed as well. Over the winter months, the focus shifts towards planning for the next growing season, safety topics, and big-picture paradigm shifts in agriculture production practices. I write the column, attach a photo, and personally email it to the newsprint publication editor list serve; on occasion, a guest author assists me with writing or provides photographs to accompany the column. "Sow and Grow with Sara" is regularly printed in over 30 newspapers and reaches over 90,000 households in more than 30 states. The two attached entries were entitled "Feeding Soybeans" and "'Snirt'… and how to minimize it"; they were released for publication August 27, 2021 and February 11, 2022, respectively. I have included scanned copies of the printed publications from the Tyndall Tribune & Register's September 1, 2021 and February 16, 2022 editions.

EXTENSION BITS AND PIECES AND ROOF GARDEN HOME AND FAMILY NEWS COLUMNS
PERSONAL COLUMN
Melanie Barkley
EXTENSION EDUCATOR
PENN STATE UNIVERSITY
BEDFORD

This personal column appears weekly in the weekend edition of the Bedford Gazette, called the Shoppers Guide, and in the home and family section of the Somerset Daily American. The column is shared with other educators in the Bedford and Somerset County offices. I supply monthly articles for the column. The newspapers that the column appears in are distributed countywide with a circulation of 19,000 for the Bedford Gazette and 12,500 for the Daily American. The objective of these agricultural related articles is to help the general public gain a better understanding of agriculture principles and help the public apply these concepts to their home environment. Choosing Meat for Grilling published April 10, 2021, addresses tips for selecting high quality meat cuts for grilling as well as how to properly grill the meats. Save Money with Larger Meat Cuts, published November 7, 2021, describes how to purchase larger meat cuts at lower prices and turn them into smaller cuts that can be used for several meals. The column is prepared using Microsoft Word and is sent to the newspaper editor electronically via email.

GREEN THUMB GARDENING
PERSONAL COLUMN
Paul Thompson
Horticulture Agent
Clemson University
YORK

This column appears in the South Carolina Farmer magazine which is published by the South Carolina Farm Bureau Federation. It is distributed to members and by subscription and has a readership of 110,000. The magazine covers a wide variety of agricultural topics to include home gardening. I have been writing this column since 2011. In addtion to the colmns, this magazine publishes most of the images I send to enhance what I write. The column on mulches appeared in the fall issue published in August 2021, and the layering column appeared in the winter issue published in November 2021.

State Winners

NORTH CENTRAL

Illinois	Ken Johnson
Kansas	Wendie Powell
Wisconsin	Tina Kohlman

NORTHEAST

Maryland	Sarah Potts

SOUTHERN

Arkansas	Sherri Sanders
Kentucky	Annette Heisdorffer
Mississippi	Pat Drackett
North Carolina	Debbie Dillion
Oklahoma	Carla Smith
Tennessee	Rachel Painter
Texas	Elizabeth McMahon

Feature Story

National Winner

GROWING ARTICHOKES IN FLORIDA

Evelyn Fletcher
Commercial Agriculture Agent
UF/IFAS St. Johns County Extension
St. Augustine

Fletcher, P*[1]

[1] Commercial Agriculture Agent, University of Florida, St. Augustine, Florida, 32092

St. Johns County represents nearly 40,000 acres of commercial farmland, with the majority of production historically consisting of potatoes and cabbage since the early 1900s. Over the past two decades, other Brassicas, snap beans, sod and vegetables of Asian origins have expanded in the area to become highly profitable alternative crops. Due to regulations on transportation and fertilization practices, along with lower contract prices and higher wages for labor, profit margins have been steadily decreasing, along with land zoned as agriculture. With financial support from St. Johns County BOCC, more alternative crops are being trialed at UF/IFAS Hastings Agricultural Extension Center, ranging from artichokes to blackberries to pumpkins. For four years, Cynara scolymus variety and nutrient management trials have been conducted to assess the marketability of artichokes in Florida, considering that 99% of artichokes are grown in California. With promising yields and positive feedback from local chefs, this crop has the opportunity to be sold commercially on the East Coast, and locally in our family-owned restaurants. As an attractive thistle, florists are also eager to use these cut flowers in local markets. With a circulation of 20,000, Edible Magazine is an ideal media outlet to spread the word about this new possibility for North Florida palettes.

https://ediblenortheastflorida.ediblecommunities.com/food-thought/growing-artichokes-florida

National Finalists:

NET WRAP ACCUMULATES IN COWS FED GROUND HAY

FEATURE STORY
Adele Harty
Cow-Calf Field Specialist
SDSU Extension
Rapid City

Harty, A[1]

[1]Cow-Calf Field Specialist, Rapid City, South Dakota, 57703

The purpose of this feature article was to educate producers on the impact that leaving net wrap on hay for grinding can have on cows. This article shares research results from a project conducted at the South Dakota State University Cottonwood Field Station from November 2019 to April 2020 that demonstrates how rapidly net wrap accumulates in the rumen of cows during a normal winter feeding period. I was the principle investigator for the research project and wrote this feature article for Hay and Forage Grower. The project was conducted with ruminally cannulated mature cows. All net wrap was removed from the rumen following the project, but the implications of leaving net wrap on are significant for beef cattle producers. There is a need for more research to understand the long term impact of net wrap in the rumen, but multiple veterinarians and producers have experience with what they are calling “net wrap disease” or “plastic disease”, that typically results in the premature death of cattle. This feature article was published in Hay and Forage Grower in the August/September 2021 edition. Hay and Forage Grower has a subscription base of 51,000 subscribers. The article also appears in the online issue at https://issuu.com/hayandforagegrower/docs/21-08-09-hfg-magazine_7effea7762d933 on pages 14-15 and currently has 538 views.

WHAT'S UP WITH THE BROWN TIPS ON THE TREES?
FEATURE STORY
Melanie Barkley
Extension Educator
Penn State University
Bedford

Barkley, M[1]

[1]Extension Educator, Bedford, Pennsylvania, 15522

The "What's Up with the Brown Tips on the Trees?" feature story was developed for the Shoppers Guide, which is a free weekend newspaper delivered to residents in Bedford County. This feature story was directed toward the general public during a periodical cicada invasion in the county. The Bedford County office received numerous calls during the summer inquiring about the browning tips on trees, which indicated the need for educational information. The purpose of this feature story is to help county residents understand how the periodical cicadas affected the trees through their egg laying process. The story discusses the life cycle of the cicada, the noise that comes from males as they seek out females, where the females lay their eggs and what happens to tree limbs where eggs have been laid. The feature story was prepared using Microsoft Word. Entrant reviewed research information, wrote the feature story, took photos to accompany the story, and submitted electronically to the features editor for the Shoppers Guide This guide is published weekly by the Bedford Gazette newspaper as a supplement to their daily newspaper and has a distribution of approximately 19,000 households. The story was published on July 17, 2021.

MAINTAINING A CLEAN WATER TROUGH FOR CATTLE
FEATURE STORY
Shanna Reynolds
County Extension Agent
University of Georgia
Lexington

Reynolds, S[1], Wunderly, M[2], Fitzpatrick, R[3], Stewart, R[4], Glenn, T[5], Ray, L[6], Knight, C[7], Cheely, T[8], Pittman, G[9], Patrick, S[10], Stephens, M[11]

[1]County Extension Agent, University of Georgia, Lexington, Georgia, 30648-0130
[2]Area Water Agent, University of Georgia, Wakinsville, Georgia, 30677
[3]County Extension Coordinator, University of Georgia
[4]County Extension Coordinator, University of Georgia
[5]Environmental Health Science Professor, Director, Institute of Bioinformatics, University of Georgia
[6]County Extension Coordinator, University of Georgia
[7]County Extension Coordinator, University of Georgia
[8]County Extension Coordinator, University of Georgia
[9]County Extension Coordinator, University of Georgia
[10]County Extension Coordinator, University of Georgia
[11]County Extension Coordinator, University of Georgia
[11]County Extension Coordinator, University of Georgia

Cattle production relies on acceptable water quality for health, reproduction, and adequate consumption. Keeping a clean trough and tank is essential for maintaining water palatability and intake, reducing disease and pathogen risk, and contributing to overall performance of cattle. By conducting a water trough survey for fecal coliform bacteria, we were able to identify contaminated drinking water situations on cattle farms and advise clean maintenance procedures to improve drinking water quality. Although it can be difficult to obtain and maintain bacteria-free drinking water, we recommend considering protocols related to water source, nuisance wildlife management, trough location, and cleaning routines. The article was published in Georgia Cattleman magazine (January 2022) and 5031 copies were printed for distribution by the editor. Georgia cattle producers can use the resource to improve animal health and growth on their farm.

Regional Winners

CONVERTING CORN STOVER INTO RENEWABLE NATURAL GAS
FEATURE STORY
Kapil Arora
Field Agricultural Engineer
Iowa State University Extension
Ames

Arora, K*[1]

[1] Field Agricultural Engineer, , Winterset, Iowa, 50273

Corn stover has typically been used in Iowa for livestock bedding and/or feed. Novel use of corn stover for producing renewable natural gas using anaerobic digestion is an emerging market in Iowa. This story was developed to convey how this methodology takes carbon on earth's surface and recycles it into a fuel which can be used to heat homes or cook food. This methodology reduces a community's dependence on fossil fuels which are buried deep into earth's crust, and aids in renewable energy production.

The anaerobic digestion process used to convert stover to natural gas and the steps involved are known to very few stakeholders. The story was written to educate

stakeholders about the supply chain processes from harvesting and baling corn stover to bringing baled stover into the natural gas production plant; chopping bales with hammer mills to feed anaerobic digesters for producing biogas; feeding the scrubbed, cleaned, and pressurized biogas into a pipeline which supplies gas to homes; and using leftover digester solids (humus) as a soil amendment. Fast facts were summarized for readers to remember the key points of the work undertaken by Iowa State University Extension and Outreach (ISUEO).

Authors interviewed natural gas production company staff to get details of the processes involved. Authors visited the different sites to measure stover production rates and to take photographs of the process.

Story was written (December 14, 2021) and published (December 20, 2021) as a News Release through ISUEO. The story was published by three leading national agricultural magazines - World Grain (December 22, 2021), Wallaces Farmer (December 23, 2021), and Successful Farming (December 24, 2021), in edited versions, both in-print and online. The total printed copies were over 100,000 for these three publications. The story was also published by News Break, Daily Advent, High Yield Conservation, and other online news outlets. The story was also reported on January 7, 2022 by KCCI-TV which is a television news channel broadcasting from Des Moines, Iowa. It is estimated that the story had a readership and/or viewership of over 500,000.

NITRATE IN NEBRASKA'S WATER SUPPLY - PART 1: THE BACK STORY OF HOW WE GOT WHERE WE ARE TODAY

FEATURE STORY

Katie Pekarek
Extension Educator-Water Quality
University of Nebraska-Lincoln Extension
Lincoln

Pekarek, K*[1], Burch, M[2]

[1] Extension Educator-Water Quality, , Lincoln, Nebraska, 68583-0996
[2] Senior Writer, Nebraska Cattlemen, Lincoln, Nebraska, 68503

Nitrogen is an essential element for plant growth and therefore, Nebraska's agricultural industry, state economy and rural prosperity. However, when nitrogen leaves the crop root zone it becomes a liability for groundwater and surface water. More than 85% of Nebraskan's use groundwater for drinking water and livestock producers use groundwater to water livestock in both confined and pasture situations. For more than 40 years, nitrate concentrations in Nebraska's groundwater have been increasing, with several areas of the state now above the safe drinking water standard of 10 ppm. This publication is part one of three articles developed with the objective to inform readers of the science-based information about the impact of high nitrate concentrations on human health, livestock, rural prosperity, and economics. The primary audience for this publication is livestock producers in Nebraska. This article was published in January 2022 ahead of the spring calving season and congruent with the expected introduction of nitrate related bills in Nebraska state legislative session. The article was shared with Nebraska Cattlemen's 15,150+ print subscribers as well as shared online on page 58 at http://nebraskacattleman.org/NCJan2022. Additionally, the article was sent via email to Nebraska stakeholders making local and state level decisions about land and water management actions. Article content development was equally shared with co-author Micky Burch, a Nebraska Cattlemen Senior Writer. Nebraska Cattlemen formatted the final version.

GROWING WITH EDUCATION, WARMING SOIL WAKES UP EARLY SPRING FLOWERS

FEATURE STORY

Ginny Rosenkranz
Extension Educator, Commercial Horticulture
University of Maryland Extension
SALISBURY

Rosenkranz, G[1]

[1]Extension Educator, Commercial Horticulture, University of Maryland Extension, Salisbury, Maryland, 21802

Free State Nursery, Landscape and Greenhouse New Magazine is created and published by the Maryland, Nursery, Landscape and Greenhouse Association and is sent to over 650 members of the Green Industry. Another 300 are picked up during the winter Maryland Nursery and Landscape Association Trade Show. The magazine comes out in May, August, and December providing information and news about Maryland's and the nations Green Industry. Each issue has articles written by University of Maryland Extension Educators and Specialists and members of the Green Industry. The summer 2021 issue features an article that provides information and photos on adding long lasting perennial spring blooming tulip and daffodil bulbs to brighten up the earliest landscapes before most herbaceous perennials begin to bloom. The care and selection of the most colorful bulbs is always the first thing a gardener thinks about, but a landscape contractor also has to consider the soil type, drainage, sun and shade and protection from predators to promote the long lasting perennial bulbs. The Mid-Atlantic area and most

parts of Maryland do not provide the cool summers that spring blooming tulips need, so many tulips are planted each year as early colorful annuals. Daffodils are not as temperamental about the high soil or air temperatures and most continue to thrive in Maryland landscapes. The article lists the hardiest and most colorful of the perennial daffodils and tulips that, with careful planning and planting, add color to the spring landscape for decades. Names and descriptions of each of the daffodils and tulips are showcased, and suggestions for where to plant them is provided so that the smallest or most fragrant flowers can be easily seen and enjoyed. Suggestions on planting techniques that provide faster instalment in the late fall are shared as well. Both the daffodil and tulip varieties are listed in order of bloom to provide landscape contractors an opportunity to plan a color palette for the landscape that flows or pops from early mid-spring, into mid-spring and finishing off with late spring.

DAIRY FARMERS AS THE LEADERS OF CLIMATE NEUTRALITY

FEATURE STORY

Margaret Quaassdorff
Dairy Management Specialist
CCE NWNY Dairy, Livestock, and Field Crops Team
Batavia

Quaassdorff, M*[1]

[1] Dairy Management Specialist, Cornell Cooperative Extension NWNY Dairy Livestock and Field Cropst Team, Batavia, New York, 14020

Net zero and climate solutions are trending topics in the dairy industry. With new guidelines and regulations poised to change operation management, many New York dairy producers feel they need stronger understanding of the Net Zero Initiative and its 2050 goals, as well as local resources to help them confidently tell their story of long-standing sustainability, and the tools to navigate social, economic, and environmental challenges and opportunities that arise concurrently. This article was published April 1, 2021, in Ag Focus, the monthly newsletter of Cornell Cooperative Extension's Northwest New York Dairy Livestock and Field Crops (NWNYDLFC) Team. The aim was to validate the current and future efforts of the dairy industry in reducing negative environmental impacts, encourage dairy producers to recognize positive contributions they are already making to the cause, as well as provide ideas and resources to take another step in the direction of climate sustainability. The article offers multiple links for producers to seek further information on the topic of Net Zero, research and facts about the dairy industry's contribution to climate neutrality, and extension and funding sources to evaluate and implement farm practices and technology to reduce greenhouse gases. This publication was directed towards dairy producers and industry, as well the general public who want to better understand the dairy industry's role in climate neutrality. Counties in Northwestern NY are dairy industry-heavy and contain or border large populations in the cities of Buffalo and Rochester, and in the Finger Lakes Region. This article was important not only to those within the dairy industry, but to those members of the broader population involved in actionable climate solutions. This article was emailed directly to 250+ farmers, allied dairy industry members, and extension educators/directors. An additional 250 readers received a printed copy by mail. Content was written by author, and Brandie Waite (NWNYDLFC Team administrative assistant) formatted the final version (pages 13-14). Discussion and feedback from this feature story prompted a 2-day virtual conference titled, "Net Zero for NY Dairy" in February of 2022, which was hosted by Cornell Cooperative Extension and PRO-DAIRY and educated over 450 participants.

BELL COUNTY 4-H MEMBER WINS WESTERN NATIONAL ROUNDUP PUBLIC SPEAKING CONTEST

FEATURE STORY

Whitney Ingram
CEA-NR
Texas A&M AgriLife Extension Service
Belton

Ingram, W[1]

[1]CEA-NR, Belton, Texas, 76513

Bell County 4-H member Alex Harris of Salado represented Texas 4-H in the Western National Roundup Prepared Public Speaking Contest in Denver, Colorado, and she was named the National Champion in Prepared Public Speaking. Following her return home, a feature story was prepared to recognize her great victory. The article was prepared for local news outlets within the county and in her hometown, and it explained the level of competition, her speech topic, educational background, extracurricular involvement, and personal achievements. The Temple Daily Telegram featured the story on January 16, 2022, and the Salado Village Voice featured the story on January 20, 2022. The Temple Daily Telegram is a seven-day, morning newspaper which is a leading source of news and information for Central Texas. According to the website, the Temple Daily Telegram has been in existence since 1907. The Salado Village Voice is a media company with a weekly newspaper who has served Salado and surrounding communities since 1979. Two photos of Alex with her awards were also submitted with the article.

AVOCADO INVASIVE INSECT PESTS: CURRENT, POTENTIAL AND RECENT THREATS TO SOUTHERN CALIFORNIA'S AVOCADO INDUSTRY

FEATURE STORY

Sonia Rios
Area Subtropical Horticulture Advisor
University of California Coop. Ext.
Moreno Valley

Rios, S*[1], Hoddle, M[2], Eskalen, A[3]

[1] Area Subtropical Horticulture Advisor, , Moreno Valley, California, 92557-8718
[2] Biological Control Specialist, UC Riverside, Riverside, California, 92521
[3] Plant Pathologist Specialist, UC Davis, Davis, California, 95616

California is the largest producer of avocados grown in the U.S. The value of U.S. avocado production measured at approximately $392 million in 2017. There are more than 3,000 avocado growers in the state farming on approximately 50,000 acres of land, with Ventura County leading the state in most acres planted and harvested in recent years. However, due to the increase of international trade, illegal importation and the smuggling of foliage, branches with leaves, whole plants and budwood, invasive insect and mite pests have begun to threaten the economic viability of avocado production in California. Invasive pests such as Polyphagous and Kuroshio Shot Hole Borers, Redbay Ambrosia Beetle and Laurel Wilt Complex, and avocado lacebug can become a threat to avocado growers. This publication aimed to create awareness to avocado stakeholders on what invasive insects have been a threat, what currently is a threat and what can potentially be threat to the industry.

The publication was directed toward California avocado growers and stakeholders. This article was very timely and critical to all avocado growers throughout the state, as the avocado lacebug had just repaired in orchards in San Diego a few months prior to the publication after being absent for than 10 years in Southern California. The publication was published in the May/June 2021 issue of Progressive Crop Consultant Magazine. This article was shared with California Agriculture's 11,000+ print subscribers as well as shared online on the Progressive Crop Consultant website. Progressive Crop Consultant magazine was designed to help today's crop consultant become more aware and informed of information that will help move California specialty crops forward. Progressive Crop Consultant is a six time a year publication. Due to the popularity of the article, I was asked to give a presentation to the Western region Integrated Pest Management (IPM) community via Zoom during their IPM Hour webinar series. I was also asked to speak about the articles contents at the University of California (UC) Entomology workgroup meeting, which consisted of UC entomologist advisors, specialist, and other state government agencies and universities. Progressive Crop Consultant Magazine formatted the final version.

State Winners

NORTH CENTRAL

Kansas	Sandra Wick
Minnesota	Marissa Schuh
Ohio	Amy Stone
Wisconsin	Tina Kohlman

SOUTHERN

Arkansas	Sherri Sanders
Mississippi	Heather Jennings
North Carolina	Kathryn Holmes
Oklahoma	Shannon Mallory
South Carolina	Alana West
Tennessee	Shannon DeWitt

Newsletter

National Winner

THE COLD HARDY CITRUS CONNECTION, CONNECTING NORTH FLORIDA AND SOUTH GEORGIA CITRUS GROWERS

Danielle Sprague
Agriculture and Natural Resource Agent
UF/IFAS Extension Jefferson County
Monticello

Sprague, D[1], Price, J[2], Olson, C[3], Strange, L[4], Dawson, J[5]

[1]Agriculture and Natural Resource Agent, UF/IFAS Extension Jefferson County, Monticello, Florida, 32344
[2]Agriculture and Natural Resources Agent, UGA Extension, Valdosta, Georgia, 31601
[3]Agent Emeritus, UF/IFAS Extension Taylor County, Perry, Florida, 32347
[4]Agriculture and Natural Resources Agent, UF/IFAS Extension Taylor County, Perry, Florida, 32347
[5]Agriculture and Natural Resources Agent, Fort Valley State University Extension, Valdosta, Georgia, 31601

The Cold Hardy Citrus Connection, a newsletter for citrus growers, is a collaborative effort by University of Florida/IFAS, University of Georgia and Fort Valley State University Extension Agents to provide producers in North Florida and South Georgia with a quarterly educational resource. The newsletter addresses regional

and timely production issues, pest and disease updates, and information on upcoming events. The newsletter also features a section with updates from the Cold Hardy Citrus Association. Articles are submitted every quarter to Danielle Sprague who designs and edits the layout of every edition of the newsletter using Canva, an internet-based graphic design program. Each edition is proofread by contributing Agents and Specialists before publication. The two issues submitted include the October 2021 and February 2022 editions. The newsletter is distributed in PDF form via email to a central list with 266 contacts and is further distributed by the contributing Agents and Specialists. Newsletters are also posted on the UF/IFAS Citrus Agent Newsletter website in PDF format. This multi-state newsletter has allowed North Florida and South Georgia Extension Agents to consistently deliver timely, science-based information to citrus clientele.

Issues of the Cold Hardy Citrus Connection can be accessed at: https://citrusagents.ifas.ufl.edu/newsletters/north-florida-archives/

National Finalists:

USE OF A DAIRY NEWSLETTER TO DISSEMINATE EDUCATIONAL CONTENT

NEWSLETTER

Sarah Potts
Dairy Specialist
University of Maryland
Keedysville

Potts, S*[1]

[1] Extension Specialist, Dairy & Beef, University of Maryland, Keedysville, Maryland, 21756

Newsletters provide a means for which extension educators can disseminate educational content and news about educational or industry events among the agricultural community. The 2019 Maryland Dairy Needs Assessment conducted by University of Maryland Extension Specialists indicated that Maryland's dairy producers were interested in receiving educational materials in the form of newsletters. The Maryland Milk Moos is a quarterly newsletter that was first released in May, 2020. The target audience is dairy producers in Maryland, although there are several subscribers from other states and countries. Each newsletter contains 3 or more educational articles that cover topics related to animal care and management, forage and pasture management, and farm and business management. Relevant future events are also included to inform readers of upcoming opportunities organized by extension or other industry groups. The newsletter is made available on the University of Maryland Extension webpage in PDF or HTML format and is distributed through email and social media channels. In 2021, four issues of the Maryland Milk Moos were published (March, June, September, December) which collectively contained 16 educational articles and reached 1,329 readers via email, social media, and website channels.

GRANVILLE AND PERSON COUNTY FIELD CROPS NEWSLETTER

NEWSLETTER

Mikayla Graham
Extension Agent, Agriculture-Field Crops
NC Cooperative Extension, Granville and Person Center
Oxford

Graham, M[1]

[1]Extension Agent, Agriculture-Field Crops, , Oxford, North Carolina, 27565

The Granville and Person County Field Crop Newsletter was designed to inform field crop producers of recent research findings, upcoming management considerations, and event updates from NC Cooperative Extension. Topics covered include pest management (disease, weeds, and insects), nutrient management, agronomic practices, economic principles, annual training for GAP (Good Agriculture Practices) and pesticide applicators, and more for tobacco, soybeans, wheat, corn, and hemp. This newsletter was developed in response to growers communicating that they did not know what services were offered by extension and that they have a need for updated production information from NC State Extension personnel. The newsletter is released monthly, and is distributed my mail, email, and digital marketing. Each month, 289 hard copies are sent out, 78 digital copies are emailed, and it is posted on Facebook (https://www.facebook.com/groups/persongranvilleextension/) and the Granville and Person County CES Site (https://granville.ces.ncsu.edu/newsletters-2/ and https://person.ces.ncsu.edu/field-crops-program-2/field-crop-newsletters/).

SAN JUAN COUNTY AG NOTES NEWSLETTER
NEWSLETTER
Bonnie Hopkins Byers
County Extension Agent/Agriculture
New Mexico State University
Aztec

Hopkins Byers, B*[1], Bleckinger, A[2], Lombard, K[3]

[1] County Extension Agent/Agriculture, , Aztec, New Mexico, 87410
[2] Assistant District Manager, San Juan Soil and Water Conservation District, Aztec, New Mexico, 87410
[3] Farmington Ag Science Center Supernatant , New Mexico State University, Farmington, New Mexico, 87401

The San Juan County Ag Notes Newsletter is a collaborative effort between the San Juan County Cooperative Extension Service, the San Juan Soil and Water Conservation District and the NMSU Farmington Agricultural Science Center. The newsletter published is published quarterly, and distributed both by physical mail and email, as well as on the agencies respective websites. The goal of the collaborative newsletter is to create a combined list of producers and community members that would benefit from an efficient and timely source of agricultural agency information. The newsletter also serves as a feedback loop for advisory committee members and residents that are interested in research, Extension updates and outreach activities. The newsletter has served as an invaluable resource to decimate updated Extension publications, research updates, emergency notifications, water quality updates and economic forecasts. Each agency has a section of the newsletter dedicated to their efforts, program activities and updates. The newsletter concludes with a collection summary of agency events and activities. The joint effort was distributed by the Extension Office through direct mail to 285 community members and 378 email recipients in February 20201, June 2021, September 2021 and March 2022. The quarterly newsletter is also distributed on social media, with a reach of over 2,000 on Facebook annually.

Regional Winners

AG NEWSLETTER
NEWSLETTER
Breana Kiser
Dickey County Extension Agent
North Dakota State University
Ellendale

Kiser, B*[1]

[1] Agriculture and Natural Resource Extension Agent, Dickey County , NDSU Extension, Ellendale, North Dakota, 58436

NDSU Extension-Dickey County creates and emails/mails out a bi-monthly ag newsletter. The newsletter is of agriculture articles related to what the season is, the newest information or research, and education on crop production, sheep production, cattle production, natural resource practices, and new this year, gardening. The newsletter contains articles from NDSU Extension ag columns, local agriculture resources, other Extension articles, and some written by the author/editor of the newsletter. The newsletter is mailed every 2 months to 305 producers and a pdf is emailed to 40 producers in the county.

THE BROWN COUNTY EXPLORER
NEWSLETTER
James Morris
Extension Educator, ANR/CD
Georgetown

Morris, J*[1]

[1] Extension Educator, ANR/CD, , Georgetown, Ohio, 45121

This is a quarterly newsletter that is sent out via mail to Brown County residents and stakeholders. James developed The Brown County Explorer newsletter to keep clientele and stakeholders informed about upcoming OSU Extension programs, on-farm research efforts, important agricultural news, and the other great work Brown County Extension does throughout the state. The newsletter is sent to 375 clients and 12 local businesses and organizations.

As shown in the attached documents, the cover page always displays the OSU Extension Mission: “We create opportunities for people to explore how science-based knowledge can improve social, economic, and environmental conditions.” The Brown County Explorer newsletter is intended to help readers connect the mission

of extension with the material they explore within our newsletter. As a levy funded county, this approach also helps us explain our mission to others who are not familiar with OSU Extension services.

Program participation and awareness has greatly increased since the start of this newsletter. This newsletter has also helped us stay in contact with clientele who can't attend programs and when programs were cancelled due to the pandemic. Based on survey results from the final mailing in 2021, over 95% of the recipients found the newsletter to be beneficial and wished to continue receiving the newsletter in 2022. Each newsletter features a sponsor who pays for our mailing costs.

LA CROSSE COUNTY AGRICULTURE NEWSLETTER

NEWSLETTER

Kaitlyn Davis
Agriculture Educator
UW-Madison Division of Extension
La Crosse

Davis, K*[1]

[1] Agriculture Educator, WACAA, La Crosse, Wisconsin, 54601

In 2020 when we were first impacted by the Covid-19 Pandemic, it became increasingly important that communication efforts were strengthened with farmers in the La Crosse County area as we switched from in-person programming to virtual. This continued into 2021 was the Pandemic proceeded. To meet the need for communication of upcoming programs and updates from the Extension office an agriculture newsletter was developed and distributed to 330 individuals from our mailing list. The newsletter was mailed directly to farmers or emailed if they requested it. After each edition of the newsletter, the newsletter was then posted to the La Crosse County Extension website where it can be easily accessed through its own dedicated webpage. An evaluation of the newsletter is being developed to determine what changes farmers would like to see, and how effective the newsletters were in informing them of upcoming programs and resources.

MAINE FARM NEWS (TWICE A MONTH)

NEWSLETTER

Donna Coffin
Extension Educator
UMaine Extension
DOVER-FOXCROFT

Coffin, D*[1], Jackson, T*[2], Lilley, J*[3], Long, B*[4]

[1] Extension Professor, UMaine Extension, DOVER-FOXCROFT, Maine, 04426
[2] Extension Professor, UMaine Extension, Lisbon Falls, Maine, 04252
[3] Extension Professional, UMaine Extension, Falmouth, Maine, 04105
[4] Extension Professional, UMaine Extension, South Paris, Maine, 04281

This newsletter started amid the pandemic need for up to date information on the rapidly changing COVID-19 programs, guidance, and financial programs that affected Maine farmers large and small.

Four County Extension staff have been collaborating to get this newsletter into the hands of farmers. It started as a weekly newsletter and later changed to twice a month. The initial email lists included county farming newsletters from three regions of the state as well as a regular statewide beef newsletter and livestock email lists. A total of 2,044 were included on the initial e-newsletter that is sent using the Constant Contact platform. It has since grown to 2,918 (2,652 delivered). Since the start of this combined newsletter the average open rate averages 35.9% and the average click rate is 15.2%. Industry average for educational entities is 28.8% open and 1.8% clicks. The majority of the newsletter is a collection of information the authors glean from a variety of sources that are added to a newsletter template. Links to events, new resources, grants / loans, surveys, and Covid-19 guidance continue to be a staple of the newsletter. The e-newsletter is now sent twice a month on the first and third Saturday to the combined email list. It is resent four days later to folks who did not open the initial e-newsletter. It is also shared on social media through three Facebook pages and an Instagram account through county pages. The February 19th newsletter had a reach of 200 on social media. The highest frequency items clicked by clients who opened the newsletters include: 124 clicks (12.7%) for a Workers Compensation Survey Request; 71 clicks (6.5%) for the Agriculture Infrastructure Investment Program; 63 clicks (5.8%) for a Tractor Safety Checklist; 50 clicks (5.6%) for the Maine Hay Directory. Other agriculture organizations and service providers see this newsletter as a valuable method to get relevant information into Maine farmers' hands and make frequent requests for information to be included.

DAIRY MARKET WATCH

NEWSLETTER

Katelyn Walley-Stoll
Extension Specialist
Cornell University, Southwest New York Dairy, Livestock, and Field Crops Program
Cattaraugus

Walley-Stoll, K*[1]

[1] Extension Associate, Cornell University, Cattaraugus, New York, 14719

New York State is home to almost 4,000 dairy farms that work tirelessly to produce high-quality milk. On top of managing employee safety, cow health, quality crop production, and countless other "jobs", dairy producers also face volatile milk markets and uncertain component prices. It's another full-time commitment to try and follow market trends and make sound management decisions that are impacted by milk prices. This monthly publication is designed to keep producers informed of changing market factors affecting the dairy industry. It's funded by Cornell PRO-DAIRY and Cornell Cooperative Extension's Southwest New York Dairy, Livestock, and Field Crops Program and features running market reports, USDA Dairy Market News, graphs and figures demonstrating volatile milk markets, and easy-to-read commentary by the author. This consistent resource reaches an estimated 5,000 people, which would include dairy farm owners and employees, Cooperative Extension educators, and dairy industry representatives. While originating from SWNY through multiple electronic mailing list distributions, Dairy Market Watch is shared all across the state via Cooperative Extension, Cornell University, industry organizations, and financial consultants directly to those who need it most – dairy farmers and the agribusinesses that support them. Cooperative Extension educators and specialists are able to use the newsletter, for free and without any strings attached, in whatever manner fits their program the best! Dairy Market Watch is uploaded on county-based program websites, shared on social media, included in regional program mailings, and referenced while on farm visits. A long time farm business management extension educator put it best when she said "Our farmers just love their Dairy Market Watch".

NIKKI'S NEWS-MARSHALL COUNTY'S AGRICULTURE AND NATURAL RESOURCES UPDATE

NEWSLETTER

Nicole Rhein
Agriculture and Natural Resources Agent
Universtiy of Kentucky
Benton

Rhein, N[1]

[1] Agriculture and Natural Resources Agent, , Benton, Kentucky, 42025

"Nikki's News" is an agriculture/horticulture newsletter that is delivered to the mailboxes/emails of 499 Marshall County families. The newsletter is generally published monthly but may run bi-monthly or even more frequently if there is breaking news. Nikki's News only shares the most cutting-edge research based educational materials, such as timely information on the hottest topics, featured publications and advertisements of upcoming programs. The recipients frequently acknowledge its value by going out of their way to tell Extension staff how much they appreciate this timely, information packed effort.

MID COLUMBIA FARMERS NEWSLETTER

NEWSLETTER

Jacob Powell
Assistant Professor (Practice)
OSU Extension Service
Moro

Powell, J*[1]

[1] Assistant Professor (Practice), , Moro, Oregon, 97039

The Mid-Columbia Farmers Newsletter is a newsletter produced every other month by Extension Agent Jacob Powell. The main audience is crop and livestock producers in the Mid-Columbia region covering Sherman and Wasco Counties in North Central Oregon. The clientele also includes researchers, agricultural services and businesses, other extension faculty in the state, and landowners. Absentee landowners find the newsletter very helpful to keep up to date on crop and economic conditions as they may live several states away. The goal is to provide timely updates impacting agriculture in the region on topics covering weather, climate forecasts, commodity prices, market forecasts, local agricultural events, and ongoing extension programs and research. Rainfall data is also shared from 40 different producers located throughout the two counties. The newsletter is mailed to 600 individuals with about 100 going to landowners living outside of the region. In addition, the newsletter is emailed out to

roughly 240 individuals. Small hobby farms are increasing in the region with many new individuals receiving the newsletter outside of the traditional commercial producers. Local office staff provide support with edits and mailing services.

GRAPEVINE - NATRONA COUNTY MASTER GARDENER NEWSLETTER

NEWSLETTER
Donna Hoffman
Assistant Extension Educator for Horticulture
University of Wyoming Extension
Casper

Hoffman, D*[1], Jones, R[2]

[1] Assistant Extension Educator for Horticulture, UW Extension of Natrona County, Casper, Wyoming, 82604
[2] Administrative Assistant , UW Extension of Natrona County, Casper, Wyoming, 82604

The Grapevine is the Newsletter for the Natrona County Master Gardeners based in Casper, Wyoming. This monthly newsletter includes a message from the Chair or Co-Chairs of the organization, the minutes of the monthly meeting, the minutes of the Steering Committee (or board) of the group, a message from the Master Gardener Coordinator, monthly birthday recognitions, an event calendar, descriptions of the educational program for the upcoming monthly meeting, a Kudos Korner to recognized members who have done great things in the recent past, and a library committee book report along with an insect of the month in some issues. It has the electronic link for members to use to go online to report their volunteer time and any produce they have donated to any local food pantries. We encourage members to submit educational or seasonal articles or informative programs and projects that other Master Gardeners will benefit from. The newsletter is distributed to approximately 65 local Master Gardeners as well as other Extension Educators and Administrators across Wyoming as well as six Master Gardeners in other Wyoming Communities and two in neighboring Montana via paper copy. We have recently started sending electronic copies and have 49 on our mailing list who receive it electronically. A few of the group receive both paper and electronic copies of the Grapevine. Our goal is to have the newsletter in our members' hands on the last Tuesday of each month, one week prior to the monthly meeting which occurs on the first Tuesday of each month, except December when we hold a holiday party instead.

State Winners

NORTH CENTRAL

Iowa	Ron Lenth
Kansas	Shad Marston
Nebraska	Glennis McClure

NORTHEAST

New Jersey	Steven Yergeau

SOUTHERN

Alabama	Steven Brown
Arkansas	Amy Tallent
Georgia	Shanna Reynolds
Mississippi	Brady Self
Oklahoma	Bradley Secraw
South Carolina	Jaime Pohlman
Tennessee	Ryan Brown
Texas	Elizabeth McMahon
Virginia	Sarah Sharpe

WEST

California	Daniela Bruno

Educational Video Recordings

National Winner

NITRATE IN NEBRASKA THE BASICS

Katie Pekarek
Extension Educator-Water Quality
University of Nebraska-Lincoln Extension
Lincoln

Pekarek, K*[1], McCullough, C[2], Gilmore, T[3]

[1] Extension Educator, , Lincoln, Nebraska, 68583-0996
[2] Associate Extension Educator, University of Nebraska, Lincoln, Nebraska, 68583
[3] Associate Professor, University of Nebraska, Lincoln, Nebraska, 68583

Nitrogen is an essential element for plant growth and therefore, Nebraska's agricultural industry, state economy and rural prosperity. However, when nitrogen leaves the crop root zone it becomes a liability for groundwater and surface water. More than 85% of Nebraskan's use groundwater for drinking water and agriculture in the state is heavily dependent on it. For more than 40 years, nitrate concentrations in Nebraska's groundwater have been increasing, with several areas of the state now above the safe drinking water standard of 10 ppm. This video was developed as part of an effort, called NebraskaWAVES, to develop watershed science education

focused on an influential subset of approximately 320 Nebraska citizens who make critical water management decisions: Nebraska Natural Resources District (NRD) Board Members. Nebraska has 23 NRDs established based on watershed boundaries and have statutory responsibilities relating to water quality and quantity. The objective of this video is to provide NRD Board Members and other water management leaders the knowledge on the role of nitrogen in Nebraska, the current state of nitrate in groundwater, the impacts of high nitrate concentrations, and a preview of how Nebraskan's are addressing nitrate challenges. This is the first of several videos about nitrate in Nebraska in development. Pekarek developed the script with assistance from McCullough and Gilmore. McCullough, Pekarek, and Sipp equally co-produced the video using Adobe Premiere Pro and Canva. "Nitrate in Nebraska - The Basics*" was posted to YouTube on February 9, 2022. As of March 15, 2022 the video has 68 views on YouTube. This version has since been reviewed by stakeholders, then subsequently revised and re-posted as "Nitrate in Nebraska The Basics." The YouTube versions have a total of 72 views. The video has been presented at the Nebraska Association of Natural Resources Districts Water Conference, at two local NRD board meetings, through multiple zooms, on two websites, and in two University of Nebraska classes. This video will be used in educational outreach of facilitated discussions in the next phases of NebraskaWAVES. https://www.youtube.com/watch?v=9koZIifdIGY

National Finalists:

TOMATO FOLIAR TESTING

EDUCATIONAL VIDEO RECORDINGS
Patrick Byers
Commercial Horticulture Field Specialist
UNIVERSITY OF MISSOURI EXTENSION
Marshfield

Byers, P*[1]

[1] Commercial Horticulture Field Specialist, University of Missouri Extension, Marshfield, Missouri, 65706

Tomato performance in the field, the greenhouse and the high tunnel is strongly dependent on good nutritional management. While a soil test is helpful in determining preplant fertilizer applications, an excellent way to know the status of nutrients in tomato plants on an ongoing basis is to conduct a simple tissue test of the tomato leaves.This video discusses the science of tomato foliar testing, the type of tissue to sample and an appropriate sampling schedule, the sampling process, and how to understand and use the foliar test report. The target audience for the video is commercial tomato producers. Patrick Byers developed the video concept, prepared the video storyboard and transcript, directed and was featured in the shooting, and edited the final video. The video was used in the MU Online Commercial Horticulture Newsletter (4.21.21), at the Missouri Tomato School, and the transcript was used in the MU Missouri Produce Growers Bulletin to reach a Plain farmer audience. The video is posted at https://www.youtube.com/

FIVE MINUTE FARM FOCUS - USING GENETICS TO IMPROVE HERD HEALTH

EDUCATIONAL VIDEO RECORDINGS
Aerica Bjurstrom
Regional Dairy Educator
University of Wisconsin Madison Division of Extension
KEWAUNEE

Bjurstrom, A*[1]

[1] Regional Dairy Educator, Kewaunee, Wisconsin, 54216

Dairy is a 45.6-billion-dollar industry in Wisconsin. Farmers have fine-tuned their management practices to provide the best environment for herd health and production. Farm tours are an excellent way to learn more about what other farmers are doing to improve specific aspects of their operations. Due to the COVID-19 pandemic, many farmers were not allowing people to tour their facilities. Rather than touring farms, Aerica Bjurstrom, Regional Dairy Educator, brought the farm to the people by developing and producing the Five Minute Farm Focus series of videos. The videos were developed to focus on one specific farm management practice that improves the health and well-being of the dairy herd. Featured farms/farmers were selected based on the educator's previous knowledge of the farm, and the farm's success of that practice. The videos are kept to approximately five minutes, to be to-the-point, informative, and educational. Each video follows the same format with a farm introduction, practice introduction, benefits, drawbacks, and a "take back to the barn" message. Some videos may include additional segments based on the interviewee's answers to the questions asked by Bjurstrom. The target audience of the videos are dairy farmers and agribusiness professionals, however, non-agriculture audiences have reported learning from the videos as well. All storyboarding, interview questions, production, editing, videography, and still photography were done by Bjurstrom, with the exception of credited photos provided by the host farms. Media was recorded on iPhone, iPad, and a DJI unmanned aerial vehicle. Media was edited on Adobe Premiere Rush, closed-captioned on Otter.ai, and published on YouTube. Eight

videos have been published since April 2021 with nearly 14,000 views overall, shared on Facebook, featured on the local agriculture television news report, and in two articles in Hoard's Dairyman. The video submission "Using genetics to improve herd health" can be found at https://www.youtube.com/watch?v=JqrFUdEDNKM The original version is unpublished and can be found at https://www.youtube.com/watch?v=P7iSgPg8rvI The original video was published on December 3, 2021 (165 views) and replaced with an updated version to correct a typo on March 4, 2022 (11 views as of March 12, 2022).

SEMINOLE COUNTY VIRTUAL FARM TOUR VIDEO SERIES: DENNIS THE BEE GUY

EDUCATIONAL VIDEO RECORDINGS
Morgan Pinkerton
Sustainable Agriculture and Food Systems Agent
UF/IFAS Extension
Sanford

Pinkerton, M[1], Yarborough, J[2]

[1] Sustainable Agriculture and Food Systems Agent, UF/IFAS Extension Seminole County, Sanford, Florida, 32773
[2] Livestock and Natural Resources Agent, UF/IFAS Extension Orange/Seminole County, Sanford, Florida, 32773

Farm Tour is a long-time tradition, held for over 20 years in Seminole County, FL, to encourage support of local farms and educate residents on agriculture. Historically, participants attended an in-person educational tour of local farms, but in 2020, this event did not occur due to the COVID-19 pandemic. Nonetheless, the community expressed strong desires to continue the Farm Tour tradition to connect residents with agriculture. In 2021, due to continued COVID-19 precautions, Farm Tour pivoted to a virtual format for the first time. University of Florida, Institute of Food and Agricultural Sciences (UF/IFAS) Seminole County Extension developed six high-quality videos in collaboration with Seminole County Government TV (SGTV). Each 4-6-minute video included a farmer-led tour of a local operation and narrations by Pinkerton. Videos were edited by SGTV and Pinkerton in Adobe Premiere. In the highlighted video, agents and SGTV recorded an up-close tour inside the hive with a local commercial beekeeper to teach residents about the role of honeybees in agriculture. Content was first shared on April 19, 2021 and also aired on SGTV. Videos were widely promoted across multiple social media platforms (Facebook, Twitter, YouTube, etc.) during a week-long agriculture awareness event in May 2021. Since the initial posting, the 2021 Seminole County Virtual Farm Tour series has collectively reached over 2,700 people and videos continue to be shared online, on TV, through local news outlets, and in the classroom. In a viewer survey during the May promotional week, 100% of respondents (n=67) adopted at least one practice to support local agriculture after viewing the videos (ie. 83.6% purchased more local agricultural products, 71.6% helped to protect honey bees and other pollinators, 65.7% checked the label of produce in the store to see where it was grown, and 44.7% encouraged youth to explore careers in agriculture). The 2021 Seminole County Virtual Farm Tour used a novel approach to keep the Farm Tour tradition alive and led to the development of long-lasting educational videos on local agriculture. Feedback from farmers and viewers indicated a strong desire for more virtual Farm Tours in the future.

Video Link: https://youtu.be/yrYO2HTT5Bg

Regional Winners

WINTERTIME WATERING TIPS OF SWINE

EDUCATIONAL VIDEO RECORDINGS
Colt Knight
State Livestock Specialist
University of Maine Cooperative Extension
Orono

Knight, C*[1]

[1] State Livestock Specialist, University of Maine, Orono, Maine, 04473

Watering pigs can be quite a chore. In the summer, pigs love to wallow and play in their water. In the wintertime, farmers often fight the brutal cold to keep waterers from freezing or becoming buried in snow and ice. Regardless of weather, pigs need a steady supply of fresh clean water as water is the most important nutrient. This educational video was designed to highlight winter watering tips for swine in the cold climate of Maine. The video addresses common problems relating to watering in the wintertime including, freezing, pig housing cleanliness, and health. However, the prime component of this video is intended as a step-by-step guide to constructing a heated waterer for pigs living indoors during the frigid winter months. This video was produced and published in the late winter of 2022 prior to most Maine Farmers purchasing pigs to raise allowing them to make good management decisions before purchasing pigs. The video was placed on the NACAA facebook page as an entry for the #epicextensionvideobattle2022 challenge and received 75 views. The video was evaluated by 26 anonymous peers on a scale of 1-5 (1 = poor, 5 = excellent) for six criteria: video quality, audio quality, educational content, creativity/engagement, effectiveness of message delivery, and

usefulness of information. Average scores were 4.7, 4.7, 4.8, 4.5, 4.7, and 4.8, respectively, for the afore mentioned categories. This video can be found at the following URL - https://youtu.be/PLAdfdBXfJs

DEVELOPMENT OF HEMP PRODUCTION RESOURCES FOR NEW JERSEY

EDUCATIONAL VIDEO RECORDINGS

Stephen Komar
Agricultural Agent
Newton

Komar, S*[1], Bamka, W*[2], Infante-Casella, M*[3]

[1] Agricultural Agent, Rutgers Cooperative Extension, Newton, New Jersey, 07860
[2] Agricultural Agent/Associate Professor, Rutgers Cooperative Extension, Westampton, New Jersey, 08060
[3] Agricultural Agent/Professor, Rutgers Cooperative Extension, Clarksboro, New Jersey, 08020

Three Rutgers Cooperative Extension Agricultural Agents received a USDA Northeast Sustainable Agriculture Research and Education, Professional Development Program state grant in the amount of $39,462 to create hemp production resources for agricultural service providers and farmers in New Jersey and others in the region. The Agricultural Agents formed an extension team focused on hemp education and outreach for producers throughout the state. Hemp is a new crop for farmers in New Jersey and in many other states. In 1970, the Controlled Substance Act Classified Cannabis sativa as an illegal Schedule I drug making all cannabis production illegal without a DEA permit regardless of Tetrahydrocannabinol (THC) levels. Recently, the 2018 Farm Bill directed the United States Department of Agriculture to establish a national regulatory framework for hemp production in all 50 states. The New Jersey Hemp Farming Act was enacted in August 2019. This new legislation provided regulations for producers to grow and sell hemp in New Jersey. Rutgers Cooperative Extension Agricultural Agents were contacted by stakeholders prior to implementation of the NJ Hemp Farming Act to find out about how to navigate hemp production, growing practices, harvesting, storing, and marketing hemp. The extension team recognized the need for research, education, and outreach about this renewed crop for producers. A product they created, through their work with Northeast SARE, was a 6:07 minute educational video explaining their hemp extension program and industry information. The video was created in September 2021 and promoted for viewing on homepage of the Rutgers SARE website (855 views) https://sare.rutgers.edu. It can also be viewed on YouTube at https://www.youtube.com/watch?v=pLC5JHvdkSU&t=2s.

VIDEO RECORDING – BEEKEEPING DEMO FOR PCN

EDUCATIONAL VIDEO RECORDINGS

Thomas Butzler
Horticulture Educator
Penn State Cooperative Extension
Lock Haven

Butzler, T*[1], Petersen, C[2]

[1] Horticulture Educator, , Lock Haven, Pennsylvania, 17745
[2] Videographer, Pennsylvania Cable Network, Camp Hill, Pennsylvania, 17011

I coordinate beekeeping educational events at Penn State's annual Ag Progress Days (APD), Pennsylvania's largest outdoor agricultural exposition, with over 40,000 attendees. Our display consists of a tent showcasing beekeeping equipment, research posters, and an observation hive. For those that show more profound curiosity, we maintain an apiary yard where we suit up attendees and open several hives to explore the world of beekeeping. The Pennsylvania Cable Network (PCN), a cable network that provides of variety of programming to over 3.2 million homes, is usually on the grounds over the three-day event filming all types of activities. They requested a private demonstration to record and then replay to their viewers. I coordinated this activity by explaining all the details, before the recording, that I would showcase. This alerted the camera operator when to take wide shots and zoom in when pointing out detailed activities within the hive. The camera operator stood by the side of the apiary yard while I went through a hive. Throughout the video, I explain how to work with bees, the various hive components, and the role of the workers, drones, and queens. Editing was minimal for the shoot and done in one-take, except for the footage highlighting the queen bee (outside the judged segment) which was added at the end (had to open another hive). The video aired on 8.14.21 (12:20 PM and 11:20 PM) and 8.15.21 (5:35 AM). The portion to be evaluated is 0:00:20 to 0:15:20. The video recording can be found at https://pennstateoffice365-my.sharepoint.com/:v:/g/personal/tmb124_psu_edu/

FARM LIFE

EDUCATIONAL VIDEO RECORDINGS
Joanna Coles
County Extension Agent for Agriculture and Natural Resources
UK Cooperative Extension Service
BOWLING GREEN

Coles, J*[1]

[1] County Extension Agent for Agriculture and Natural Resources, Bowling Green, Kentucky, 42101

The University of Kentucky Cooperative Extension Service-Warren County Office and the Warren County Agriculture Foundation host an agriculture awareness breakfast for the community every March. However, due to COVID, the breakfast was not held in 2021 which would have been our 10th annual breakfast. The hosts decided to create an educational agriculture awareness video to utilize on media outlets, social media, and at future agriculture events to celebrate 10 years of agriculture awareness. The objective of the video was to show the importance of agriculture, challenges to agriculture, and advice for new farmers. The Warren County Agriculture Agent recruited the multigenerational farms that participated in the video project, developed the questions to achieve the educational objective, supervised filming and editing of the video, distribution of the video, and appeared in the video to tie the message together. The hosts hired VidMonster Productions to help with filming and editing the video. The video was shared on WBKO our local ABC, CW, and FOX affiliate that aired to 20,000 households, on our Warren County Agriculture Social media sites and reached 33,440 with over 4346 engaged, KY Farm Bureau shared the video on social media and RFDTV aired the video on Market Day Report to over 500,000 viewers as well as their simulcast and social media. The results were tremendous to this video. Local elected officials, farmers, and general community members helped share the content and the importance of agriculture to our community, and with the national attention, we had several requests to share the video in other areas of the United States. The link to the video is https://youtu.be/Yjigm2pVa8Y.

THUMP IT - THE LORE OF WATERMELON RIPENESS

EDUCATIONAL VIDEO RECORDINGS
Daniel Ostrowski
Extension Agent
NC Cooperative Extension
Yanceyville

Ostrowski, D[1]

[1] Extension Agent, , Yanceyville, North Carolina, 27379

As the pandemic droned on, many agents began to notice webinar and Zoom fatigue in our constituents and registration for educational sessions began to decrease. In an effort to change our approach to distance education, I set out to create an entertaining and educational video to reach a broader audience. I also set out to incorporate different voices from the county that were typically not heard from and tell a story about culture. This video was posed to Youtube on 6/15/21 and shared across all our platforms.

https://youtu.be/XzUrCAlGB8g or https://go.ncsu.edu/thumpit

UNIQUE CHALLENGES IN TEACHING NEEDED SKILLS: CALF CASTRATION TECHNIQUES FOR TRIBAL RANCHERS

EDUCATIONAL VIDEO RECORDINGS
Betsy Greene
Extension Horse Specialist
University of Arizona
Tucson

Greene, E*[1], Brawley, N*[2], Wright, A*[3], Arias, J*[4], Beard, J[5]

[1] Extension Horse Specialist, University of Arizona Cooperative Extension, Tucson, Arizona, 85721-0090
[2] Assistant in Extension-Production Systems, University of Arizona Cooperative Extension, Solomon, Arizona, 85551
[3] Area Associate Agent-Livestock, University of Arizona Cooperative Extension, Willcox, Arizona, 85643
[4] Assistant Agent, FRTEP , University of Arizona Cooperative Extension, San Carlos, Arizona, 85550
[5] State Livestock Extension Specialist, University of Arizona Cooperative Extension, Tucson, Arizona, 85721

Tribal ranchers in rural Arizona have many challenges to deal with when raising cattle in the desert environment, including limited forage, low forage quality, many predators, and lack of access to veterinarians. San Carlos Apache ranchers, like most ranchers, usually castrate their own calves as a part of herd management and animal stewardship when they gather the herd to brand, deworm, vaccinate, and ear tag. The San Carlos Livestock Association

consists of five cattle associations and two tribal ranches. During extension facilitation sessions (Arias and Greene), ranchers repeatedly requested workshops to teach new/inexperienced ranch hands how to castrate the calves to ensure it was done properly to prevent complications and to improve animal welfare. Unable to find a veterinarian willing to teach the castration process to the ranchers, we created the 8-minute video "The How and Why of Calf Castration". This video provides quick and clear directions and demonstration of two common methods of castration used on ranches (knife and emasculator). It contains necessary information on the anatomy of the testicles, reasons for castration, tools needed, and cleanliness/sterilization of equipment to decrease calf morbidity and mortality. The castrations are performed by a veterinarian (who wished to remain anonymous) and was shot at the ranch of one of the authors. Video contents were developed, filmed, edited, narrated, and reviewed by the authors, and peer reviewed by veterinarians/livestock specialists. This video has a small target audience, but has been extremely well received, viewers noting that castration was shown as it happens on a "real ranch" (flies and all), rather than in a sterile environment.

NOTE: Viewer discretion is advised - this video is a necessary resource created to meet the needs of tribal (or any) ranchers to ensure humane castration procedures and demonstrates actual calf castration. https://extension.arizona.edu/pubs/how-why-calf-castration

EDUCATING 4-H MEMBERS ABOUT THE IMPACT OF WILD HORSES ON UTAH'S RANGELAND

EDUCATIONAL VIDEO RECORDINGS
Randall Violett
Extension Assistant Professor
Utah State University
Cedar City

Violett, R*[1]

[1] Extension Assistant Professor, Utah State University, Cedar City, Utah, 84721

The program was developed to educate 4-H members about the impact wild horses have on Utah's rangelands. The method of delivery was a two-day educational camp named the 4-H Mustang Camp. 4-H members were taken to a range site and shown the impacts that wild horses have on the vegetation and other natural resources across the landscape. They were also taken to a Bureau of Land Management (BLM) holding facility to see the horses up close. Randall Violett was interviewed and presented a narrative for a TV program called "The County Seat". "The County Seat" is a public affairs program that focuses on the issues that affect county government. The show provides a platform that allows county leaders and related private industries to reach the public with news that affects the viewer at the local level. The producer of the show followed the camp participants for the afternoon they were at the range site. The program was recorded without a script and all the editing was done by the producer. Several other Utah State University Extension personnel were shown in the video but were not identified or give an opportunity to narrate. This program was recorded on July 30, 2021 and was aired August 8, 2021. The program is 25 minutes in length and is typically viewed by 85,000 viewers every Sunday morning on KSL TV. Dr. Violett's narrative can be seen and heard at minute 2:45 through minute 4:10 at the following link. https://www.youtube.com/watch?v=5uNrqbqEFdw

UW EXTENSION FROM THE GROUND UP GRAPES PLAY LIST

EDUCATIONAL VIDEO RECORDINGS
Donna Hoffman
Assistant Extension Educator for Horticulture
University of Wyoming Extension
Casper

Hoffman, D*[1], Keto , D[2], Osterlund, D[3]

[1] Assistant Extension Educator for Horticulture, UW Extension of Natrona County, Casper, Wyoming, 82604
[2] Manager, Area Tech & Communications; Videographer, University of Wyoming Extension, Laramie, Wyoming, 82070
[3] Instructional Technology Education Specialist, University of Wyoming Extension, Casper, Wyoming, 82604-2901

From the Ground Up is a series of educational video segments developed to share as a part of our local television station's evening news. Each segment is typically 90 to 120 seconds long. These short segments were intended to reach an audience that would often have little or no experience with Extension in the past, but allow them to recognize Extension as a go to resource for gardening related advice and recommendations. The use of these videos has expanded to YouTube and are now available for play long after the single play that originally aired on TV. Availability of these segments on YouTube also makes them searchable by topic to those inside as well as outside of Wyoming. These segments are video recorded on locations around the state of Wyoming or within the geographical region, where the topics are best illustrated. The University of Wyoming Extension supports the project with a videographer and editor. Videography is done on a Panasonic HVX 200 camera and editing on Final Cut Pro and Adobe After Effects provided by University of Wyoming

Extension. After editing, segments are posted on a UW Extension YouTube Channel for another venue to reach a greater audience. Individual segments give a quick, concise answer to a variety of gardening questions. The segments include members of a team of Extension Educators as the personalities in front of the camera. The Educators and the videographer all work on locating taping sites and B-roll, developing topics for seasonal issues, scripts, and watch or listen to taping sessions for continuity and clarity of text. During the pandemic it was more difficult for the team to gather to film videos and several that were posted to YouTube in 2021 were recorded and not edited in previous seasons. This segment has the applicant serving as the on screen personality, as well as script developer and subject matter expert. This version is about planting grapes for trellis growth.

https://www.youtube.com/watch?v=8jmrjEpnnLw

State Winners

NORTH CENTRAL

Illinois	Ken Johnson
Indiana	Woolery Woolery
Iowa	Denise Schwab
Kansas	Cassie Homan
Minnesota	Julie Weisenhorn
North Dakota	Angie Johnson
Ohio	Chris Zoller
South Dakota	Sara Bauder

NORTHEAST

Maryland	Ginny Rosenkranz
New Hampshire	Jonathan Ebba

SOUTHERN

Alabama	Harli B. Willis
Arkansas	Cory Tyler
Georgia	Brooklyne Wassel
Mississippi	Alex Deason
Oklahoma	Shannon Mallory
South Carolina	Anthony Savereno
Tennessee	Chris Hicks
Texas	Paul Winski
Virginia	Michael Parrish

WEST

New Mexico	Bonnie Hopkins Byers
Oregon	Jacob Powell

Fact Sheet

National Winner

RECOGNIZING SIGNS OF FREEZE DAMAGE IN BLUEBERRIES

Kimberly Post
County Extension Agent
University of Georgia
Lakeland

Post, K[1]

[1]County Extension Agent, University of Georgia, Homerville, Georgia, 31634

The blueberry freeze damage fact sheet was developed by the ANR Agent for distribution to local blueberry producers. Clinch County is historically in the top three for blueberry producing counties in Georgia and the area experiences one or two freeze events every year. Oftentimes producers want to make a crop insurance claim based on a freeze, but lack the necessary documentation or waited too long to have the Agent verify the damage. Homeowners also have many questions about the viability of their berries after a freeze. In response to these frequent questions, the ANR Agent took on-farm photos of recent damage and compiled them with short descriptions and likelihood of blossoms being able to bear fruit. As an easy to read one-page image or PDF, the fact sheet can easily be printed, e-mailed, or texted to producers to use as a guide when taking photos of damage. “Recognizing Signs of Freeze Damage in Blueberries” offers visual examples of damage and reiterates the need to document signs of damage for on-farm record keeping or any type of claim. To date, it has been distributed to over 675 commercial growers and homeowners via e-mail, social media, and as hardcopies in the office. Small-scale and beginning growers have commented that it is especially helpful as they go through their first blueberry freeze experience.

National Finalists:

LET'S TALK ABOUT HORSES AND SOY

FACT SHEET
Brittani Kirkland
Extension Educator- Equine
Penn State Extension
Washington

Kirkland, B*[1], Wickens, C[2], Vineyard, K[3], Adkin, A[4]

[1] Equine Extension Educator, Penn State University, Washington, Pennsylvania, 15301
[2] State Equine Specialist, University of Florida, Gainesville, Florida, 32607
[3] Senior Nutritionist, Purina Animal Nutrition, Gainesville, Florida, 32067
[4] Faculty, College of Central Florida, Ocala, Florida, 34474

Soy is a common ingredient in commercial equine feeds; however, many horse owners are unaware of why these products are in diet formulations. Recent research and public perception of soy in human diets have also raised horse owner concerns on how soy in equine diets might impact horse health. Equine nutritionists and educators have reported frequent questions on this topic and a lack of published, easily comprehensible information available for distribution to horse owners. The "Let's talk about Horses and Soy" fact sheet aimed to provide current, research-based information on soy ingredients in equine diets for horse owners in a simplistic and understandable format. Benefits of soy, soy processing methods, and diet contributions were described. Additionally, current research on soy allergies, allergy testing, and phytoestrogens found in common equine diet ingredients was provided. Misinformation around soy and its impact on horses can confuse horse owners about their feeding and feed purchasing decisions. Brittani Kirkland, a state-wide equine educator at Penn State University, along with team members Carissa Wickens, State Equine Specialist at the University of Florida, Kelly Vineyard, Senior Nutritionist for Purina Animal Nutrition, and Angie Adkin, equine faculty at College of Central Florida, authored this fact sheet to help inform and remove confusion around the topic of soy for horse owners. The fact sheet was also created to serve as a comprehensive resource for equine educators to use when communicating about this topic to horse owners. Graphics from Canva.com and photos taken by the team of authors were used to increase attractiveness and visually describe concepts described. Currently, the fact sheet has been disturbed nationally to 135 equine educators through the HorseQuest listserv, posted on five equine educational Facebook networks, and has reached over 2,606 people on the Penn State Extension Equine Team and ExtensionHorses Facebook pages.

PRECONDITIONING SYSTEMS AND MANAGEMENT PRACTICES FOR BEEF CALVES

FACT SHEET
Kimberly Mullenix
Extension Specialist - Animal Science
Alabama Cooperative Extension System
Auburn University

Justice, M[1], Tigue, A*[2], Kelley, K*[3], Rodning, S*[4], Mullenix, K[5]

[1] Graduate Research Assistant, Auburn University/Alabama Cooperative Extension System, Auburn, Alabama,
[2] Animal Science and Forages Regional Extension Agent, Auburn University/Alabama Cooperative Extension System, Tuskegee, Alabama, 36083
[3] Farm and Agribusiness Management Regional Extension Agent, Auburn University/Alabama Cooperative Extension System, Brewton, Alabama, 36426
[4] Professor and Extension Veterinarian, Auburn University/ Alabama Cooperative Extension System , Auburn University, Alabama, 36849
[5] Associate Professor and Beef Extension Specialist, Auburn University/Alabama Cooperative Extension System, Auburn University, Alabama, 368495625

This fact sheet was developed in response to a need for reference resources on post-weaning management strategies for beef cow-calf operations in Alabama. Beef cattle production ranks second behind broilers in cash receipts among Alabama farm commodities. Most cattle operations in the state do not utilize post-weaning management strategies; however, research in this area indicates that preconditioning or backgrounding practices can improve beef calf animal production, health, and profitability for producers. Our team of graduate students, Extension agents, and specialists developed this quick reference resource as a supporting guide for in-person and online educational programs on this topic in the state. The fact sheet is used to provide a summary of practices a producer might consider to improve post-weaning beef production in their operation. Two in-person meetings were hosted in fall 2021 where the publication was distributed. 80% of participants (n =19) indicated that they planned to adopt one or more of the practices in the publication in their operation during the next calf weaning season. The resource was also widely distributed on the Alabama Extension website and supporting social media resources (Alabama Beef Systems Extension and Alabama Cooperative Extension System Forage Focus Facebook pages), with over 2,500 fact sheet webpage views recorded in 2021 through early March 2022. Extension-research efforts on this topic have inspired a statewide farmer survey on beef calf backgrounding practices which is being administered online through Qualtrics until April 2022.

CORN SMUT (USTILAGO MAYDIS)
FACT SHEET
Kalen Taylor
Extension Assistant Professor - Agriculture
Utah State University Extension
Delta

Taylor, K[1], Murray, M[2]

[1] Extension Assistant Professor - Agriculture, , Delta, Utah, 84624
[2] Extension IPM Specialist, , Logan, Utah, 84321

The submitted work is a fact sheet for the fungus Ustilago maydis more commonly known as corn smut. The fact sheet is intended for sweet corn producers with corn smut problems and anyone who has questions or wants more information about corn smut. The clean layout and colorful pictures help professional farmers or amateur gardeners. Contained within the concise publication are identifiable characteristics, disease cycles and management options for U. maydis. This fact sheet assists large-scale producers or home gardeners alike to identify and manage corn smut issues. It has 164 downloads since publication in July with an additional 60 abstract views. The online nature of this fact sheet has led to international readership with 47 downloads coming from Japan, 11 more in Europe and a handful spread through Australia, Africa, South America and Mexico. Overall, readership has been dispersed through 22 countries.

Regional Winners

SOIL HEALTH TOOLS AND TECHNIQUES FOR FRUIT AND VEGETABLE PRODUCERS
FACT SHEET
Natalie Hoidal
Extension Educator
University of Minnesota Extension
Farmington

Hoidal, N[1], Paige, Z[2], Lindblom, S[3]

[1] Extension Educator, local foods and vegetable crops, University of Minnesota Extension, Farmington, Minnesota, 55024-8087
[2] Farmer, North Circle Seeds, Vergas, Minnesota, 56587
[3] Farmer, Solar Fresh Produce, Buffalo, Minnesota, 55313

This fact sheet was developed to highlight how soil health principles can be applied to vegetable farms, and to highlight practices being used by Minnesota farmers. It is meant to be introductory information for growers who are just beginning to think about soil health, and was co-authored with two vegetable farmers. Since the soil health principles are usually discussed in a field crop or livestock context, we felt that a fruit and vegetable specific publication was needed. This fact was developed with the Sustainable Farming Association of Minnesota (SFA), so it lacks Extension branding. This was intentional, as SFA is considered the primary farmer-to-farmer network in Minnesota, and they reach audiences that Extension does not. As such, this introductory fact sheet is meant to draw people in, and link them to more in-depth Extension resources. The fact sheet was first printed in November 2021, and so far 200 physical copies have been distributed at regional conferences and events. 200 more copies have been printed, and will be distributed in the coming months.

ASIAN LONGHORNED TICKS IN OHIO
FACT SHEET
Timothy McDermott
Ext. Educ., ANR
Columbus

McDermott, T*[1]

[1] Ext. Educ., ANR, OSU Extension, Franklin County, Columbus, Ohio, 43210

Ohio is on the front lines of tick and tick-vectored disease expansion going from one medically important tick to humans, companion animals, and livestock twenty years ago to five ticks of consequence today. The rapid advancement of new tick species, their expanded host ranges, and research developments on tick-vectored disease needs to be met by the most up to date outreach and education materials. The newest tick in Ohio is the true invasive Asian Longhorned tick. This tick was first discovered in Ohio in 2020 and had expanded into two more counties by the end of 2021 causing acute livestock mortality and potential game-changing adjustments to the Ohio livestock industry going forward. This fact sheet's objective is to describe the Asian Longhorned tick's appearance, host range, disease transmission capability, prevention strategies, and treatment options. It is geared for the general public and the veterinary community but also places an emphasis on how to mitigate the negative effects that this tick has the potential to cause on livestock and forage producers in Ohio. My contributions to this fact sheet that included working with a researcher in New Zealand to create options for making stored forage from contaminated pasture, research on alternate forages, research on veterinary acaricide options and general editing. It is hosted online as well as available as a printed copy depending on audience. The fact sheet was added to OSU's online fact sheet website, Ohioline,

in February 2022 so website downloads over time have not been established. It was included in 6,600 copies of the 2022 Private Pesticide Applicator training manual distributed throughout Ohio and was also shared in tick programs in Ross, Harrison, Jefferson, Lake, Ashtabula, and Geauga counties, to the Ohio State Master Gardener Lunch and Learn continuing education program, and to a monthly meeting of the Ohio State Beekeepers Association attended by professionals from Ohio, Michigan, Kentucky, Tennessee, New York, Pennsylvania, and the United Kingdom. The forage and grazing recommendations in this fact sheet were presented in March 2022 at the 10th International Integrated Pest Management Symposium.

Online location: https://ohioline.osu.edu/factsheet/vme-1035

MANAGING SHEEP BODY CONDITION SCORE THROUGHOUT THE YEAR

FACT SHEET

Jaelyn Quintana
Sturgis

Quintana, J*[1], Froehlich, K*[2], Carroll, H*[3]

[1] Sheep Field Specialist, South Dakota State University, Rapid City, South Dakota, 57703
[2] Small Ruminant Specialist, South Dakota State University, Brookings, South Dakota, 57006
[3] Livestock Stewardship Field Specialist & Beef Quality Assurance Coordinator , South Dakota State University, Brookings, South Dakota, 57006

Assigning sheep a body condition score (BCS) aids in estimating external fat stores which can be used to identify nutritional and health status. Unfortunately, BCS resources for sheep producers are limited and comprehensive information must come from multiple sources. The SDSU Extension Small Ruminant team saw an opportunity to create a unique BCS factsheet that covers the importance of BCS, how to BCS, and visual indicators of BCS. Unlike cattle, sheep must be handled to properly assess condition due to their wool cover. However, if there is less than half an inch of wool growth, sheep can be scored visually. Prior to this fact sheet, no other extension resource provided both the visual and palpation methods of BCS. Additionally, target BCS is included as an easy, quick to read table. A barn reference was also created to supplement the factsheet. It provides large, full color pictures and descriptions for each BCS. The barn reference can be laminated and hung in a location such as a barn or working facility for a reference when producers are handling sheep and assigning BCS.

Nearly 100 copies of the factsheet and barn reference were distributed at the Newell Ram Sale and South Dakota Sheep Growers Annual Convention. On the SDSU Extension website, the webpage has had 133 views and the publication has been downloaded 144 times. The document was also shared with USDA NRCS to help guide CSP enhancements which include recorded BCS.

SUMMER SQUASH GROWER GUIDE FOR GROW THIS! PROGRAM

FACT SHEET

Jodi Richmond
Extension Agent
WVU Extension Service
PRINCETON

Richmond, J[1]

[1] Extension Agent, Princeton, West Virginia, 24740-2627

The Grow This! program is a collaborative effort between West Virginia University Extension's Family Nutrition Program and Agriculture & Natural Resources Unit to provide free seeds to families and community groups interested in gardening. Over 15,000 people received seeds from the program in 2021, in which the theme was the "three sisters", corn, beans, and squash. Ag agents develop educational information to be distributed including production, nutrition and variety selection. FNP personnel provide on-site nutritional programs throughout the state to supplement the content. There is also a Grow This! website with weekly gardening and nutritional posts where gardeners can ask questions and post update pictures. Ag agents answer questions related to production, diseases and pests. The summer squash grower guide is one of the publications developed to be distributed for this series. In addition to being accessed by the Grow This! participants, it is available on the WVU Extension website for general public use. https://extension.wvu.edu/lawn-gardening-pests/gardening/wv-garden-guide/growing-summer-squash-in-west-virginia#:~:text=%20Growing%20Summer%20Squash%20in%20West%20Virginia%20,source%20of%20vitamin%20A%20%28beta%20carotene%29%2C...%20More%20

CALIBRATING SINGLE NOZZLE BOOM-LESS SPRAYERS

FACT SHEET

Michael Paskewitz
CEA - Agriculture
Melbourne

Davis, J[1], Davis, T[2], Andrews, M[3], Paskewitz, M[4]

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Boom-less nozzle sprayers are popular due to their maneuverability in uneven terrain, low cost, and minimal maintenance. However, the terrain that has led to their adoption, also introduces errors from improper overlap and irregular speeds. Producers commonly contact Extension agents with concerns of streaked fields and inconsistent results. Considering record production costs, accurate applications have become a priority and calibration of these systems is therefore critical to ensure desired product efficacy. The purpose of this factsheet is to provide producers and county agents with clear, step-by-step instructions to accurately calibrate boom-less nozzle sprayers. Additionally, the factsheet provides a ready to use calculation sheet designed for field use while calibrating and as a recordkeeping tool. As a co-author, I contributed producer friendly methods used as content in this factsheet, I wrote portions including a critical product mixing section, and provided edits leading to the final copy. This color printed factsheet has been distributed to all 75 Arkansas County Extension offices. Copies have been provided to producers at pesticide trainings, production meetings, state Farm Bureau convention, one-on-one consultations, and field days. Digital access has been shared from County Extension social media pages around the state. The publication has been added to the University of Arkansas Cooperative Extension Service publication list and is available to be viewed and printed online or professionally printed copies ordered by the public.

ALFALFA LEAFTIER FOUND FOR THE FIRST TIME IN LOW DESERT ALFALFA

FACT SHEET

Apurba Barman
Area Low Desert IPM Advisor
University of California- Division of Agriculture and Natural Resources
Holtville

Barman, A*[1], Palumbo, J[2], Rethwsich, M*[3]

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[2] Professor, University of Arizona, Yuma, Arizona,
[3] Crop and Entomology Advisor, University of California Cooperative Extension, Blythe, California, 92225

The purpose of this fact sheet was to provide scientific information and identification tools for a new insect alfalfa pest, the alfalfa leaftier (Dichomeris acuminatus; Gelechiidae: Lepidoptera). The primary target audience was local/area alfalfa growers and pest control advisers in the affected areas, with the secondary audience being all others with interest in this pest and alfalfa crops. Identification tools and descriptions of different life stages were not available as this insect had not been agriculturally important until our report in October 2021. The three authors contributed equally to gathering important information, necessary photographs and illustrations. Apurba Barman reared the insect to obtain different life stages and generate photographs. John Palumbo also reared the insect and generated photographic documentation. Michael Rethwisch contributed to the initial identification and illustrations of the adult stage of the insect. Apurba Barman prepared the initial draft and subsequently Michael Rethwisch and John Palumbo edited the final print version of this document. This fact sheet was published in Imperial and Riverside County newsletters reaching nearly 750 subscribers. Publication of this fact sheet in the “Alfalfa and Forage News” blog by the University of California Cooperative Extension extended the information to an even larger geographic audience within and beyond the state of California. Part of this fact sheet was also adapted by University of Arizona Cooperative Extension County Extension agents to distribute at different Extension events among the clientele, which is estimated to be nearly 350 participants. This fact sheet has been an excellent resource for the pest control advisers in the low desert of California to distinguish among caterpillar pests of alfalfa crops, especially when they are at early stages and appear to be similar

POTENTIAL POISONING OF HORSES CONSUMING SORGHUM, SUDANGRASS, AND SORGHUM-SUDANGRASS HYBRID FORAGES GUIDE B-720

FACT SHEET

Jason Turner
Extension Horse Specialist
NMSU
Las Cruces

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[3] Professor, NMSU , Las Cruces, New Mexico, 88003

Periods of drought have become more frequent in recent years throughout the West. In this situation, owners often look to alternative hay sources, such as annual forage crops, to meet the needs of their horses. Therefore, the horse specialist, the forage agronomy specialist, and a plant pathology professor wrote a fact sheet, Potential Poisoning of Horses Consuming Sorghum, Sudangrass, and Sorghum-sudangrass Hybrid Forages Guide B-720, with the purpose of educating horse owners on the challenges and potential risks associated with feeding sorghum, sudangrass, and sorghum-sudangrass hybrid forages to horses. The fact sheet was published by the New Mexico State University (NMSU) Cooperative Extension Service (CES) in March 2021 on the CES website where it received 124 page views in the first week. Along with this release, its posting on Facebook reached 29,578, and it was shared 488 times. The publication is available at the following URL: https://aces.nmsu.edu/pubs/_b/B720/welcome.html

State Winners

NORTH CENTRAL

Iowa	Jennifer Bentley
Kansas	Sandra Wick
Missouri	Donna Aufdenberg
North Dakota	Lindy Berg
Wisconsin	Aerica Bjurstrom

SOUTHERN

Florida	Alicia Halbritter
Kentucky	Jessica Bessin
Mississippi	Brady Self
North Carolina	Adam Lawing
Oklahoma	Josh Campbell
South Carolina	Susan Lunt
Tennessee	Jason de Koff
Texas	Tyler Mays

WEST

Arizona	Betsy Greene

Publication

National Winner

2021 SPOTTED LANTERNFLY MANAGEMENT GUIDE

Emelie Swackhamer
Horticulture Educator
Penn State Extension
Colllegeville

Swackhamer, E*[1], Korman, A*[2], Walsh, B[3], Leach, H[4]

[1] Horticulture Educator, Colllegeville, Pennsylvania, 19426
[2] Horticulture Educator, Penn State Extension, Northampton County, Nazareth, Pennsylvania, 18064
[3] Extension Educator, Penn State Extension, Berks County, Leesport, Pennsylvania, 19533
[4] Orchard Manager, Cherry Bay Orchards, Suttons Bay, Michigan, 49682

An invasive insect, Lycorma delicatula, commonly known as the spotted lanternfly (SLF), was discovered in southeastern Pennsylvania in September 2014. SLF is a pest of grapes, hardwood trees, and other plants. Pennsylvania ranks fifth nationally for grape production and first for hardwood production. High populations of SLF also create a considerable nuisance in landscapes and some people have used unsafe management practices. Efforts to contain and suppress SLF populations are underway. The Pennsylvania Department of Agriculture has issued a quarantine order which currently includes 34 out of 67 counties. The quarantine regulations prohibit movement of any life stage of SLF and require businesses who move within and out of the quarantine area to have a permit and document inspections of vehicles and cargo. The 2021 SLF Management Guide was developed to provide a comprehensive source of research-based information that discusses SLF biology, effects on plants, recommended management options, and regulatory compliance. The guide offers new decision-making tools including a matrix to help residents assess the potential risk to their plants and a description of management options following an integrated pest management approach. This guide is also part of a broader effort to inform people about the quarantine and permit requirements and includes information about how to get an SLF permit. The authors developed the content and provided images and concepts for the graphics. Design and printing were done by the Creative Services Group in the College of Agricultural Sciences. The guide received 6,811 unique page views on the website at https://extension.psu.edu/spotted-lanternfly-management-guide. People from 8 eastern states have viewed it, including 44% from PA and 21% from NJ. It is also available as a printed copy through funding from the United States Department of Agriculture.

18,731 printed copies were distributed between August 2021 and March 2, 2022. 34,823 people from 28,141 companies have completed the permit training and 1,190,31 permits were issued for use in individual vehicles.

National Finalists:

MINDSET TACTICS FOR HAPPINESS, BRAIN HEALTH, AND BEHAVIORAL WELL-BEING

PUBLICATION
Larry Tranel
Dairy Specialist
Iowa State University Extension and Outreach
DUBUQUE

Tranel, L*[1]

[1] Dairy Field Specialist, Iowa State University Extension and Outreach, Dubuque, Iowa, 52003

This four part publication was intended for farmers, and those who work with them. It was written to assist their understanding and adaptation of mindset tactics for improved mental health in a variety of areas. This dairy field specialist, who spends about 50% of his time in farm mental health due to the high distress of dairy farmers, was the sole author of these publications with design assistance from ANR Communications. They were utilized for a "Rural Resiliency: Caring for You and Yours" Webinar Series.

A Qualtrix survey was sent to a select group of farmers and agri-business personnel. Results show 79% of respondents found the publication extremely or very useful with another 14% moderately useful. Seventy eight percent of respondents shared the publication with a total of over 8,000 individuals. More than 1,000 other copies have been downloaded or emailed to interested parties. Using a Likert scale of 1 to 5 with one being little knowledge and five being great knowledge, the following areas were survey for increase in reader knowledge with the numbers in parentheses the mean increase and the second number the percent increase in knowledge to level 4 or 5, respectively:

1) Importance of how we think about stress (1.77, 84.62%); 2) Using higher reasoning mindset tactics to mitigate stress (1.54, 61.53%); 3) The difference of good stress and distress (1.46, 53.85%); 4) Importance of reinterpreting negative emotions to positive (1.54; 69.24%); 5) Importance of smiling and proper posture to mitigate stress (1.69, 69.24%); 6) Importance of routine, diet and reduced sugars to mental health (1.00, 61.54%); 7) Knowledge of serotonin and oxytocin for brain and heart health (1.44; 75.00%); 8) Balanced smartphone use and news watching to brain health (1.31, 53.85%); 9) Tools in the Farmer's Mental Health Toolbox (1.73, 76.28%). For the nine measured knowledge increase impacts, the average mean increase in knowledge was 1.5 with 67.24 percent moving into the 4 or 5 level range.

Overall, this publication received great reviews for being both timely and impactful and have served as a great resource for larger programming efforts and educational of presentations.

MISSISSIPPI VEGETABLE GARDENER'S GUIDE

PUBLICATION
Jeffrey Wilson
Assistant Horticulture Professor
Mississippi State University
Verona

Wilson, J[1]

[1] Assistant Horticulture Professor, , Verona, Mississippi, 38879

The majority of homeowners in Mississippi (MS) have a home vegetable garden. Knowing how to properly plan, select, install, maintain, and harvest these vegetables is very important. Home horticulture is the number 1 type of call received at the local MSU Extesnion office and the subject agents most often have to address. This new publication replaced the outdated Garden Tabloid, which was not available by Print on Demand. The new publication updated all areas of the old version and is availalbe for download or printing by the client. This home gardening publication has been the most widely distributed publication by MSU Extension for many years and will now be even better for the home gardener. It is distributed online and through all 82 MS county Extension offices.

RUSSIAN OLIVE TREES: CONTROL AND MANAGEMENT IN THE PACIFIC NORTHWEST

PUBLICATION
Danielle Gunn
Agricultural Extension Educator
University of Idaho
Fort Hall

Gunn, D*[1], Patterson, R*[2]

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The purpose of this publication was 1) to create a comprehensive, research-based guide containing the most relevant information and effective management techniques for invasive Russian olive trees; and 2) to increase awareness of and halt the spread of invasive Russian olive trees in the Pacific Northwest. To achieve these objectives, we collaborated with landowners and managers, and affected producers beginning in 2019 to determine the need for a research-based publication, education, and demonstration projects to help manage this severe problem. Russian olives are a significant issue in the Pacific Northwest and have altered ecosystems and native habitat. Land managers requested help managing the problem. Our work demonstrated a significant need for information and education. Because of this demand, we targeted multiple audiences in the Pacific Northwest, particularly landowners and managers, and producers. Danielle Gunn and Ronald Patterson authored the publication. The University of Idaho Extension Publishing Department edited, designed, and published the manuscript in November 2021. As of March 1, 2022, the publication was ranked number 11th out of 167 University of Idaho publications and had been viewed 451 times. I have presented the information at eight conferences to hundreds of concerned individuals. As a result, land management agencies have used this publication to implement management projects. Natural resource departments on the Fort Hall Reservation and in Pocatello, Idaho, used this publication to develop and implement four large removal and rehabilitation projects. The increase in knowledge and awareness by our target audience is a valuable indicator of the publication's effectiveness. Further, the implementation of tree removal projects following publishing is remarkable. The publication is available for online viewing with a print option. I provided the publication link via professional and clientele contacts, email blasts, and during formal presentations. The authors' contributions included determining need, idea development, and combining research and field work to author the publication. Danielle Gunn served as the lead author which entailed interviewing other Russian olive researchers, combining information, submitting drafts, photos, and a final manuscript. URL: https://www.extension.uidaho.edu/publishing/html/PNW755-Russian-Olive-Trees-Control-and-Management-in-the-Pacific-Northwest.aspx?title=Search&category1=Search&category2=NULL

Regional Winners

BULLETIN E-3423 FARM MANAGEMENT EXPERIENCE RESOURCE GUIDE

PUBLICATION
Jonathan LaPorte
Farm Business Management Educator
Michigan State University Extension
Cassopolis

LaPorte, J*[1]

[1] Farm Business Management Educator, , Cassopolis, Michigan, 49031

Intended Audience: Beginning Farmers

Distribution: 200 (direct email), online analytics indicate 100+ since publishing on 2/18/2022

Educator's Role: Primary author and developer

Description: Management experience is a phrase that is heard often in farm business, especially for a new decision-maker. It is an important measurement used by many agricultural services to define if an individual is a beginning or established farmer. As a beginning farmer, they have access to benefits and assistance that can help develop their business. These offerings can include premium discounts, additional risk protection options, or financial support. However, demonstrating that they possess experience is often a common obstacle to obtaining these benefits.

In many U.S. Department of Agriculture (USDA) programs, at least one to three years of experience is needed to access beginning farmer services. If an individual is starting a new farm or transitioning from a laborer role on an existing farm, meeting criteria can be difficult. Even established farm managers find defining and establishing management experience to be a struggle.

This publication is intended to assist beginning farmers in better understanding and demonstrating management experience. It explores what sets management experience apart from knowledge gained as a farm laborer. It also reviews how an individual can gain experience regardless of whether they currently work on a farm or are starting a new business.

SUPPLEMENTATION CONSIDERATIONS FOR EWES MANAGED ON DORMANT WINTER PASTURES AND RANGELANDS

PUBLICATION

Jaelyn Quintana
Sturgis

Quintana, J*[1], Stewart, W[2], Scasta, D[3]

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Western sheep production is highly dependent on the utilization of rangeland as a forage source for flocks. Generally, standing forage is approximately one third of the cost of harvested feedstuffs. Thus, maximizing the use of your most cost-effective grazing resource, while utilizing the most affordable supplement that meets nutrient requirements should be a guiding principle. Over feeding of a protein or energy supplement can potentially decrease time spent grazing and thereby reduce consumption of the most affordable grazing resource. In contrast, during drought years where grazing forage resources are limited, energy supplementation can be utilized to decrease grazing pressure and potentially extend grazing resources. However, dormant forages rarely meet nutrient requirements for sheep especially during gestation and lactation which often coincide with winter months, so producers must supplement with higher quality feedstuffs. With varying management systems and supplementation options, it's important to understand the principles of effective supplementation. Important considerations should also include temperature swings, storage and delivery options, and which supplement provides the greatest nutrient concentration for the price. This extension bulletin was written to help guide supplementation decisions for western range sheep producers.

This publication was a collaboration between the University of Wyoming (UW) and South Dakota State University (SDSU) whose states rank 4th and 6th in sheep production, respectively. After undergoing a formal peer review process through UW, it was distributed on the UW AgNews extension website. Since its release in January, it has had 48 pageviews and 40 unique pageviews. Ms. Quintana served as the lead author and led the peer-review process.

TIPS FOR GROWING HOUSEPLANTS IN MAINE

PUBLICATION

Donna Coffin
EXTENSION EDUCATOR
UMaine Extension
DOVER-FOXCROFT

Coffin, D*[1], Long, R*[2], Wallhead, M*[3]

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Extension Professional, UMaine Extension, South Paris, Maine, 04281
Extension Horticulture Specialist, UMaine Extension, Orono, Maine, 04469

Houseplants can brighten any home. Keeping houseplants can be soothing to people, and nurturing plants can reduce stress levels. But problems may crop up when growing houseplants in the home, and this can be very discouraging. The objective of this factsheet series for home gardeners in Maine, is to provide guidelines for growing healthy indoor plants even during winter, creating new plants with cuttings, and using artificial light. Diagnosing common problems and controlling insects and diseases are also addressed. UMaine Extension staff did not have a publication on houseplant care to share with clients so a series of six factsheets were developed on: Caring for Houseplants in Maine, Dealing with Houseplant Problems, Controlling Insects and Disease in Houseplants, Growing Houseplants Under Artificial Lights in Maine, Creating New Plants from Old Plants, and FAQs About Houseplants in Maine. They were later combined into one publication: Tips for Growing Houseplants in Maine #2611. These online publications have had 1,153 views. News releases were sent to statewide media outlets, social media posts announced the factsheet series availability, county newsletters included information on the series (sent to 3,175 emails), and in-person information tables offered the printed publication along with propagation opportunities for several houseplants (325 clients contacted). Also, these factsheets were also offered to clients attending a webinar on "How to Not Kill Your Houseplant" with a local greenhouse operator as guest speaker with 33 attending. A client comment after receiving requested print copies of the series: The bulletins were extremely helpful. She belongs to a garden club and a nature club, has 55+ houseplants at home and has already picked up several tips from the bulletins. The authors' role included adapting material from retired educators and specialists, writing new sections, providing photos and conducting outreach to home gardeners to share the information. Communications staff edited the content and photos and posted them on the website.

PESTICIDE SAFETY EDUCATION: PRIVATE APPLICATOR RECERTIFICATION WORKBOOK

PUBLICATION
Erika Crowl
Agent Associate, Agriculture
University of Maryland Extension
Cockeysville

Crowl, E*[1], Kness, A*[2], Brown, A[3], Sater, H*[4], Zobel, E*[5], Dill, S*[6], Semler, J*[7], Rhodes, J*[8], Jones, J*[9], Seifrit, D*[10], Behnke, D*[11], Rosenkranz, V*[12], Butler, B[13]

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[5] Senior Agent Associate, Agriculture, University of Maryland Extension, Cambridge, Maryland, 21613
[6] Principal Agent, Agriculture, University of Maryland Extension, Easton, Maryland, 21601
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[11] Senior Agent Associate, Agriculture, University of Maryland Extension, Elkton, Maryland, 21921
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[13] Principal Agent, Agriculutre, University of Maryland Extension, Westminster, Maryland, 21157

As a response to the COVID-19 pandemic, the Private Applicator Recertification Workbook is developed with intention to give Maryland Private Pesticide Applicators, who do not have access to our online training, the recertification credits needed to renew the applicator's license. Topics covered in this workbook are Maryland Department of Agriculture (MDA)-approved and are equivalent to two hours of in-person training needed every three years to renew your private applicator's license. This workbook is also approved for Pennsylvania credits and Delaware credits since many Maryland farmers farm across state lines.

Applicators must read the entire workbook, answer all quiz questions at the end of the workbook, and submit the quiz to be graded. Upon receipt, the quiz will be graded by an Extension Agent. To receive pesticide recertification credits, the applicator must score at least a 70 percent on the 30-question quiz. Once the applicator passes, the applicator receives confirmation in the mail and their information is submitted to the Maryland Department of Agriculture. At that time, the applicator may then renew their license through the MDA Pesticide Regulation Division.

As of March 1, 2022, fifty-three workbooks have been distributed to applicators. Lead authors E. Crowl and A. Kness led the development of the workbook, contributed to educational content, distributed the workbooks, graded the quizzes, and collaborated with MDA for successful license renewal. All other authors contributed to educational content throughout the workbook.

WILD HARVESTING AMERICAN PLUM AND CHICKASAW PLUM IN GEORGIA

PUBLICATION
Heather Kolich
County Extension Coordinator
University of Georgia
Cumming

Kolich, H[1], Campbell, H[2]

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[2] Public Service Assistant, UGA Warnell School of Forestry & Natural Resources, Athens, Georgia, 30602

The first in a planned series of publications on wild harvesting for lay audiences, "Wild Harvesting American Plum and Chickasaw Plum in Georgia," is an electronic public outreach publication housed on the University of Georgia Warnell School of Forestry and Natural Resources website at https://www.warnell.uga.edu/outreach/publications/individual/wild-harvesting-american-plum-and-chickasaw-plum-georgia. It completed the peer review process in December 2021 and was posted to the website in January 2022. The six-page publication is intended to raise awareness of native forestry products and reconnect Georgia residents with the natural history of the state through sustainable harvesting of native plums from natural, uncultivated environments. The publication covers habitat and identification of American and Chickasaw plum trees in the wild, history of the plant, historic and current uses, food value for wildlife and humans, methods for safe and ethical harvesting from the wild, using and storing the harvested fruit, methods of cultivation, and links to additional resources such as recipes and identification guides. In addition to being featured on the Warnell

website, the publication was included as a link in my March 2022 e-newsletter, Forsyth Field Notes, distributed to 3,810 subscribers on February 2, 2022; provided as a link to 13 attendees of the Forsyth County Extension "Trees for Bees" webinar for homeowners on March 3, 2022; and featured in social media postings on February 16, 2022, and March 1, 2022, collectively reaching over 1,600 readers and generating 44 engagements. For this publication, I researched the history of the plants, co-authored the publication, and provided some original photographs used in the publication.

TENNESSEE HOME FRUIT AND VEGETABLE CALENDAR - 2021

PUBLICATION

Natalie Bumgarner
State Specialist
UT Extension
Knoxville

Bumgarner, N*[1], Upchurch, G[2], Whitehouse, S*[3], Sammons, L[4], Rose, M*[5]

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Each year in Tennessee, our county offices receive a huge number of questions about home fruit and vegetable selection and management. While UT Extension has a large suite of resources to address these questions, there was not a single resource where agents could direct stakeholders or use to reference key dates or activities. A calendar format was a perfect solution to this publication need. Plus, the longer format and time-based arrangement enabled the calendar to serve as an Extension resource that provided answers to many basic questions while also linking clients to the wide range of more detailed horticulture information available to support their timely garden activities. And, the fact that the document would have to be updated yearly provided the opportunity to change out content and provide the more up to date information and resources. After a few years of focusing on vegetables alone, the 2021 calendar was updated to include both home vegetable and fruit information. Each month provides timely tips and activities to support home food production. Additionally, each month provides spotlight sections that dive into management or selection topics that answer current questions while referring to other Extension resources. In the daily boxes of the calendar, suggestions and tasks are made and color codes are used to indicate different regions of the state. The yearly reach of the calendar continues to grow each year because of the print and web format flexibility. The calendar is made available for agents to order printed copies in the late fall, and the 2021 calendar had approximately 3,000 hard copies printed and distributed at the end of 2020 for use throughout 2021. Additionally, the calendar is available free of charge as a pdf on Uthort.com and other Extension sites throughout the year. The pdf format includes the added benefit of live links to the many Extension resources referenced in the calendar. In 2021, the garden calendar page was viewed 5,495 times on UThort.com making it the second most visited page on the whole website.

PREVENTING AND RESPONDING TO COMBINE FIRES

PUBLICATION

Jacob Powell
Assistant Professor (Practice)
OSU Extension Service
Moro

Powell, J*[1]

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Dryland wheat producers in eastern Oregon are very effective at stopping wildfires that can occur during wheat harvest or frequently spread onto their farming operations from nearby wildfire ignitions. However, with no till farming practices leaving more residue on the soil surface it is becoming increasingly dangerous and difficult to keep fires small and under control. This publication was produced for dryland wheat producers in Oregon to provide an overview of fire prevention during harvesting operations and considerations in the event that a wildfire occurs. The publication provides tips on equipment sanitation, checking equipment bearings, and potential modifications on harvesting equipment to reduce the risk of a wildfire starting. An overview of basic fire suppression tactics and safety is also included. Jacob Powell was the sole author providing content and worked with Oregon State University Extension Communications staff in the layout and distribution. The publication was produced in July 2021 and is available as a pdf or viewable online here: https://extension.oregonstate.edu/pub/em-9326. The pdf has been made available to 30 producers and viewed online by 306 individuals as of March 14, 2022.

25 RULES OF THUMB FOR FIELD CROPS
PUBLICATION
Mark Nelson
Extension Professor
Utah State University
Beaver

Yost, M[1], Allen, N[2], Cardon, G[3], Larsen, R[4], Nischwitz, C[5], Palmer, M[6], Nelson, M*[7], Price, S[8], Ramirez, R[9], Ransom, C[10], Scow, B[11], Violett, R[12]

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[5] Extension Plant Pathologist, Utah State University, Logan, Utah, 84322
[6] Extension Professor, Utah State University, Ephraim, Utah, 84627
[7] Extension Professor, Utah State University, Beaver, Utah, 84713
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[10] Extension Weed Specialists, Utah State University, Logan, Utah, 84322
[11] Assistant Professor, Utah State University, Hurricane, Utah, 84737
[12] Associate Professor, Utah State University, Cedar City , Utah, 84720

This peer-reviewed Extension publication was written to educate farmers and landowners on ways to help them improve their operations. University Extension services are widely known for scientific information on best practices for field crop production. Many Extension experts commonly offer the same tips or “rules of thumb” to growers. This article is certainly not a comprehensive list of the practice’s farmers need to be successful in their operations, but it represents an attempt to capture 25 common tips or “rules” from a wide range of Extension experts throughout Utah. The rules are loosely arranged in topical categories but not by importance or relevance. This publication covers several different areas including: seedbed preparation, planting guidelines, harvesting guidelines, spraying, scouting for noxious weeds, crop disease and improved irrigation techniques. There are links imbedded in the online publication that readers can click on for more information. If farmers will pick two or three of these rules of thumbs and incorporate them into their farming operation it could increase their crop production and reduce expenses on their farms. I was one of a number of authors of this publication and it was designed by the Utah State University Extension Design team. This publication has only been online for the past 45 days and has already been downloaded 22 times in the United States and six times internationally. Demand for this publication is expected to increase as more people find out it is available and how valuable it can be.

State Winners

NORTH CENTRAL

Illinois	Talon Becker
Kansas	Sandra Wick
Minnesota	Natalie Hoidal
Missouri	Patrick Byers
Nebraska	Glennis McClure
Ohio	Gary Gao
Wisconsin	Katie Wantoch

NORTHEAST

New Jersey	William Hlubik

SOUTHERN

Alabama	Jacob Kelley
Florida	Molly Jameson
North Carolina	Kendra Phipps
South Carolina	Justin Ballew
Texas	Chase Brooke

WEST

California	Zheng Wang

Website/Online Content

National Winner

GROWING FRANKLIN
Timothy McDermott
Ext. Educ., ANR
Columbus

McDermott, T*[1]

[1] Ext. Educ., ANR, OSU Extension, Franklin County, Columbus, Ohio, 43210

Growing Franklin was started in January of 2018 when I started full time in Franklin County. The objective is to have an online content hosting hub for event information, informative articles, and supportive links to assist backyard growers, community gardeners, teacher educators, and

urban farmers with local food production information. While I have tried to make the website as visually pleasing and engaging as possible, we at Ohio State are limited to what functionality and appearance features are allowed for us at our U.OSU.EDU WordPress websites. The real heart of what makes Growing Franklin impactful is the reach that it has achieved over time due to the extraordinarily large amount of content created, including the addition of recorded webinar, created video, and hybrid digital programming to address the COVID pandemic's increase in the number of new growers who were looking for research-based learning from a trusted source. This website truly shined in COVID as an information location. One highlight on the site that is an output from the COVID teaching period is the page titled "Full Year of Growing" which is a year-long four season chronological order listing of 22 videos, articles, and webinars designed to educate and support a new gardener from seed to harvest all 12 months of the year. Since inception, Growing Franklin contains 214 (over one post per week on average) website posts, has 770 subscribers, and its viewing data includes 108,000 sessions from 75, 380 different viewers who have enjoyed 151,000 pageviews. It has been viewed by residents of 83 different countries, which is over half of the world. It is interactive with 191 comments to date from readers. It has been used for Master Gardener Volunteer continuing education, been referenced as an information source in the CFAES Chow Line newsletter, been linked nine times to other WordPress websites, and content has been used to populate the Ohio Department of Agriculture's Victory Garden website. I am administrator and created 100% of the content.

National Finalist:

THE UF/IFAS FLORIDA-FRIENDLY LANDSCAPINGTM WEBSITE
WEBSITE/ONLINE CONTENT
Tom Wichman
FFL Assistant Dir. and GI-BMP Statewide Coor.
GAINESVILLE

Wichman, T*[1], Momol, E*[2]

[1] FFL Assistant Dir. and GI-BMP Statewide Coor., UF/IFAS Ext. FFL Program, GAINESVILLE, Florida, 32609
[2] Dir. of the UF/IFAS Ext. Florida-Friendly Landscaping Program, UF/IFAS Ext. FFL Program, Gainesville, Florida, 32609

The UF/IFAS Florida-Friendly Landscaping™ (FFL) Program is Florida's primary Extension program for ecologically sustainable, science-based landscaping practices that protect water resources. Since the FFL program's beginnings in 1993, it has compiled a vast reservoir of landscaping resources that the public may access via the program website. Launching in early 2021, a completely reimagined and updated FFL website (https://ffl.ifas.ufl.edu/; or FloridaFriendlyLandscaping.com) superseded the earlier website version and is now the primary public access point for all facets of the FFL program. With a focus on showcasing the FFL program's nine foundational landscaping principles, the website redesign also facilitates navigation for the program's diverse audience that includes individual homeowners, landscape professionals, local governments, builders/developers, HOAs, and community/property managers. FFL program director Esen Momol and assistant director Tom Wichman oversaw development of the new website layout and curated much original and updated content. Featured content includes detailed guidelines for each FFL principle and extensive resource links by topic. Additional content includes landscape design guidelines, photo galleries, explanatory videos, recorded webinars, and access to FFL-sponsored professional development (CEU) courses. The website also provides free access to a series of five mobile web apps providing portals to specific purpose FFL topics including the FFL plant guide, butterfly and bee gardens, toxic plants, and the GPS enabled identification of statewide fertilizer prohibition zones. Since the new website's launch, FFL website use has doubled, serving 99,000 users in the past year, with pages/session up almost 30%.

Regional Winners

BEGINNING FARMERS DEMAND (DEVELOPING AND EDUCATING MANAGERS AND NEW DECISION-MAKERS) SERIES
WEBSITE/ONLINE CONTENT
Jonathan LaPorte
Farm Business Management Educator
Michigan State University Extension
Cassopolis

LaPorte, J*[1]

[1] Farm Business Management Educator, , Cassopolis, Michigan, 49031

The Beginning Farmers DEMaND series offers a fresh look at farm business management for new and beginning farmers. The series is designed to help the next generation of farm operators learn about financial and business management strategies that can help them develop into managers and decision-makers on the farm. Whether you represent the transition of generations, an employee to owner, or a new entrant to the business, the DEMaND

series can offer assistance through articles, bulletins, webinars, and more!

URL address: www.canr.msu.edu/farm_management/DEMaND-Series/demand-bulletin-series

The website contains articles, bulletins, and webinar recordings created by a team of MSU Extension educators. The series is supported by several agriculture industry partners: GreenStone Farm Credit Services, Michigan Farm Bureau, Michigan Corn, Michigan Soybean, and USDA Farm Service Agency. Additional resources for financial statements in particular include sources from other universities and industry partners.

UW-MADISON EXTENSION DAIRY PROGRAM (FACEBOOK PAGE)

WEBSITE/ONLINE CONTENT
Aerica Bjurstrom
Regional Dairy Educator
University of Wisconsin Madison Division of Extension
KEWAUNEE

Bjurstrom, A*[1], Kohlman, T*[2]

[1] Regional Dairy Educator, , KEWAUNEE, Wisconsin, 54216
[2] Regional Dairy Educator, , Fond du Lac, Wisconsin, 54935

Online social media content has become the go-to source for news and announcements. Farmers frequently rely on easily accessible content via mobile device or computer without the hassle of opening attachments or long, verbose emails. The UW-Madison Extension Dairy Program has utilized Facebook's social media platform to disseminate information to individuals in a concise manner. The Facebook page consists of shared posts from popular press written by, or about extension colleagues, educational videos, research-based articles from the University of Wisconsin and other agriculture universities, and other relevant content that can be shared via a web link. Regional Dairy Educators, Tina Kohlman, and Aerica Bjurstrom developed and manage the page and post content, with additional posts (directed by Kohlman or Bjurstrom) done by Erin Dahle, support staff, Extension Kewaunee County. Content focuses on reaching dairy producers, agribusiness professionals, and in some cases, the general public with the intent to educate on general dairy operation practices. The platform also promotes events with the use of videos and Facebook events promoting not only the meeting and/or event, but also individual speakers. The page averages a reach of 5,100 people per month on 25 posts. The social media page has 955 "likes" with 1,098 "followers" as of March 14, 2022. The page can be viewed at https://www.facebook.com/UWExtensionDairyProgram

MARYLAND GROWS BLOG

WEBSITE/ONLINE CONTENT
Jon Traunfeld
Principal Agent & Director, Home & Garden Information Center
University of Mayland Extension
ELLICOTT CITY

Traunfeld, J*[1], Carignan, C[2], Adler, D[3]

[1] Principal Agent & Director, Home & Garden Information Center, University of Maryland Extension, ELLICOTT CITY, Maryland, 21042-1542
[2] Digital Horticulture Education Coordinator, University of Maryland Extension, ELLICOTT CITY, Maryland, 21042-1542
[3] Video Production & Web Support, University of Maryland Extension, ELLICOTT CITY, Maryland, 21042-1542

Purpose and objectives
Maryland Grows (https://marylandgrows.umd.edu/) is the blog of the University of Maryland Extension's (UME) Home & Garden Information Center (HGIC). It is an online communications platform that educates Maryland residents about sustainable gardening practices. Blog articles are written by University of Maryland and UME faculty, staff, and Master Gardener volunteers. Articles are published once or twice each week and are shared via social media. Objectives:

Use timely subject matter to engage amd inform readers on best gardening and landscaping practices.
Direct readers to the UME HGIC website for more comprehensive home horticulture information including research, instructional videos, and articles emphasizing Integrated Pest Management (IPM);
Increase awareness and use of our Ask Extension online question and answer service.

Maryland Grows was launched in 2017 and expands upon the former "Grow It Eat It" blog to include a variety of topics such as beneficial insects and pollinators; IPM practices for care of trees, shrubs, and lawns; native plants, and indoor plant care. In 2022, we began adding more content to address climate change and gardening.

Audience
Our target audience is the Maryland public with an interest in yard and garden topics, techniques, and solutions.
We reach beginner gardeners as well as more advanced readers such as Master Gardeners.

Distribution
Online readers (visitors) totaled 233,185 in 2021. The blog has 972 subscribers, a 20% increase since December 2020.

Articles are distributed on HGIC's Facebook and Twitter, which have 4,925 and 1,890 followers, respectively, as of February 2022. Maryland Grows articles are distributed further by:

UME Master Gardeners, in monthly newsletters and social media sites;

University of Maryland departments and faculty social media accounts (e.g. Entomology Department);

Social media groups including the Extension Master Gardeners national Facebook group, Maryland Native Plant Society Discussion Group, and numerous garden clubs online.

The blog receives an average of 36,237 views monthly during the height of the growing season (June-August). It was the fourth top source of referral traffic to the UME website in 2021, directing readers to the full range of online educational content provided by the Maryland Extension.

FARM-TO-TABLE VIRTUAL FIELD TRIP FOR 4TH GRADERS
WEBSITE/ONLINE CONTENT
Lauren Langley
Livestock Extension Agent
North Carolina Cooperative Extension
Burlington

Langley, L[1], Dabbs, D[2]

[1] Livestock Extension Agent, , Burlington, North Carolina, 27217
[2] Field Crops Extension Agent, , Burlington, North Carolina, 27217

The average American is now at least three generations removed from the farm so there is a need to educate youth about agriculture and where their food comes from. The Alamance County Center aims to address this issue with the annual Farm-To-Table (F2T) event held in partnership with the Soil and Water Conservation District, Forestry Service, Parks and Rec Dept., Alamance County Beekeepers, and a local high school FFA chapter. In the past, F2T was held in person as a field trip for Alamance County 4th graders. In 2020 and 2021, F2T was a virtual event. A Google site was created to organize recordings of the nine educational stations and accompanying educational resources. The topics covered were beekeeping, field crops, beef cattle, poultry, forestry products, dairy, food and nutrition, soil and water conservation, and plant science. All 4th grade teachers in the county were invited to participate in the virtual event. Thirty-seven teachers from 16 elementary schools registered to use the curriculum with a total of 915 students. Teachers were oriented to the Google site in mid-October and the program materials were accessible for two months. A post-evaluation was sent to the 37 teachers who registered for the virtual Farm-to-Table program. The evaluation response rate was 59% with 21 teachers participating. Teachers were asked to rank their students' knowledge of agriculture before and after participating in the virtual F2T program. On a scale of 1-5 (with 1 being "very low" and 5 being "very high") teachers rated their students' knowledge at an average of 2.1 before implementing the program and an average of 4.2 after implementing the program. One teacher commented, "All of the presentations were wonderful. This is a great resource for students to learn from, especially during these difficult times where we are restricted. Please continue to offer Farm to Table for these kids!" Lauren Langley created the Google site in 2020 and updated it in 2021 with the assistance of an Extension co-worker that served on the planning committee. Lauren videoed and edited the majority of the station and farm tour videos. Website Link: https://sites.google.com/ncsu.edu/farm-to-table2021

GROWING SOCIAL MEDIA OUTREACH FOR OKLAHOMA HOMEOWNERS
WEBSITE/ONLINE CONTENT
Carla Smith
Ext Ed Horticulture/4-H
Oklahoma State University Extension
Shawnee

Team Members: Smith, C[1]

[1] Ext Ed Horticulture/4-H, Oklahoma State University Extension, Shawnee, Oklahoma, 74804

Horticulture is a very visual oriented science. Landscapes, gardens, and produce are visually appealing. IPM issues are also very visual. Insect and disease diagnostics need that type of communication to discover the problem. Social media works very well to relate to clients with real time examples and solutions. My goal has been to improve communication about horticulture content. Online visibility has increased community awareness of what our office can provide. Many clients burned out on the screen time options in 2020, as it was the only option for a while. Selective promotion and finding what our clients need has been a big part of this outreach process for 2021.

Using Facebook for horticulture, I can address the issues with resources (fact sheets or links), share OSU

Horticulture content and promote events, and make recommendations for research-based problem solving for practical homeowner use.
In February 2020, a record-breaking freeze event occurred which generated many calls in the months following. By photo documentation and posts, I was able to help communicate information to our local community. We are still fielding calls for winter injury from that event, partly because clients learned who to ask.

During the growing season, photos from our demonstration butterfly garden were used to show beneficial and problem insects to promote pollinator conservation practices.

In late August, a Kissing Bug was brought into our office, identified, and tested positive for the Chagas virus. Posting a photo and information reached over 40,000 clients, our largest reach ever with over 215 shares.

In January 2022, a recycling project was launched on Facebook to collect glass vases from the community to distribute to 4 local flower shops, due to glass availability issues. Spring cleaning, recycling, and product availability all addressed through social media efforts. The post has currently reached just under 7,800 people with 81 shares and we have collected over 225 vases from 25 donors to date.

The media outreach has helped raise visibility. Our office Facebook reach increased by 56.4% since March 15 last year. Checkout our page: https://www.facebook.com/Pottawatomie-County-OSU-Extension-135538003133246.

READY, SET, GROW! GARDENING WEBINAR SERIES

WEBSITE/ONLINE CONTENT
Marisa Thompson
Urban Horticultural Specialist
New Mexico State University
Los Lunas

Team Members: Bruton, E*[1], DeVos-Cole, S*[2], Garlisch, J*[3], Moran Duran, S*[4], Garvin, L*[5], Thompson, M*[6]

[1] Socorro County Program Director, Extension Agent , New Mexico State University - Cooperative Extension, Socorro, New Mexico, 87801
[2] Mora County Program Director, Extension Agriculture Agent, New Mexico State University - Cooperative Extension, Mora, New Mexico, 87732
[3] Bernalillo County Director, Agriculture & Natural Resources Agent, New Mexico State University - Cooperative Extension, Albuquerque, New Mexico, 87107
[4] Bernalillo County Horticulture Agent, New Mexico State University - Cooperative Extension, Albuquerque, New Mexico, 87107
[5] State Extension Master Gardener Manager, New Mexico State University - Cooperative Extension, Corrales, New Mexico, 87048
[6] Urban Horticultural Specialist, New Mexico State University - Cooperative Extension, Los Lunas, New Mexico, 87031

In response to the public demand for gardening classes, especially for at-home food production, a collaboration of Extension Agents Emily Bruton of Socorro County, John Garlisch & Sara Moran of Bernalillo County, Suzanne DeVos-Cole of Mora County, Lynda Garvin of Valencia County, former NMSU IPM Specialist Dr. Amanda Skidmore, and Urban Horticulture Specialist Dr. Marisa Thompson created the "Ready, Set, GROW!" gardening webinar series (https://desertblooms.nmsu.edu/ready-set-grow.html) with live virtual classes on timely gardening topics. These free monthly classes continue to be popular, with over 2,000 registered participants and over 10,000 recorder views on Zoom, Facebook, YouTube, and the Desert Blooms website between March 16, 2021 and March 15, 2022. Recorded sessions are posted to the webpage and distributed through social media. Webinars are delivered by the Ready, Set, GROW! Team Members, NMSU CES faculty, and invited local speakers. Scheduling, marketing, registration, and the webpage are all maintained by Team members. With the use of online technology, the class attendance increased by 3,150% per class, from an average of 20 participants for in-person classes prior to the pandemic to 650 per Ready, Set, GROW! webinar. Of 418 evaluations completed by participants, 99.5% would recommend the series to others. 90% of participants reported they would change current or implement a recommended gardening practice(s) based on information learned from a class. Our Team believes that gardening should be as accessible as possible to anyone wanting to learn, implement, and share these science-based practices.

4-H LIVESTOCK WEIGHT CALCULATORS

WEBSITE/ONLINE CONTENT

Cody Zesiger
Extension Assistant Professor
Utah State University
Ogden

Zesiger, C[1], Hadfield, J[2], Dallin, J[3], Reed, N[4], Garcia, M[5]

[1] Extension Assistant Professor, Utah State University, Ogden, Utah, 84401
[2] Agriculture and Animal Science Specialist, Utah State University, Logan, Utah, 84321
[3] Extension Assistant Professor, Utah State University, Salt Lake City , Utah, 84095
[4] 4-H Program Coordinator , Utah State University, Morgan, Utah, 84050
[5] Extension Beef Specialist, Utah State University, Logan, Utah, 84321

In 2019, the team created the 4-H livestock weight calculators to reduce the number of animals failing to reach the minimum weight required to enter the show ring. However, the calculators weren't very easy to access nor were they advertised as part of an extension program. In 2021, the calculators were added as a new USU website (https://extension.usu.edu/4h-livestock-calculator) to increase their accessibility and improve the overall quality of the tools. The calculators can be used to reliably predict a market animal's weight as well as the average daily weight gain. The calculators' design includes examples for beef, swine, lambs, and goats, but they are useful for calculating the previously described values for many other species. Additionally, the calculators work well when the market animal's environmental conditions remain relatively constant, e.g., housing, rations, or exercise. If a market animal's living conditions change, then the accuracy of the calculators may be diminished. In 2021, the team introduced the website and calculators to youth and their mentors at several Jr livestock nutrition clinics. The presenters invited the 4-H youth to begin tracking their animal's weight on a regular basis and to use the website. A post-workshop survey revealed that 92% of respondents said that they were likely to use the calculators on the website and 8% were unsure. As of September 2021, the website has been viewed 7,621 times. Each team member assisted this program by presenting the website's utility at a Jr. livestock clinic or by reviewing the website content. Cody Zesiger wrote the code for the calculators and Jessie Hadfield created the USU webpage. As a result of the website and the Jr. livestock clinics, these tools have gone from near abandonment to a popular tool for 4-H youth in Utah.

THE ART OF RANGE PODCAST

WEBSITE/ONLINE CONTENT

Tipton Hudson
Washington State University
ELLENSBURG

Hudson, T*[1]

[1] Extension Professor, Washington State University, Ellensburg, Washington, 98926

The Art of Range (artofrange.com) is a first-of-its-kind podcast produced by Washington State University Extension in cooperation with the Society for Range Management and funded through the Western Extension Risk Management Education Center. It has been designed to address the complex risks in rangelands-based livestock production. The title "Art of Range" plays on the idiom that range management is both art and science. A science is a body of knowledge to be acquired. We know much about the biophysical world and the numerous ecological interactions among organisms. An art, classically understood, is the practice, the application of a body of knowledge. Rangeland management is an art as well—those whose livelihoods depend on making good decisions over a lifetime on the land require skill developed from continual adaptive learning. Sustainable rangeland-based livestock production is important to society as one of the only methods of food and fiber production that relies on naturally occurring plant communities. In fact, both ranchers and sociologists believe that the main threats to the continued viability of ranching as a socioeconomic business enterprise are economic and political rather than ecological. Social problems require social solutions. Social solutions require deep, integrative thinking that is increasingly rare in an increasingly digital society. We cannot and should not automate mental labor. Conversation, including recorded conversation, engages our highly plastic human brains in ways that strengthen our abilities to synthesize complex information. The Art of Range podcast broadcasts hour-long interactive conversation with some of the brightest minds in rangeland management, including ranchers, researchers, and resource professionals, on the toughest topics related to ranching risks. Since launching in October 2018, The Art of Range has attracted over 105,000 unique 'listens' as of March 2022 from dozens of countries and every U.S. state. The breadth and depth of topics has resulted in over three-quarters of listeners (range managers of various kinds) to change behavior – behavior that influences approximately 200 million acres of land, according to survey results – toward ecological and economic resiliency. Podcasting may represent an extraordinary opportunity for Extension professionals, as farmers and ranchers have increasing options for asynchronous education.

State Winners

NORTH CENTRAL

Illinois	Doug Gucker
Kansas	Sandra Wick
Minnesota	Julie Weisenhorn
North Dakota	Hannah Nordby

NORTHEAST

Maine	Colt Knight
New Jersey	Megan Muehlbauer
West Virginia	Joshua Peplowski

SOUTHERN

Alabama	Jessica N. Curl
Arkansas	Rachel Bearden
Georgia	Jessica Warren
Kentucky	Joanna Coles
Mississippi	Heather Jennings
South Carolina	Charly Greenthaler
Tennessee	Rachel Painter
Texas	Jessica Rymel
Virginia	Sarah Sharpe

Learning Module/Notebook

National Winner

BEGINNER BEEKEEPING SERIES

Kimberly Post
County Extension Agent
University of Georgia
Lakeland

Post, K[1]

[1] County Extension Agent, University of Georgia, Lakeland, Georgia, 31635

The Beginner Beekeeping Series was developed to introduce adult beginners to the world of beekeeping. The Series was delivered in six classes throughout the year. The class slides with space for students' notes, supplementary information, instructions for certain tasks, and links to more reading or video resources were compiled in the learning notebook, divided into sections that align with each class. Materials were distributed to students in the 2020, 2021, and current 2022 iteration of the Series (31 participants). All PowerPoint presentations, lesson plan sheets, and surveys included in the learning notebook were created by the Ag Agent. Supplementary information about pollinator-friendly gardens, monitoring for mites, and the honey tasting guide from other land grant universities were compiled by the Ag Agent and are not being claimed as original work.

National Finalists:

A CHANGING WAY OF LIFE: AMBIGUOUS LOSS AND FARMING

LEARNING MODULE/NOTEBOOK
Emily Krekelberg
Extension Educator
University of Minnesota Extension
Rochester

Krekelberg, E*[1], McGuire, J[2]

[1] Extension Educator, , Rochester, Minnesota, 55904
[2] Professor and Extension Specialist, University of Minnesota Department of Family Social Science, St. Paul, Minnesota, 55108

Ambiguous loss is an unclear loss without closure. The lack of clarity is based on something or someone being both here and not here at the same time, such as a missing person or someone who has dementia. Others may not recognize the loss, and people may not be able to move forward in solving the original need or problem. Ambiguous loss theory has long been used to support family therapy in cases such as terminal illnesses and children leaving home. However, ambiguous loss also has many applications to families in the farming industry. In the changing farm and rural landscape, loss of land, livestock, changing markets, and even relationships can be ambiguous losses that lead many to feel "stuck." A Changing Way of Life: Ambiguous loss and farming is a workbook to help farm families understand and name ambiguous loss, and to provide strategies for moving forward. Designed for educators, public health administrators, social workers, clergy, and others who have an interest in helping farm families. This is an interactive workbook that includes questions and activities along the way to increase understanding. Readers will learn what ambiguous loss is, how to consider their own situation considering this perspective, and how to confront ambiguous losses and move forward. The workbook was written by myself and my Family Development colleague, Jenifer McGuire. Jenifer contributed to setting up ambiguous loss theory and strategies for confronting it. I wrote about the applications in farming, how ambiguous loss impacts both the family and the business and contributed to the resilience strategies. All writing and activity drafting was done by me and Jenifer; copyediting was completed by the UMN Extension Communications team. 3,000 workbooks were published and half of those were distributed to Extension colleagues in North Central Region states; the remaining workbooks are being distributed in Minnesota to farm families, Extension personnel, and other stakeholders.

CREATIVE GARDENING

LEARNING MODULE/NOTEBOOK
Leslie Rose
Extension Horticulture Agent
N.C. Cooperative Extension
Winston-Salem

Rose, L[1]

[1] Extension Horticulture Agent, , Winston-Salem, North Carolina, 27105

The Creative Gardening online learning module was created by Leslie Rose, Horticulture Agent in Forsyth County, North Carolina. The module is a website designed for use as a 4-H program to guide youth through a series of lessons related to gardening. Use of this online module made connecting with youth possible when in-person meetings were limited due to the COVID-19 pandemic. The Creative Gardening site was developed using Google Sites. The website includes 5 units, intended for use over a 5 week period with youth in elementary school. The units cover investigating seeds, what plants need, exploring the garden, plant parts, and harvesting from the garden. Within each unit, there are several activities for students to complete to learn about the topic. The lessons for each unit are intended to take a minimum of one hour to complete. Leslie Rose filmed videos to introduce and demonstrate activities in the module. In addition, written instructions were included for all activities. Additional activities created by other Extension Agents and staff were included in the site as well. A pre- and post-assessment form is integrated into the website for evaluating the success of the learning module. In partnership with the 4-H Extension Agent in Forsyth County, Leslie Rose offered the Creative Gardening program in spring 2021. Five students participated in the program, reporting increased knowledge of gardening and increased confidence in their ability to garden after completing the activities. Agents in Forsyth County plan to use the activities in this module again for future 4-H programs. The Creative Gardening learning module can be accessed at: https://sites.google.com/ncsu.edu/tinkerspacecreative-garden/home

ONLINE HIGH ALTITUDE GARDENING COURSE FOR TELLER COUNTY

LEARNING MODULE/NOTEBOOK
Mark Platten
County Director
CSU EXTENSION
Woodland Park

Platten, M[1]

[1] County Director, Colorado State University Extension, Woodland Park, Colorado, 80863

The objective of this online course was to meet the gardening needs of the county at a time when we couldn't meet in person because of Covid. We have a high turnover rate in the county due to harsh living conditions and because we're a bedroom community of Colorado Springs and its five military bases. This influx of new community members creates a high demand for gardening skills at our 7,500-10,500 foot elevation, growing season of less than 90 days, granitic soil, high winds, 40 degree temperature swings, and being in the hail belt. Covid shutdowns and economic downturn resulted in Teller County residents scrambling for high altitude gardening resources. Many residents needed to find ways to grow food so they could feed their families, while others wanted something they could do during the shutdown and gardening was both therapeutic and rewarding. Since we couldn't meet in person, we were relegated to online training. With Zoom fatigue plaguing most people and the difficulty of finding a good time to hold the online training, Mark decided it would be best to build an online course. The ideal solution would have been to partner with Colorado State University's (CSU) Online platform. Unfortunately, they were tasked with transitioning the campus classes, making us a low priority. Mark researched online course platforms and decided on Thinkific to host the course. He used Zoom to record the master gardener classes and Director Suite 365 to edit the videos. The result is nine gardening modules, each 1-1.5 hours long, along with over 50 downloadable pdfs. Students can access at any time and on computers or cell phones, take it at their own pace, and go back to the recordings at any time. They have direct access to me via the platform and I have sent them an evaluation and modified the course based on feedback. The program has been shared beyond my county to the other mountain counties in Colorado and has generated 1.5 times the income of our in-person classes and reached people who were unable to attend our classes.

Regional Winners

TAKING TRACTOR OPERATION TRAINING TO THE VIRTUAL LIMITS

LEARNING MODULE/NOTEBOOK

S. Dee Jepsen
State Specialist, Ag Safety and Health
Ohio State University Extension
Columbus

Jepsen, S[1], Pulley, J[2], Grubbs, S[3]

[1] State Specialist, Ag Safety and Health, , Columbus, Ohio, 43210
[2] Graduate Research Associate, The Ohio State University, Columbus, Ohio, 43210
[3] CEO, Victory Enterprises, Davenport, Iowa, 52802

As agriculture becomes more technology based, so too should its trainings. Virtual Reality(VR) adds tech savvy and skill-building components into safety training programs, thereby enhancing interest for both instructors and youth.

Agriculture is a dangerous industry. From 2001 to 2015, 48% of fatalities to young workers were involved in agriculture, with 47% caused by transportation/tractors and 20% from contact with machinery. Bureau of Labor Statistics (2016) reported teens were 7.8 times more likely to die working in agriculture when compared to all other industries combined. In Ohio, tractors/machinery cause 61% of farm fatalities. Such statistics support the need for additional training of young workers on farms, ranches, and urban agricultural operations.

Our objective was to provide a VR experience complementing the traditional handbook-based training programs available to youth 14 -18 years old. The novel experience of VR training is an accepted, affordable, and effective teaching method for students to build upon their knowledge and skills of complex mechanisms in a safe environment. The realistic simulation mimics what students encounter during a certification test where they complete a pre-op check, hitch implements, attach PTOs/ hydraulics, and drive a tractor/wagon through a course. Their scores are saved on the headset for instructors to review.

Beyond skill testing, 100 students reported a moderately positive experience (mean 7.4). On a 10-point scale, students rated constructs of engagement, judgement, and experience consequences higher than other constructs surveyed. Qualitative comments from instructors included: "VR allows students to practice while I'm on the live tractor course watching other drivers; VR adds distance-education opportunities especially when we go to remote learning days; I see application for students in special education classes – they don't take tractor operation courses, but now they can experience driving a tractor from their classroom."

Funded through USDA-NIFA, VR pilot trainings were available in Ohio during 2021, with pending release to App stores for national use. Jepsen contributed to grant application/administration (100%), concept design and teaching knowledge of tractor safety (80%). Pulley, a PhD student, contributed to learning experience (20%), software engineer liaison (85%), and construct evaluation (95%). Victory Enterprises was the software sub-contracted company.

BEEFUP - CALVING STRATEGIES FOR MARKET ADVANTAGES

LEARNING MODULE/NOTEBOOK

Olivia Amundson
Sioux Falls

Amundson, O*[1], Brandt, K*[2], Harty , A*[3], Gessner, H*[4]

[1] Sioux Falls, South Dakota, 57106
[2] Watertown, South Dakota, 57201
[3] Philip, South Dakota, 57567
[4] Sioux Falls, South Dakota, 57106

With receipts from cattle sales not always covering annual production costs, the need for added value is critical to producer success. As producers look for ways to add value to their calf crop, this program helped identify areas of concern and led to knowledge changes. According to NAHMS, 2017, 54.4% of operations had one or more calving seasons lasting more than three months. When evaluating producer participation, over 1,000 views on the SDSU Extension website for calving distribution related information the past year indicated a program need. Additionally, over 50 producers attend South Dakota AI Schools every year seeking education about reproductive technologies to tighten calving seasons. This demonstrated the need and opportunity for education on the value and profitability potential of a defined calving season. According to NAHMS, 2017, 59.4% of cattle are sold in sale barns. Therefore, incorporation of sale barn market data describing what drives market calf prices and provides added value clearly defined the need for a distinct calving season. A more defined calving season will result in a more uniform calf crop, potentially more pounds of calf to sell, and an evaluation of other management practices that add value when calves are sold through the sale barn.

Training House was the virtual platform utilized for the BeefUP program. Program curriculum was outlined and prepared by the BeefUP team members. As the content coordinator, I finalized curriculum and recruited speakers involved in the virtual program. Program publicity (press release, marketing ads, internal and external emails) were coordinated through me and distributed to and by team members through email, FaceBook, and the SDSU Extension website. The program had 16 active participants in the first cohort of the course. Curriculum within the BeefUP course will be available for future course runs. The curriculum will be assessed through Training House (https://traininghouse.sdstate.edu/), the link and password will be e-mailed to the state chair. If selected as a state winner, access will be e-mailed to the regional vice chair.

AG 101 HANDBOOK: AG EDUCATION FOR AG SERVICE PROVIDERS

LEARNING MODULE/NOTEBOOK

Andrew Kness
Agriculture Agent
University of Maryland Extension
Street

Kness, A[1], Crowl, E[2]

[1] Agriculture Agent, University of Maryland Extension, Street, Maryland, 21154
[2] Agriculture Agent Associate, University of Maryland Extension, Cockeysville, Maryland, 21155-9492

Government agricultural (ag) service providers that work for agencies such as Maryland Department of Agriculture, Soil Conservation, Farm Service Agency, and USDA, work closely with farmers and administer many government-funded programs. However, USDA has identified that many new hires to the agencies have limited understanding of common agricultural practices due to their extensive backgrounds in the environmental or biological sciences, engineering, or other non-agricultural fields. This gap in practical agricultural production knowledge needs to be addressed in order to keep farms viable into the future and service providers safe when on the farm. Ag 101 was developed as a hands-on instructional program to help government ag service providers better understand Maryland agriculture. A total of 4 sessions were offered between 2020-2021 across Maryland training 126 professionals. The two-day program consisted of classroom learning via a webinar followed by a hands-on farm tour. To supplement the educational content, the Ag 101 Handbook was developed. This 49-page document follows the course curriculum and contains helpful information and educational content for the students in the program. Pre and post-course evaluations show significant increases in knowledge of Maryland agriculture production practices and participants felt that this program will enable them to better serve farmers (n=38).

FORAGE BASICS

LEARNING MODULE/NOTEBOOK

Leanne Dillard
Forage Extension Specialist
Alabama Coopertaive Extension System
Auburn University

Dillard, L*[1], Mullenix, K*[2], Silva, L[3], Gamble, A[4], Kesheimer, K[5], Russell, D[6], Runge, M*[7], Kelley, K*[8], Prasad, R[9], Stanford, K*[10]

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[3] Forage Extension Specialist, Clemson University Extension, Blackville, South Carolina, 29817
[4] Soil Extension Specialist, Alabama Cooperative Extension, Auburn University, Alabama, 36849
[5] Entomology Extension Specialist, Alabama Cooperative Extension, Auburn University, Alabama, 36849
[6] Weed Extension Specialist, Alabama Cooperative Extension, Auburn University, Alabama, 36849
[7] Economics Extension Specialist, Alabama Cooperative Extension, Auburn University, Alabama, 3649
[8] Regional Farm and Agribusiness Extension Agent, Alabama Cooperative Extension, Auburn University, Alabama, 36849
[9] Nutrient Management Extension Specialist, Alabama Cooperative Extension, Auburn University, Alabama, 36849
[10] Nutrient Management Extension Specialist, Alabama Cooperative Extension, Auburn University, Alabama, 36849

Forage Basics is a first of its kind in the Southeast online course to provide introductory to intermediate-level knowledge to forage and livestock producers in Alabama and the Southeast. The course is free to the public and available at https://aces.catalog.auburn.edu/courses/forage-basics . The course consists of 21, 10-min modules covering topics from forage species selection, forage for beef cattle, dairy cattle, small ruminants, and horses, poisonous plants, and forage economics. The course was a team effort by Extension Specialists and the Communications team at the Alabama Cooperative Extension System. Content for each module was developed by the Extension Specialist specializing in that area. Funding for the course and course organization, development, and release were supervised by the Forage Extension Specialist. The Alabama Cooperative Extension

System Communications team devleopd the graphics, logos, and recorded the voice overs for the course and currenlty manage the Canvas Course Catalog. The course was released on August 17, 2021. Within 90 days after its release, over 100 individuals had enrolled in the self-paced course. Six months after its release over 230 individuals had enrolled in the course. Participants have 180 days to complete the course before they have to re-enroll in the course. Currently there is a 17% completion rate on the course. Promotion of the course has been through email list-servs, face-to-face contact, expositions, and social media. Currently 7% of those enrolled in the course are from outside Alabama. Furthermore, several participants are from other countries than the US.

MICROGREENS GROW ALONG | TALLER DE CULTIVO DE MICROPLANTAS: A BILINGUAL ONLINE WORKSHOP
LEARNING MODULE/NOTEBOOK
Brooke Edmunds
Commmunity Horticulture Faculty
Oregon State University
Salem

Edmunds, B*[1], Tobey, L[2], Russell, S[3], Senior Angulo, J[4]

[1] Commmunity Horticulture Faculty, Oregon State University Extension, Salem, Oregon, 97301
[2] OSU Food Hero Program Coordinator, Oregon State University, Corvallis, Oregon, 97333
[3] SNAP-Ed Coordinator, Oregon State University Extension, Newport, Oregon, 97365
[4] EFNEP State Coordinator, Oregon State University Extension, Corvallis, Oregon, 97333

Growing microgreens is an accessible, year-round gardening technique. OSU Extension horticulture faculty previously taught a microgreens class as a traditional lecture and wanted to offer an online version. Instead of replacing with a lecture via Zoom a decision was made to experiment with offering as an interactive online workshop. The existing class outline was used to create new step-by-step instructional videos, infographics, and plain language text to guide the absolute beginner. The text was translated and videos dubbed into Spanish by OSU's Food Hero team (SNAP-Ed outreach). The end product was an approximately two-week long bilingual online 'workshop' that guides participants through a simple growing method and shares related food safety, nutrition, meal ideas, and OSU resources. The workshop was promoted through online newsletters, OSU Extension social media and emails to partner organizations. An online discussion group was used to develop a sense of community and to allow for peer-to-peer learning. In 2021 the workshop was delivered in daily emails and reached 2,732 participants. In 2022, the content was reworked into a self-guided, online learning module. This module was promoted to the general public and SNAP-Ed audiences via social media and email newsletters. The revised module has been viewed 2,039 times with a 95% positive rating (n=58). The learning module has also been requested for use by elementary school teachers and county-based Extension nutrition educators in Oregon and other US states.

View this learning module by clicking the orange button labeled 'Let's Get Growing | ¡Empecemos a cultivar!' on this landing page: https://beav.es/UbJ

State Winners

NORTH CENTRAL

Illinois	Chelsea Harbach
Wisconsin	Heather Schlesser

SOUTHERN

Florida	Amy Vu
Kentucky	Leann Martin
Mississippi	Brady Self
South Carolina	Jaime Pohlman
Virginia	Rebecca Roberts

Published Photo

National Winner

STRAWBERRY FARM LAND PREPARATION, HILLSBOROUGH CO., FL
Wael Elwakil
Extension Agent II, Fruit & Vegetable Production
UF/IFAS Extension, Hillsborough County
Seffner

Florida strawberry industry dominates the winter berry's production in the United States with total annual sales estimated at more than 477 million dollars with more than 11,000 acers in 2021. Most strawberry production in Florida is concentrated in Hillsborough County because of historic reasons, the regions microclimate during the winter month, and the support of the University of Florida researchers based in the Gulf Coast Research and Education Center. The Fruit and Vegetable Extension Agent in Hillsborough County, who works very closely with the local fruit and vegetables producers, provides education, consultations, and applied research-based solutions. The agent uses aerial photography and mapping regularly in his extension program. It is a very useful tool and illustrative method of inspection and surveying that provides a clear unobstructed view and prospective of farms among many

other uses. The agent captured this land preparation photo in October of 2021 over one of the largest local farms during land preparation for the strawberry production season. This aerial view published in October of 2021 shows multiple tractors, and a few more out of the frame, with different implements working in tandem forming raised planting beds, fumigating, compacting beds, and laying drip tape and plastic mulch. This is a true testament of the modern precision agriculture systems. This grower indicated preparing an average of 400 acres per day to complete all his farmland in about a week. This image is used as the fruit and vegetable page banner on the UF/IFAS Hillsborough county website which offers a variety of information and resources. It offers a representation of the majority of the stakeholders' production systems. The Fruit and Vegetable Production page URL: https://sfyl.ifas.ufl.edu/hillsborough/agriculture/vegetableproduction/

National Finalist:

PERIODICAL CICADA LAYING EGGS ON A PEAR TREE
PUBLISHED PHOTO
Emelie Swackhamer
Horticulture Educator
Penn State Extension
Colllegeville

The emergence of Brood X of the periodical cicadas in some northeastern states resulted in a lot of interest from the public. Penn State Extension offices received inquiries about the potential for cicadas to damage landscape plants. To deliver research-based information about the identification, life cycle, health effects on trees, and management options, the author worked with a local newspaper reporter who wrote an article for the public. This image is one of four published photos that were taken by the author to accompany the article. It captured a female cicada laying eggs into a pear tree, which can cause flagging damage on twigs. The image was printed with the caption "A Brood X female lays her eggs. Her black ovipositor is visible on the underside." The image was published on Friday, July 16, 2021, in the Reading Eagle newspaper which serves the greater Berks County, PA area. The Reading Eagle's weekday circulation is 37,000.

Regional Winners

COYOTES: DAMAGE MANAGEMENT
PUBLISHED PHOTO
Carter Oliver
County Director
Iowa State University Extension and Outreach
Logan

The once overly harvested coyote has made a remarkable return to the landscapes across Iowa. Being adaptable has allowed this predator to live bewteen urban and rural areas. This adaptability is also a curse as humans are often concerned for their livestock and house pets saftey. The article Coyotes: Damage Management was published on August 26, 2021 by the Natural Resource Stewardship page of Iowa State University Extenison and Outreach. This article was written to address the reasons why conflicts take place and how to avoid situations that lead to conflicts. The article starts but provind a history of the coyotes diet, behavior, habitat and identification. Next, the article covers living with coyotes by providing levels of behaviors and heir corresponding actions. This allows readers to understand the three steps provided to reduce coyote conglicts. This article has been viewed over 300 times since its publication and led to a podcast conversation about coyote conflicts. The photo caption reads, coyote on a gravel road in Iowa.

MASTER GARDENERS AT WORK! - MASTER GARDENERS EARN HONORS
PUBLISHED PHOTO
Eric Barrett
Associate Professor
Ohio State University Extension
Canfield

Context: Photo submitted as part of an article relating to county Master Gardener Program winning multiple awards at the state conference, including first place overall for the County Plant and Pest Diagnostic Clinic.

The target audience was readers of the Valley Grows Page in the Youngstown Vindicator and the Warren Tribune Chronicle. The papers reach 35,000 readers in print each day and even more through the websites tribtoday.com and vindy.com.

The photo was published on Monday, November 8, 2021, on page B8 of the Youngstown Vindicator and the Warren Tribune Chronicle.

Published Caption: Lil Quaranta researches a plant for identification in the Mahoning County Extension Plan and Pest Clinic.

Attached PDF of actual page of printed newspaper. Website of final publication: https://www.vindy.com/life/lifestyles/2021/11/master-gardeners-earn-honors/

BLACK GRASS BUG
PUBLISHED PHOTO
Patrick Wagner
Entomology Field Specialist
SDSU Extension
Rapid City

The photo was taken in a lab following a visit to a producer's wheat field in Pennington County, South Dakota. It was published on April 30, 2021 in an article that I wrote for the May 3rd edition of SDSU Extension Pest & Crop Newsletter: https://igrow.cmail20.com/t/ViewEmail/j/543C45C123E3008F2540EF23F30FEDED/

'GLORIA' THE NEAT PEACH
PUBLISHED PHOTO
Hemant Gohil
Agriculture and Natural Resource Agent
Rutgers Cooperative Extension
Clarksboro

The photograph was taken by the author during summer just before the post-harvest evaluation of 'Gloria', a novel peach variety. It was developed by Rutgers Tree Fruit Breeding Program and the author is one of the principal evaluators of new varieties. The purpose of the photograph was to show readers, the very attractive physical characteristics of this new peach variety and draw their attention to other important traits. It has a unique firm flesh that does not squirt juice upon consumption, hence 'neat peach'. It has a traditional melting flesh and red skin color with a yellow background, mild-aroma, and a right balance of sweetness and acidity and hangs longer on the tree after achieving commercial maturity, giving growers a wider marketing window. The photo was part of an article 'The Neat Factor' published on August 31, 2021, in the Canadian newspaper, Niagara Falls Review (48,000 print circulation, https://go.rutgers.edu/xjwjjpo9). The photo was also featured throughout in the NJ Peach Promotion Council 2021 calendar, distributed to more than 286 peach growers, retailers, and packing houses.

WVU EXTENSION GARDEN CALENDAR COVER
PUBLISHED PHOTO
Emily Morrow
Extension Agent
WVU Extension Service
Kearneysville

This photo was taken on July 11, 2021 and utilized in print on the 2022 WVU Extension Garden Calendar. The photo was also published online and in various newspapers as part of a statewide press release. The Garden Calendar is an annual free publication that provides daily garden planning, maintenance, and harvesting information to producers and home horticulturalists. Approximately 75,000 copies of this calendar are printed and distributed to Extension Offices, libraries, farm supply stores, and other local businesses across the state's 55 counties. The calendars were printed in early November of 2021 and published online on December 21, 2021 at the following webpage: https://extension.wvu.edu/lawn-gardening-pests/garden-calendar. As of March 1, 2022, 3,913 have viewed the photo online. The agent published this photo in a local newsletter in January of 2022, reaching 456 households.The agent captured this photo with a Nikon D3500 camera. The photo features a young West Virginian enjoying a local peach, aligning with the calendar's theme of "West Virginia's Own." Educational articles and other photos within the calendar highlight plants both native and adapted to West Virginia's growing conditions. The photo sets the landscape for the remainder of the publication by symbolizing the important role future generations will play as both consumers and producers of horticulture crops in West Virginia.

ALABAMA CATTLEMAN MAGAZINE'S MARCH 2022 COVER PHOTO
PUBLISHED PHOTO
Timothy Vining
Regional Extension Agent
Alabama Cooperative Extension System
Moulton

The camera used to capture this photo was a Nikon D5600 with a Sigma 18-35mm F1.8 lens. This photo depicts two beef cows gazing into a February sunset. This image was captured during a farm visit to Star B Cattle in Russellville, Alabama on February 7, 2022. It is vital that extension agents build relationships with their cliental. Many beef cattle producers have a career off the farm, and it is difficult for them to schedule a farm visit during normal working hours. Nothing demonstrates the dedication of an extension agent like a personal visit, after regular office hours. The Alabama Cattlemen's Association selected this photo as the cover for the March issue of

the Alabama Cattleman Magazine, released on March 1, 2022. With a subscribership of over 9,000 individuals, the Alabama Cattleman Magazine provides educational information, advertising opportunity, political insight, and market updates to the state's cattle producers each month. This cover photo illustrates that even during the muddy, wet, and cold winter months elegance, grace, and beauty are still present on the family farm.

LIFE IN THE MEADOW PART 1: BUMBLE BEE (BOMBUS SPECIES) AND GOLDENROD (SOLIDAGO SPECIES)

PUBLISHED PHOTO
Barbara H Smith
Horticulture Extension Agent
Clemson University
Clemson

The submitted photo, "Bumble bee (Bombus species) on Goldenrod (Soldiago species)", shows the important relationship between native plants and insects in a meadow habitat. Planting a meadow garden with native plant material will encourage pollinating insects and other linked insect and arachnid species. This photo is part of a collection of 22 photos that compromised a photoblog published on the Home and Garden Information Center website on Oct. 4, 2021, "Life in The Meadow Part 1." The photo was also shared on the Clemson Extension Horticulture Facebook page on Oct. 9, 2021 as Garden Photo of the Day. The viewer is given a visual perspective of the importance of native meadow plants and their mutual symbiotic relationship with pollinating insects. Goldenrod flowers (Solidago species) provide pollen and nectar for the bumble bee (Bombus species), and the bee is pollinating the flowers.
The photoblog received 457 total page reviews on the Home and Garden Information Center website plus 51 total views on Flickr. When shared to the Clemson Extension Horticulture Facebook page, it reached 484 people and was shared to other social media sites.

https://hgic.clemson.edu/october-4-week-1-garden-photos/

https://www.facebook.com/cuexthorticulture/photos/a.106003811043973/413157486995269/

GRAMA GRASS NEAR SONOITA, AZ

PUBLISHED PHOTO
Ashley Wright
Livestock Area Associate Agent
The University of Arizona
Vail

One of the most desirable grazing species on southern Arizona landscapes is grama grass. There is a wide variety of grama grass species, but to have a significant population on your landscape generally correlates with a higher grazing capacity. These native grasses are resilient, nutritious, and beautiful. In 2020, the Arizona Section of the Society for Range Management (SRM) ran a photo contest for images taken on Arizona rangelands. I took this photo while visiting a producer near Sonoita, AZ using my cell phone camera (yes my cell phone - a Samsung Galaxy Ultra 21). It was selected as the runner up photo for the 2020 AZ SRM photo contest and featured as the cover photo for the AZ SRM June 2021 Newsletter. This photo showcases the beautiful colors of the seedheads on this species of grama, with the Santa Rita mountains in the background. This was taken during monsoon season, when Arizona receives nearly half of its annual rainfall, thus the landscape is especially green. I often use it during educational presentations as a contrasting image with the same area during extreme drought years, and as an example of some of the best grazing the state of Arizona has to offer.

CALIFORNIA CITRUS GROWERS SCOUTING FOR ASIAN CITRUS PSYLLID

PUBLISHED PHOTO
Sonia Rios
Area Subtropical Horticulture Advisor
University of California Coop. Ext.
Moreno Valley

This photo was taken on 7/14/2019 in Escondido in San Diego County, California during a University of California Cooperative Extension (UCCE) Asian Citrus Psyllid (ACP) Scouting Field Day. The insect pest, ACP acts as a vector spreading "huanglongbing", a devastating disease of citrus trees. Scouting for the eggs and adults are extremely important in determining insecticide application threshold. The participants in the photo were citrus growers, pest control advisors, and county agriculture commissioners being led by UC Citrus Entomologist Specialist on how to identify the different stages of the ACP. Equipment used was a Nikon Camera. This picture was used on social media and a poster presentation. 1) Been posted on my Twitter account, @UCCE_SoniaRios on 3/15/22. https://twitter.com/UCCE_SoniaRios. It was used to advertise other upcoming ACP scouting field days and to introduce

a new grant that I am associated with. The photo is being circulated amongst my 1,343 followers, which mostly consist of professionals in the agriculture industry. 2) Photo was also used in an outreach and extension poster that described the ACP scouting field days that was shown at last year's Annual Meeting and Professional Improvement Conference. The poster was a national finalist. https://www.nacaa.com/posters/uploads/2282.pdf. Audience consisted of NACAA members that attended the conference virtually.

The premise of this photo was to 1) show field day participants learning how to identify ACP eggs that could be found on the new green flush on citrus that could only be seen by an eye piece. 2) The UCCE understands that learn by doing and hands on training is the most effective way of learning. Teaching and reviewing scouting basics and demonstrating how to use something as simple as an eye piece correctly are crucial skills that need to be taught for the control of this vector carrying pests in citrus.

SHEEP PRODUCTION IN UTAH'S PIUTE AND WAYNE COUNTIES
PUBLISHED PHOTO
Trent Wilde
Extension Associate Professor
Utah State University Extension
Junction

Sheep production is one of the practices that sustain the agriculturally driven economies in Utah's Piute and Wayne Counties. At the request of local county commissioners, Extension was asked to conduct a predation study to quantify sheep loses to predators like coyotes, mountain lions and bears. As part of this study, pictures were taken of sheep mortalities as well as other sheep production activities. At the November 2021 Utah Section of the Society of Range Management Annual Meeting, Will Talbot, the sheep producer who cooperated with the predator study, was asked to be a speaker. This producer asked Trent Wilde, the agicultural Extension agent who conducted the predator study, to help prepare a Power Point presentation for his talk at the SRM meeting. A picture of Will Talbot trailing his sheep herd to a different pasture was used as the background photo for the presentation. The picture was taken by Trent Wilde. After Will Talbot's talk at the SRM meeting, a representative from the Utah Section of the Society for Range Management asked for permission to use the background photo from the Power Point presentation on their website. Trent Wilde gave his permission, and the photo was published on the Utah Section of the Society for Range Management website. The photo can be found on the website at: https://www.utsrm.org/news . A screen shot of the website is included with this submission.

State Winners

NORTH CENTRAL

Illinois	Ken Johnson
Kansas	Jeanne Falk-Jones
Minnesota	Anne Sawyer

NORTHEAST

New York	Katelyn Walley-Stoll

SOUTHERN

Arkansas	Allison Howell
Georgia	Brooklyne Wassel
Kentucky	Leann Martin
Mississippi	Brady Self
North Carolina	Margaret Ross
Oklahoma	Shannon Mallory
Tennessee	Kevin Rose
Texas	Jessica Rymel
Virginia	Rebecca Roberts

Event Promotional Package

National Winner

SMALL RUMINANT WORKSHOP PROMOTIONAL PACKAGE
Cassidy Dossin
Agriculture & Natural Resources Agent
UF/IFAS Extension
Green Cove Springs

Dossin, C*[1], Toledo, I*[2], Halbritter, A*[3], Tomlinson, A*[4], Harlow, L*[5], Jennings, E*[6], Fenneman, D*[7], Wynn, K*[8], Sanders, C*[9], Korus, K*[10], Jennewein, S*[11], Whitehead, E*[12], Pittman, H*[13], Beach, E*[14]

[1] Agriculture & Natural Resources Agent, UF/IFAS Extension Clay County, Green Cove Springs, Florida, 32043
[2] Dairy Regional Specialized Agent, UF/IFAS Extension , Gainesville, Florida, 32611
[3] Agriculture & Natural Resources Agent, UF/IFAS Extension Baker County, Macclenny, Florida, 32063
[4] Agriculture & Natural Resources Agent, UF/IFAS Extension Columbia County, Lake City, Florida, 32055
[5] County Extension Director, UF/IFAS Extension Union County, Lake Butler, Florida, 32054
[6] County Extension Director, UF/IFAS Extension Levy County, Bronson, Florida, 32621
[7] County Extension Director, UF/IFAS Extension Madison County, Madison, Florida, 32340
[8] Agriculture & Natural Resources Agent, UF/IFAS Extension Hamilton County, Jasper, Florida, 32052
[9] County Extension Director, UF/IFAS Extension Alachua County, Newberry, Florida, 32669
[10] Agriculture & Natural Resources Agent, UF/IFAS Extension Alachua County, Newberry, Florida, 32669

[11] Agriculture and Natural Resources/Small Farms & Alt Enterprises Agent, UF/IFAS Extension Duval County, Jacksonville, Florida, 32254
[12] Agriculture & Natural Resources Agent, UF/IFAS Extension Bradford County, Starke, Florida, 32091
[13] Agriculture & Natural Resources Agent, UF/IFAS Extension Gilchrist County, Trenton, Florida, 32693
[14] Agriculture & Natural Resources Agent, UF/IFAS Extension Lafayette County, Mayo, Florida, 32066

The Small Ruminant Workshop flyer, agenda, and email announcement were designed to catch the attention of clientele and highlight a new format for the annually recurring program. This year, collaborators emphasized three major presentation topics from university specialists to provide clientele highly technical information directly from the experts. To supplement this, displays were developed and manned by agents to present quick talks and hands-on demonstrations on a variety of topics in ten-minute rotations. Participants were free to attend displays on topics that interested them during structured breaks in the primary program. Communicating the new structure of the Small Ruminant Workshop and conveying the function of these displays was crucial for promotion of the event, therefore participants would know what to expect and would be able to get the most out of the workshop for their individual operations. To accomplish this, collaborators of the workshop developed and distributed an event agenda, explaining the displays, listing the major presentations and display topics, and providing an itinerary for the event concisely. A flyer was developed and distributed to feature the specialist presenters and their topics. An email announcement was written and distributed to a listerv of Northeast Florida producers. The program is targeted to reach an audience of both new and experienced small ruminant producers, as well as those prospective farmers interested in the industry. The flyer was distributed virtually through email along with the email announcement to a total of 357 subscribed producers and generated 22 direct ticket sales. Overall, promotion efforts were successful, and 41 tickets were sold. Program evaluations revealed that an average of 80% of participants increased their knowledge from display presentations and 90% intended to adopt recommended practices such as body condition scoring, weed identification, pasture fertility management, and animal health practices on their operations as a result of the program. Promotional pieces for the Small Ruminant Workshop were successful in increasing program attendance numbers, allowing for knowledge gain and recommended practice adoption for small ruminant producers.

National Finalists:

KSU CROP TALK WEBINAR SERIES
EVENT PROMOTIONAL PACKAGE

Sandra Wick
District Extension Agent, Crop Production
K-State Research & Extension
Smith Center

Wick, S*[1], Falk Jones, J*[2], Campbell, S*[3], Wertz, K*[4], Dinkel, C*[5], Miller, C*[6], Hyland, A*[7], Bennigsdorf, E*[8], VanSkike, K*[9]

[1] District Extension Agent, Crop Production, K-State Research and Extension, Smith Center, Kansas, 66967
[2] Multi-County Extension Agronomist, K-State Research and Extension, Colby, Kansas, 67701
[3] District Crop Production Agent, K-State Research and Extension, Hays, Kansas, 67601
[4] District Livestock Production Agent, K-State Research and Extension, Grainfield, Kansas, 67737
[5] District Crop and Horticulture Agent, K-State Research and Extension, Ellsworth, Kansas, 67439
[6] District Crop Production Agent, K-State Research and Extension, Phillipsburg, Kansas, 67661
[7] District Agriculture Agent, K-State Research and Extension, Atwood, Kansas, 67730
[8] County Agriculture Agent, K-State Research and Extension, Colby, Kansas, 67701
[9] District Crop Production Agent, K-State Research and Extension, Norton, Kansas, 67654

80% of Kansas producers have crop enterprises and need research-based information for a profitable operation. The “KSU Crop Talk Webinar Series” was a collaboration with nine KSU Extension County/Districts that includes 26 counties. Our goals for the 7-week series were to provide crop producers with research-based information on hot topics for their crop enterprise. Topics included Fertility management with high input costs, Weed management, Cover Crop management, Manure and your Fertility program, Climate update and the KS Mesonet along with 2022 Grain Market Outlook and Strategies. Each of the live ZOOM sessions were recorded and posted on the KSU NW Agronomy website along with other cooperating Extension counties or districts. We received 391 views since the recordings were posted. The three pieces of promotional tools we would like to highlight, but not limited to, were Social Media posts (county/district Facebook, Instagram, Twitter), a news release along with the promotional FLYER for the event.

Several Social Media posts (Facebook, Instagram, Twitter) were developed and posted on each of the county/district websites and I have included an example on one of the collaborating KSU Extension Districts, Post Rock District

page. https://www.facebook.com/postrockextension/posts/1827968250735787 on January 31, 2022 to create awareness of the program. There are 10,357 total followers for the 2 counties/7 districts with K-State Research and Extension.

The second promotional piece was the flyer with all the details for the event. Our team members helped develop and published the piece using Powerpoint software with a color copier. The flyer was posted on each of the two counties and seven district websites along with distributed to approximately 2,423 producers on each of the county/district ag listserv lists. After the information was distributed and promoted, several county/district offices received several inquiries about the event series and registrations totaled 261 for the virtual series.

The third promotional piece was a news release that was shared in each of the collaborating counties/districts with K-State Research and Extension. There were approximately 27 local newspapers and 2 regional ag publications that were utilized for promotion purposes. The total distribution for this promotional resource was 113,426.

RU READY TO FARM: GETTING ROOTED IN THE GARDEN STATE

EVENT PROMOTIONAL PACKAGE

Brendon Pearsall
Senior Program Coordinator
Rutgers Cooperative Extension
Hightstown

Pearsall, B*[1], Hlubik, W*[2], Errickson, W*[3], Errickson, L[4], Sawatzky, A[5], Eberly, L[6]

[1] Senior Program Coordinator, Rutgers Cooperative Extension, Hightstown, New Jersey, 08520
[2] County Agent, Rutgers Cooperative Extension, North Brunswick, New Jersey, 08902
[3] County Agent, Rutgers Cooperative Extension, Freehold, New Jersey, 07728
[4] Director, Rutgers Gardens, North Brunswick, New Jersey, 08902
[5] Program Coordinator, Rutgers Gardens, North Brunswick, New Jersey, 08902
[6] Videographer, Rutgers Cooperative Extension, Skillman, New Jersey, 08558

The RU Ready to Farm Beginner Farmer Training Program is a 3-phase multi-year program designed to increase the knowledge and skill base of new and beginner farmers in New Jersey to help them transition into an agricultural career. The items featured in this entry were developed as part of an ongoing effort to increase awareness of the program among potential participants, the broader farming community, and state and local government. The promotional flyer was designed by the lead author with assistance from the team and distributed to news media, agricultural groups, and at the Middlesex County Fair. It played a key role in attracting 657 unique visitors to our inaugural information session registration page of which 73 registered for the event. The video submission (https://youtu.be/PG9OmJGru1g) provides highlights of the farm tours that were a feature of the first year of the program. The team recruited videographer Linnéa Eberly to film the events and produce finished videos from the footage. The team's role in these videos included the initial outreach and recruitment of Linnéa, the coordination of farm tours, organizing the equipment and software Linnéa used, directing which content to produce, and providing comments throughout production. This video has been used to promote the program to political leaders, new participants, and the Princeton Ag Society. The tri-fold brochure was designed by the author with input from the overall team in the form of photos and comments. 1000 copies were printed. So far, they have been distributed at the New Jersey Vegetable Growers Association Convention and through our County Extension Offices. The results of these promotional efforts include attracting 48 registered participants to our first program year, our goal was 20. Additionally, 35 perspective participants have been placed on a waiting list for our second year. Of the 48 year-one registrants, 12 moved on to Phase 2 of the program, filling all available slots. The primary program goal is to have at least 12 participants develop a farm business. Though it is early to evaluate the overall impact, 2 participants have purchased farms and are developing plans to start their farm business.

Regional Winners

STRATEGIC FARMING: LET'S TALK CROPS!

EVENT PROMOTIONAL PACKAGE

Lizabeth Stahl
Extension Educator - Crops
University of Minnesota
Sherburn

Stahl, L*[1], Bongard, P*[2]

[1] Extension Educator - Crops, , Sherburn, Minnesota, 56171
[2] Educational Content Development & Communications Specialist, University of MN Extension, Farmington, Minnesota, 55024

The "Strategic Farming; Let's Talk Crops!" program was developed to provide research-based information to farmers and agricultural professionals around a myriad of crop production issues in an effective and efficient manner. The information provided is intended to help farmers

optimize crop production and enhance profitability, while focusing on best management practices, integrated pest management, and environmental stewardship. In 2022, the program consisted of 13 one-hour webinars, Wednesday mornings from January 5 through March 30. Sessions were recorded and posted online. To promote the program, the authors created a press release that was distributed to media across the state, the MN Crop News blog (2,829 subscribers as of 3/14/22), the SW MN Extension Crops Update (1,096 subscribers as of 3/15/22), the email addresses of previous attendees, and UMN Extension Twitter and Facebook pages. The authors prepared a poster advertising the program that was printed and displayed at the UMN Extension booth at the Minnesota Corn Growers Association and Minnesota Soybean Growers Association, MN Ag Expo in Mankato, MN, 1/19-1/20/22. The authors worked with support staff to prepare a one-page, double-sided flyer that was distributed at the Crop Pest Management Short Course (12/7-12/7/22), six Research Updates for Ag Professional (1/4-1/13/22), Private Pesticide Applicator Workshops, and multiple local and regional crops events throughout the state. The picture used as part of the program "branding" was taken by Stahl. There have been 1,792 participants for the 10 sessions to date, and views as of 3/13/22 = 1,294 for the 10 webinars posted to date at z.umn.edu/strategic-farming. Follow-up blogs on each session have been posted on the MN Crop News (5,094 views as of 3/14/22 for the nine posted to date) and press releases have been distributed to media across the state after each session. Stahl also advertised the program through statewide, regional, local, and multi-state radio (e.g., Linder Farm Network, Red River Farm Network). Evaluation results from post-webinar surveys to date indicate 95% agreed they increased their knowledge by attending the webinar (n=484), and 80% agree they plan to use the information presented in their farming operation or work (n=480).

WALKING STRONG HOOF HEALTH WEBINAR SERIES
EVENT PROMOTIONAL PACKAGE

Tina Kohlman
DAIRY & LIVESTOCK AGENT
University of Wisconsin Madison Division of Extension Fond du Lac

Kohlman, T*[1], Bjurstrom, A*[2], Fuenzalida, M[3]
DAIRY & LIVESTOCK AGENT, UW-Extension Fond du Lac

[1] County, Fond du Lac, Wisconsin, 54935
[2] Extension Dairy Agent, UW Madison Extension, Kewaunee County, Wisconsin, 54216
[3] Dairy Educator (former), UW-Madison Extension Dane County, Madison, Wisconsin, 53558

When it comes to health issues on a dairy farm, lameness is usually a main concern along with mastitis and reproductive issues. Lameness includes any abnormality which causes a cow to change the way she walks. It can be caused by a range of foot and leg conditions including foot rot, digital dermatitis, laminitis, and claw disease.

Digital dermatitis, often referred to as hairy heel warts, is an infectious foot disease in dairy and beef cattle herds. It has been reported on 70 percent of all U.S. dairies and 95 percent of large operations comprising 500 or more cows. Once introduced to the herd, the disease can spread rapidly, often leading to lameness in cows, which decreases milk production and reproductive health (fertility) in dairy animals.

Walking Strong is a three-part hoof health webinar series designed for farmers, dairy workers, veterinarians, and agribusiness professionals. With Hispanic speaking individuals providing much of the on-farm labor, the series was offered in English and Spanish to reach an underserved audience. The hoof health series focused on prevention and control of infectious claw diseases, prevention of claw diseases in robotic milking systems, and prevention and control of digital dermatitis in heifers. As part of the promotion for the hoof health webinar series, Extension Dairy Educators Tina Kohlman, Aerica Bjurstrom, and (former) Maria Jose Fuenzalida co-developed and -promoted co-developed and -promoted the virtual meeting through print and social media platforms.

A press release written and distributed by Fuenzalida to local, regional, and state farm newspapers as well as for use by county-based educators in county newsletters and email blasts.

An email banner graphic developed by Kohlman promoting the three-part webinar series, developed using Canva, a free online graphic design program. Image was taken and provided by Bjurstrom.

Social media graphics promoting each of the three webinars in the series was developed by Kohlman and posted on the Extension Dairy Team Facebook page one week prior to the respective meeting. Image was taken and provided by Bjurstrom. Example grpahic link: https://www.facebook.com/UWExtensionDairyProgram/posts/1910890672409639.

CCE FARMER TAX SCHOOL
EVENT PROMOTIONAL PACKAGE
Katelyn Walley-Stoll
Extension Specialist
Cornell University, Southwest New York Dairy, Livestock, and Field Crops Program
Cattaraugus

Walley-Stoll, K*[1]

[1] Extension Specialist, , Cattaraugus, New York, 14719

To help farms navigate complex tax management decisions, a group of Cornell Cooperative Extension Farm Business Management Specialists delivered a series that was designed to inform and empower farm managers to better understand their tax obligations, management strategies, and improve farm profitability. From October 2021 - January 2022, four specific topics were presented virtually that included: Income Tax Planning for Farms that File a Schedule F, Farm Financial Records for Decision Making and Tax Management, Tax Management for Beginning and Small Farm Businesses, and Farm Specific Tax Code Benefits.

With specific learning objectives and course descriptions, farmers were able to enroll in one or more classes to address their tailored needs and interests. The program provided a mix of introductory and intermediate content appropriate for new and experienced farm operators. The CCE Farmer Tax School had 430 registrations/ attendees overall, including farm owners and managers, tax preparers, CCE educators, FarmNet consultants, and industry representatives.

The program planning team included Bonnie Collins, CCE Oneida County; Steve Hadcock, Capital Area Agriculture and Horticulture; Elizabeth Higgins, ENY Commercial Horticulture; Mary Kate MacKenzie, SCNY Dairy and Field Crops; Dayton Maxwell, Capital Area Agriculture and Horticulture; Joan Petzen, NWNY Dairy, Livestock, and Field Crops; Nicole Tommell, CNY Dairy, Livestock and Field Crops; and Katelyn Walley-Stoll, SWNY Dairy, Livestock, and Field Crops.

Katelyn Walley-Stoll took the lead on promotional and administrative considerations for the series, in addition to contributing to the presentations for the first course. These promotional materials included:

Program Promotional Flier: Designed our base promotional tool to include an original logo, course descriptions, program details, and additional information. This was used across CCE networks in electronic and mailed newsletters and on social media posts. Attached.

Press Release for Regional Customization: Wrote a “base” press release that was then edited by each project team member to fit their regional needs. Attached.

Website Landing Page for Registration: Created a centralized webpage (tinyurl.com/ccetax school) which housed all of the program details, sponsorship opportunities, and course registrations. This was used in all of our promotions for streamlined advertisement and registration. Full url: https://swnydlfc.cce.cornell.edu/submission.php?id=1375&crumb=currentxxprojects|16

TRI-COUNTY AG EXTENSION GROUP COMMODITY EDUCATIONAL SERIES
EVENT PROMOTIONAL PACKAGE
David Fourqurean
Calhoun

Fourqurean, D*[1], Shadrick, V*[2], Stone, J*[3]

[1] ANR Agent, , Calhoun, Kentucky, 42327
[2] ANR Agent, , Dixon, Kentucky, 42409
[3] ANR Agent, , Madisonville, Kentucky, 42431

The purpose of this educational series was to pool all the resources that the Tri-County Ag Extension Group had at their disposal, to provide educational opportunities to producers in the area. Vicki Shadrick, Jay Stone and David Fourqurean worked to identify issues that needed addressed from an educational standpoint. Three area’s that were identified were Grain Production, Forage production and Tobacco production. The specific issues within these areas were Dicamba Certification: With the increase in Dicamba complaints, producers needed training to apply Dicamba products correctly and in the correct conditions. The grain meeting gave the team members an opportunity to discuss real world situations from 2021 and how to prevent those problems from arising again. Forage Sampling: As fertilizer, feed and other inputs hit beef producers financially, forage analysis becomes even more important. The Tri-County Beef Field Day gave producers a chance to learn the correct procedure to sample their forages as well as how to interpret the results to make better financial decisions about input purchases to improve their own forage production or the purchase of forage/commercial supplements. GAP Training: As producers learned about Good Agricultural Practices related to tobacco production, team members had the opportunity to help farmers understand how to manage high input prices, manage H2A related issues and several new production issues. The team created flyers that were used in all 3 county newsletter mailings encompassing

550 producers as well as posting on all 3 county Facebook pages and the newly established Tri-County Ag Extension Group Facebook page. Over 150 producers that account for 75% of the acreages in these focused groups took part in these programs. As one producer was quoted “These types of programs are what make Extension such a valuable resource to us as producers”.

BELL COUNTY CONSERVATION EXPO

EVENT PROMOTIONAL PACKAGE

Whitney Ingram
CEA-NR
Texas A&M AgriLife Extension Service
Belton

Ingram, W[1]

[1] CEA-NR, , Belton, Texas, 76513

Land ownership is changing throughout the state as new property owners purchase more rural land in Texas. In Bell County, new and small acreage landowners make up a substantial portion of the residents. By providing educational tools and resources to property owners, informed individuals are more likely to become better stewards of the land by conducting the practices that help conserve our natural resources. The 2021 Bell County Conservation Expo took place on October 28th, 2021. This annual program is geared toward providing educational resources and information for new landowners in Bell County. Program topics included plant identification, weed control, predator control, property tax assessments and special valuations. 45 participants, 14 sponsors/ committee members, and 7 program speakers were in attendance. 2 CEU hours were offered. A flyer (attachment 1) was created by the agent to advertise the program. The flyer was emailed to 300 participants on the Bell County Ag & Natural Resources mailing list. The flyer was also printed and posted on 3 community bulletin boards in the county. The news article (attachment 2) was prepared by the agent and submitted to the Temple Daily Telegram. It was published twice. The Temple Daily Telegram is a seven-day, morning newspaper which has been a leading source of news and information for Central Texas since 1907. The program (attachment 3) was printed to provide participants with an overview of the agenda and to recognize contributing partners and sponsors. An evaluation was conducted following the program and participants exhibited a high level of knowledge gained and intentions to adopt best management practices.

DATE PALM WEBINAR SEMINAR SERIES

EVENT PROMOTIONAL PACKAGE

Sonia Rios
Area Subtropical Horticulture Advisor
University of California Coop. Ext.
Moreno Valley

Rios, S*[1], Montazar, A[2]

[1] Area Subtropical Horticulture Advisor, UC ANR Riverside/ San Diego, Moreno Valley, California, 92557-8718
[2] Irrigation and Water Management Advisor, UC ANR Imperial, Holtville, California, 92250

Dates can only be produced in Arizona and in the Coachella and Imperial Valleys of California’s desert region. Traditionally, the author would host an annual Date Palm Field Day that would be held in East Riverside County in California. However, due to COVID-19 restrictions a webinar series was determined to be the next best thing. The 2021 Date Palm Webinar Seminar Series was coordinated by the author and fellow farm advisor, Ali Montazar in an effort to provide research-based information to date palm growers and stakeholders in Arizona and California on current best management practices for dates. In addition to the valuable information, distributing continue education units (CEU’s) was also a priority. Topics presented by University of California (UC) advisors, specialist, agriculture commissioners, and USDA/ARS researchers included irrigation management, puffy-skin puffiness, current laws and regulations, and several topics in IPM. There was also a seminar that was given exclusively in Spanish for our Spanish-speaking clientele. Recorded seminars can also be found on the UC Agriculture and Natural Resources YouTube channel. Marketing content was developed by UC Program Support and the author. The program was promoted via email blast at the local and multi-state state level on several email servers (including local advisor email list which consist of approximately 4,000+ address, as well as UC Program Support email list). It was also advertised on the authors social media via Twitter. UC IPM distributed fliers of the agenda which were distributed through Arizona’s Department of Agriculture, Western Chapter of the International Society of Arboriculture, Certified Crop Advisor organization, and through the California Department of Pesticide Regulations, as we were offering over 10 hours of CSU hours. These promotional efforts resulted in approximately 145 participants from two states, and two international countries which included Mexico and Morocco. With an average of 35 people per session. Overall satisfaction for the series was rated excellent as post surveys were given. On average about 98% (n-=65) agreed or strongly agreed that they gained knowledge from the seminar series.

GOODING COUNTY SCIENCE FAIR PROMOTIONAL PACKAGE

EVENT PROMOTIONAL PACKAGE

Cindy Kinder
Extension Educator
University of Idaho
Gooding

Kinder, C[1], Dorchuck, T[2], Hamilton, J[3]

[1] Extension Educator, , Gooding, Idaho, 83330-1178
[2] Administrative Assistant, University of Idaho, Gooding Extension, Gooding, Idaho, 83330
[3] Community STEM Coordinator , University of Idaho, Gooding Extension, Gooding, Idaho, 83330

The science fair promotional package was used to inform and encourage participation in the county wide science fair. The promotional packet included information about science projects, dates and timelines to participate in the fair, registration information and descriptions of each of the project types (research or exploration), divisions (Jr. High, High School, Open) and 10 science project categories (Animal Systems; Biology, Environmental Services/Natural Resource Systems, Food Products and Processing Systems, Plant Systems; Biology, Power, Structural, Technical and Robotic Systems, Social Science, Chemistry, Biomedical & Health Services, and Mathematics & System Software, Other). The team lead conducted an informal needs assessment and determined that students needed more explanation on how to set up science projects, how to write a report and create a poster, along with an interview judging rubric. This was included in the packet. Each member of the team complied and edited assigned sections in the packet. The packet was created and distributed during the winter to all schools in the county to encourage their students to engage in an individual, team or class wide science project and then enter it in the spring science fair. Science fair packets were created and edited by the team in MS Word accessed by MS Teams and then the final version was converted to Adobe PDF format. The packets were then printed in color with the County Extension Office equipment and hand delivered to students at schools and emailed to teachers. All school districts received the information and 67% participated in the science fair, this is a 400% increase from the previous year; 233 students participated in the 3rd Annual Gooding County Science Fair which is a 423% increase from 2021.

GROWING FORWARD FARM OPEN HOUSE

EVENT PROMOTIONAL PACKAGE

Bonnie Hopkins Byers
County Extension Agent/Agriculture
New Mexico State University
Aztec

Hopkins Byers, B*[1], Webster, Z[2], Medlock, W[3], Griffiths, R[4]

[1] County Extension Agent/Agriculture, , Aztec, New Mexico, 87410
[2] San Juan County 4-H Ag Agent, NMSU, Aztec, New Mexico, 87410
[3] Program Specialist , NMSU CES San Juan County, Aztec, New Mexico, 87410
[4] San Juan County FCS Agent, NMSU, Aztec, New Mexico, 87410

In October 2021, the San Juan County Extension staff hosted an open house for the Growing Forward Farm project. Growing Forward Farm is a cooperative project between the San Juan County Cooperative Extension, San Juan County Government, and NMSU Cooperative Extension to create an outdoor agricultural classroom. The mission of the farm is to connect youth and community members to the legacy and future opportunities for agriculture in San Juan County and beyond. The target audience is San Juan County community members, and the goal was to create an agricultural training center unlike anything else offered in the state on New Mexico to help spread agriculture, environmental, and natural resource education amongst our community. The open house event was a celebration of the collaborative community work done to build the foundation of the farm project. The event was advertised on social media, through the Agricultural and 4-H newsletters, and on the local radio. The newsletters collectively reached 824 community members. The social media posts had a reach of 313, and the podcast was viewed 121 times. For the event, the agents created promotional materials about the farm, as well as a self-guided tour for participants. The open house had 107 attendees that toured the farm and learned about the Growing Forward Farm vision and mission. During the event, local dignitaries, the Director of NMSU Cooperative Extension and the County Program Director addressed the audience. The program concluded with the local fire department “christening” the Growing Forward Farm Barn using their fire hoses. The varied promotion program was successful as it brought in an audience from all over the community to celebrate the farm collaboration.

Podcast Interview on KSJE: https://www.facebook.com/watch/?v=1189407111542484

Growing Forward Farm Social Media Post:
https://www.facebook.com/111636427405336/posts/340252151210428/

State Winners

NORTH CENTRAL

Illinois	Chelsea Harbach
Indiana	Mathias Ingle
Iowa	Kapil Arora
North Dakota	Renae Gress
Ohio	Beth Scheckelhoff
South Dakota	Sara Bauder

NORTHEAST

Maryland	Erika Crowl
West Virginia	Alexandria Smith

SOUTHERN

Alabama	Zachery Brannon
Arkansas	Jan Yingling
Mississippi	Heather Jennings
North Carolina	Sara Drake
Oklahoma	Shannon Mallory
South Carolina	Alana West
Tennessee	Rachel Painter
Virginia	Michael Parrish

WEST

Washington	Don McMoran

Bound Book/eBook

National Winner

SEASONAL PLANTING GUIDE AND CALENDAR FOR SOUTH CAROLINA SCHOOL AND COMMUNITY GARDENS

Amy Dabbs
Statewide School & Community Gardening Coordinator
Clemson University
Charleston

Snipes, Z*[1], Snipes, Z*[2], Ballew, J*[3], Last, R*[4], Tanner, S*[5], Turner, S*[6], Whitener, P*[7]

[1] Statewide School & Community Gardening Coordinator, , Charleston, South Carolina, 29401
[2] Commerical Horticulture Agent, Clemson Extension, Charleston, South Carolina, 29401
[3] Commerical Horticulture Agent, Clemson Extension, Lexington, South Carolina, 29072
[4] Horticulture Extension Agent, Clemson Extension, Barnwell, South Carolina, 29812
[5] Horticulture Program Team Director, Clemson Extension, Clemson, South Carolina, 29634
[6] Horticulture Extension Agent, Clemson Extension, Greenwood, South Carolina, 29648
[7] 4-H Youth Development Agent , Clemson Extension, Greenville, South Carolina, 29601

The Seasonal Planting Guide and Calendar for South Carolina School and Community Gardens serves as the textbook for two Clemson Extension statewide online courses: “School Gardening for South Carolina Educators” and “Cultivating Communities: A Clemson Extension Community Gardening Program.” Authors from the Clemson Extension Horticulture Program Team and 4-H Youth Development Team designed the book as an “easy-to-follow guide that includes gardening checklists, crop profiles, common insect pests, vegetable diseases, a harvesting guide, sample planting calendars, and expanded plans for year-round vegetable gardening in South Carolina.” The workbook format allows gardeners to quickly consult checklists and tables to find answers to common questions.

The book was designed by Torborg Davern Design. Reviewed by Thomas Litton, Janet Litton, and Dawn Anticole White. Published by Clemson University Press.

National Finalists:

BEST MANAGEMENT PRACTICES FOR SUNFLOWER PRODUCTION

BOUND BOOK/EBOOK
Patrick Wagner
Entomology Field Specialist
SDSU Extension
Rapid City

Wagner, P*[1], Varenhorst, A*[2], Mathew, F[3], Beck, R*[4]

[1] Entomology Field Specialist, South Dakota State University, Rapid City, South Dakota, 57703
[2] Assistant Professor & SDSU Extension Field Crop Entomologist, South Dakota State University, Brookings, South Dakota, 57007
[3] Associate Professor and Field Crops Pathologist, South Dakota State University, Brookings, South Dakota, 57007
[4] Former Agronomy Field Specialist, South Dakota State University, Pierre, South Dakota, 57501

The first edition of “Sunflower Production” was published by South Dakota State University (College of Agricultural and Biological Sciences and Cooperative Extension Service) in 2000. “Best Management Practices for Sunflower Production” replaces the first edition of “Sunflower Production.” The purpose of this publication is to provide South Dakota sunflower stakeholders with up-to-date information on commercial sunflower production and pest management. In addition, the information can

also apply to other sunflower producing areas of the United States. This publication is freely available both online (https://extension.sdstate.edu/best-management-practices-sunflower-production) and in print. To date, there have been 10,000 copies of this publication printed and over 1,000 copies distributed across South Dakota and neighboring states.

NEW JERSEY COMMERCIAL HEMP FIELD PRODUCTION GUIDE
BOUND BOOK/EBOOK
Stephen Komar
Agricultural Agent
newton

Infante-Casella, M*[1], Bamka, W*[2], Brown, K*[3]

[1] Agricultural Agent/Professor, Rutgers Cooperative Extension, Clarksboro, New Jersey, 08020
[2] Agricultural Agent/Associate Professor, Rutgers Cooperative Extension, Westampton, New Jersey, 08060
[3] Program Associate, Rutgers Cooperative Extension, Westampton, New Jersey, 08060

Hemp is a new crop for today's farmers in New Jersey and in some other states of the United States. A Rutgers Cooperative Extension Team of Agricultural Agents received multiple inquiries from producers trying to decide to produce hemp in light of new regulations. In 1970, the Controlled Substance Act Classified Cannabis sativa as an illegal Schedule I drug making all cannabis production illegal without a DEA permit regardless of Tetrahydrocannabinol (THC) levels. This act prohibited the production of hemp. In recent times, the 2018 Farm Bill directed the United States Department of Agriculture to establish a national regulatory framework for hemp production in all 50 states. The New Jersey Hemp Farming Act was enacted in August 2019. This new legislation provided regulatory framework to allow hemp producers to grow and sell hemp for commercial purposes in New Jersey. Rutgers Cooperative Extension Agricultural Agents began assisting producers with interpretation of new rules for compliance when producing hemp, production methods, pest controls, harvest methods, post-harvest handling, and storage of hemp. In order to meet the needs of producers who were navigating this new crop, a grant was applied for and awarded on October 1, 2020 from the Northeast Sustainable Agriculture Research and Education (SARE) program to fund development of a field production guide for hemp. In November of 2021, Rutgers Team Members, completed and posted the e-book "New Jersey Commercial Hemp Field Production Guide" on the Rutgers SARE website hemp publications page. The guide was developed using field research data from studies conducted by the Rutgers Agricultural Agent team and findings from other Mid-Atlantic and Northeastern states conducting hemp research. All sections of the guide were written by the team and a literature search was done with assistance from an undergraduate intern student. In just the past 3 months, this e-book has been viewed on the Rutgers SARE website by 1,243 visitors and downloaded 135 times. The e-book can also be found on the SARE Grants Report website at https://projects.sare.org/information-product/new-jersey-commercial-hemp-field-production-guide/ along with the project report.

SOUTHERN GARDENING ALL YEAR LONG
BOUND BOOK/EBOOK
Gary Bachman
Horticulture Specialist
Mississippi State
Biloxi

Bachman, G[1]
[1]Horticulture Specialist, Mississippi State University, Biloxi, Mississippi, 39532

Gardens are amazing, living creations. They change by the season, they are places to try new things. Many of the writings in this book originate in my Ocean Springs, MS home garden. But this book is not an encyclopedic listing of plants. I share both my garden all-stars and successes, along with plants that did not perform well and ideas I had that weren't so good. This book is both practical and common sense, to make gardening approachable. It is an encouragement to get out and enjoy your garden and landscape

Regional Winners

FLORIDA FRIENDLY LANDSCAPING IN SEMINOLE COUNTY
BOUND BOOK/EBOOK
Tina Mcintyre
Extension Agent 1
UF/IFAS Extension
Sanford

McIntyre, T*[1], Gutner, R[2], Pinkerton, M*[3], Wilson, S[4]

[1] Florida Friendly Landscaping Agent, UF/IFAS Extension Seminole County, Sanford, Florida, 32773
[2] Research Assistant, UF/IFAS Extension Seminole County, Sanford, Florida, 32773
[3] Sustainable Agriculture Agent, UF/IFAS Extension Seminole County, Sanford, Florida, 32773
[4] Professor of Environmental Horticulture, UF/IFAS Environmental Horticulture Dept., Gainesville, Florida, 32611

Some invasive plants are listed as "prohibited for sale"

on the Florida Department of Agriculture and Consumer Services Noxious Weed List, however many invasive plants are still commercially available. Invasive species pose significant threats including economic losses in agriculture, human and animal health hazards, disruption of native ecosystems and more. Most invasive plants today were introduced by the horticulture industry for ornamental purposes and approved horticultural cultivars can be confusing for even experts. In 2019, Tina McIntyre, lead author, began documenting the call from the local Central Florida Cooperative Invasive Species Steering Committee and in 2020 started to assemble the team and write. Plant This, Not That: A Guide to Avoiding Invasive Plant Species in Florida is a laminated, ring-bound-flipbook written to provide safe alternatives to commonly sold invasive ornamental plants. Perfect of the resident or professional visiting or running a nursery, this revolutionary resource includes 22 invasive plants that are commonly available for sale along with hundreds of listed and pictured alternative cultivars or Florida-Friendly species. Published in October 2021 in conjunction with the UF/IFAS Bookstore & Communications and funded by Seminole County, over 500 copies have already been bought or distributed. Concepts from the book have been integrated into classes for landscape professionals, industry nursery owners, master gardeners and the general public. Preliminary results show that 275/283 or 97% of participants increased their knowledge about the impact invasive species have in Florida, 279/280 or 99.6% of participants intend to use the information from the class to choose plants that are not invasive, and 241/258 or 93.4% of participants felt more confident they could identify invasive plant species. Notable publicity has included The Tampa Bay Times, Brevard Business News, Central Florida Agriculture News, Florida Currents Trade Magazine, Lake Mary, Sanford, Oviedo, Altamonte Springs LIFE Magazines, Interviews about the book on First Coast Connect (local National Public Radio NPR) and Better Lawns & Gardens Radio. The book is available for purchase at the UF/IFAS Bookstore http://ifasbooks.ifas.ufl.edu/p-1658-plant-this-not-that.aspx and will help protect our natural resources, reduce costs of invasive plant management, and beautify our landscapes. A copy was sent to Kalyn Waters.

FORAGE NUTRITION STUDY FOR THE SAN PEDRO NRCD
BOUND BOOK/EBOOK
Ashley Wright
Livestock Area Associate Agent
The University of Arizona
Vail

Wright, A*[1], McReynolds, K[2], Stratton, S[3]

[1] Livestock Area Associate Agent, University of Arizona, Vail, Arizona, 85641
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Forage nutritional content has been a topic of priority for Arizona cow-calf producers for several years. Most producers are grazing cattle on large tracts of public land, and forage quality can vary greatly across the region and from year to year as climate conditions change. In 2018, the San Pedro Natural Resource Conservation District (NRCD) requested a forage nutrition study within their district. This district is located in the middle San Pedro River Valley, about 40 miles south and east of the city of Tucson. The Box K ranch near the town of St. David (in Cochise County) was selected as a representative operation, and four study sample sites were established based on ecological site. At each site a rain gauge was established and key grazing species to be sampled were identified. Between 2018 and 2021, each site was collected 2x per year, and forages were sent to the Utah State University Analytical Laboratory (USUAL) to be tested for TDN, protein, and key minerals. Once completed, this work, along with all relevant literature and background information was compiled into a 19 page ebook report (50 pages, including appendices). Once completed, the results of the study were presented at a meeting of the San Pedro NRCD, and the ebook was distributed digitally to the San Pedro NRCD, as well as neighboring NRCDs and relevant cattlemen's groups in the area. This publication includes background information on the importance of mineral and protein supplementation to cattle, maps and descriptions of the ecological sites selected, all collected data for the sample sites, and summary charts conveying the findings of the forage nutrition data. This data was used to make general recommendations for mineral and protein supplementation for producers grazing cattle on similar landscapes, and several producers both within the San Pedro NRCD, and in the surrounding region have altered their mineral and/or protein supplementation strategies based off this information. Additionally, a larger study has been undertaken at the statewide level to expand the applicability of this information to more producers.

State Winners

SOUTHERN

Alabama	Leanne Dillard
Arkansas	Allison Howell
Texas	Andrew Lewis

PRESENTATIONS

2022 NACAA
107th
Annual Meeting
and
Professional Improvement Conference

West Palm Beach, Florida

4-H AND YOUTH PROGRAMMING PRESENTATIONS

FARM TO PLATE, WE EDUCATE

4-H AND YOUTH PROGRAMMING
Lauren Butler
County Extension Director/ Livestock Agent
UF/IFAS Extension Okeechobee County
Okeechobee

Authors: Lauren Butler[1], Colleen Larson[2]

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Okeechobee County, Florida ranks first in beef cattle and dairy production in the state of Florida, with over 185,000 head of cattle. These enterprises help make Okeechobee one of the top 10 agricultural producing counties in the state earning producers $257 million annually. Maintaining this industry requires knowledgeable individuals and motivated young people willing to enter this lifestyle. Objectives: The objectives of this program were 1) develop a program that reflects the needs of our community 2) provide educational opportunities that increase the knowledge and skill of the participants by at least 20%. Methods: We accomplished these goals by creating an agricultural youth day camp called "From Farm to Plate We Educate". To accomplish our goal of education the majority of the activities were tours where we explored topics through agricultural operations, agricultural support industry operations (trucking and refinery), environmentally sensitive locations and market outlets of agricultural products. To enrich each of the tour stops we used experiential learning, hands-on activities, demonstrations, sensory demonstrations, observations and STEM activities before, during or after each location. Results: Over the course of the 3 years that this camp has been active, 56 students have indicated a 25% increase in knowledge gain in the areas of: dairy production, human nutrition, biological controls, beef and citrus production, and aquaculture. Another result of the camp is repeated funding, an indication we are reaching a need within the community as our funding comes from our Children Services Council which only funds youth events that are not occurring in similar capacities. Impact: Participants of this camp show an increase of 15% in awareness of agricultural production in Okeechobee County as well as in the state of Florida. Through the subjects and activities, not only did we educate kids on agricultural fields, but we also improved eating habits, educated them on food safety, career opportunities, and local food systems. Three participants also used their exposure to the specific agricultural operations to complete science fair projects relating to the agricultural commodity.

GREEN THUMB CLUB – URBAN GARDENING AFTER SCHOOL PROGRAM

4-H AND YOUTH PROGRAMMING
Sarah DeBour
ISU Extension and Outreach
Mason City

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According to the Iowa Department of Education, Bureau of Information and Analysis, 59% of Mason City youth at Lincoln Intermediate School are on free/reduced lunch. Green Thumb Club is an afterschool program that teaches youth about the development of their food. The Cerro Gordo County Extension and Outreach office partnered with Lincoln Intermediate School in Mason City to offer an after school urban gardening program. Through Green Thumb Club, youth learned the basics of gardening and where their food comes from. The club meets weekly after school and is completely free for all participants. This allows members of the under-represented groups to attend and feel included. Each semester we offer Green Thumb Club, we see an increase in the number of participants. From fall of 2020 to spring of 2021, we saw a 54.5% increase in participant numbers. The student evaluation indicated that 95% of students were more interested in STEM (plant science specifically) after attending Green Thumb Club. Of those students, 97.5% of them expressed interest in attending Green Thumb Club again during the school year. Green Thumb Club is an essential addition to Lincoln Intermediate School that allows youth to learn about gardening and food security through hands on, STEM lessons. Iowa State University Extension and Outreach intends on continuing the Green Thumb Club program in the future, with the desire to educate all Lincoln Intermediate youth about food security.

THE 4-H BREAKFAST CLUB: DEVELOPING A SUCCESSFUL LIVESTOCK PROJECT FOR UNDERSERVED AUDIENCES

4-H AND YOUTH PROGRAMMING
Melissa Beermann
County Director
Monona County Extension
Onawa

Authors: Melissa Beermann[1]

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Swine and poultry production are important enterprises in the State of Iowa. Swine production has declined in West Central Iowa, with only one pig shown at the Monona County Fair in 2010. Teaching youth life skills while participating in hands-on learning about these industries is foundational to rural Iowa. As the nation's demography shifts, it is important to reach all audiences. The livestock project – 4-H Breakfast Club – provides an opportunity for low-income, non-farm families and underrepresented, culturally and ethnically diverse youth. Diverse audience recruitment has been key to the success of the program. Females make up 65% of the participants. 85% of participants are non-rural, while minority youth make up 20% of the club. A hands-on approach to learning and partnership with the ISU Western Research Farm were key to drive results. Financing was needed, pigs sourced, project location identified, participants recruited, a training program curriculum was developed and trainers were identified. The guiding principles are empowered with interpersonal skills and exposure to AgSTEM experiences. Participant Jocelyn Ramos commented "With this program, it really did open my eyes. Maybe I could pursue something in this career. This ag major, this field is not very diverse. But, as a Senior in High School now, I could potentially do this. Now it is a possibility." Other participants are now County Extension Council members, 4-H Youth Committee members, volunteers or donors. Education includes several hands-on workshops. Record keeping, showmanship, judging, financing, nutrition, biosecurity and meat cut identification are examples of the activities. The summer field day features Swine Specialist Dave Stender's GloGerm challenge used to illustrate biosecurity and a group quiz bowl. Weekly chores, high standards of herdsmanship and a team environment are expected. Media recognition, industry & public support and grant awards have solidified the impacts. Iowa State representative Randy Feenstra attended the Research Farm field day - with our minority participants reporting how they valued the program. By lowering the barriers, the 4-H Breakfast Club reaches an average of 32 youth each year and has created a successful environment for all youth to be involved in 4-H in new ways.

ENGAGING YOUTH AS CONSUMERS AT FARMERS' MARKET

4-H AND YOUTH PROGRAMMING
Amanda Bennett
Ext. Educ., ANR
Ohio State University Extension
Troy

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Farmers markets can be an exciting social event in a community and provide a tool to teach about local agriculture. A Junior Farmers Market was conducted 13 times in two counties for elementary students. The goal of the grant-funded markets was to provide opportunities for youth to make healthy food choices, try new vegetables, be introduced to shopping at farmers markets, encourage healthy purchasing habits and make connections with local producers. The markets were located on school grounds and attempted to replicate the atmosphere of a traditional farmers market. The youth interacted with local farmers at stations where fresh produce was available to "purchase" with wooden market coins. Partner agencies presented topics such as encouraging healthy drinks, hands-on activities for youth to explore where their food comes from and tasting new vegetables.

All programs were evaluated via surveys completed by the student, teachers, and parents. At one site a formal student evaluation was gathered utilizing a web-based survey administered to the students (n=137). Results of the survey showed 81% of the students ate produce purchased from the market and 58% stated they were excited about eating fruits and vegetables since participating in the Farmers Market and nearly 76% tried a new food at the market. Sixty-one percent responded they plan to attend a local farmer's market. An additional teacher survey revealed 100% agreed the program was a valuable tool in strengthening curriculum and one commented the event was a "great opportunity to promote agriculture in Ohio."

CREATING INDEPENDENT SCHOOL GARDENS

4-H AND YOUTH PROGRAMMING
Mariah Simoneaux
Extension Agent - Horticulture
LSU Agricultural Center
Gonzales

Authors: Mariah Simoneaux[1]

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The benefits of school gardens are well documented; however like all gardens, they require a great deal of work and attention to remain successful. For extension agents involved in school garden programming, caring for multiple school gardens and communicating with numerous teachers can become immensely time consuming. Over the last several years our Ascension Parish LSU AgCenter school garden team and volunteers have worked to encourage teachers and students so they feel confident working in the school garden. This is being accomplished by utilizing our master gardener volunteers, incorporating an annual teacher workshop, and using grant funds. More independence in the school gardens has allowed us to grow our school garden program and become more efficient with our time.

YOUTH LEARN ABOUT BEEF PRODUCTION DURING AGRICULTURE WEEK EDUCATIONAL SESSIONS

4-H AND YOUTH PROGRAMMING
Shannon Williams
Extension Educator
University of Idaho
SALMON

Authors: Shannon Williams[1]

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Lemhi County is rural with a total population of 8,027 (2019 statistics). The largest town in the county, Salmon, has a population of 3,096. While the top agricultural commodity in Lemhi county is beef cattle and calves, not all county residents are involved in beef production and not all county youth are raised on ranches.

In 2008, the Lemhi County Extension Advisory committee requested that youth in the county be provided with information on where their food comes from. The first program for fifth graders in the Salmon School District included agriculture in a Snickers™ bar, agriculture web (activity showing how agriculture industry segments are connected) and beef production. In 2013, the idea was launched to take the students on a field trip to University of Idaho Nancy M. Cummings Research, Education and Extension Center (U of I NMCREEC) so they could see cattle and experience learning outside of the classroom. A grant was submitted to the Idaho Beef Council for the cost of busses, bus drivers, port-a-potties and workshop supplies. A team of UI Extension educators, specialists, staff and volunteers were put together to present workshops. The grant was received, and the first beef field day was held in March of 2014.

The goals of the beef field day included:

- Providing youth with an understanding of how ranchers care for their cattle
- Allowing youth to see what cows eat and how they digest their feed
- Offering youth an opportunity to see how science and technology are involved in beef production

With these goals in mind, five interactive workshops were developed. In 2021, the beef field day was offered to both fifth grade and sixth grade. Sixth grade has missed the field trip the year before due to COVID-19. Pre- and post-quizzes were developed and administered to determine how much knowledge the students gained as a result of the educational sessions/presentations. The quizzes were administered by their teachers in the classrooms before and after the event. The average post-quiz scores increased by 28.94% for fifth graders and by 26.33% for sixth graders.

AG EXPLORE: AG CAREER BOOT CAMP

4-H AND YOUTH PROGRAMMING
Jan Yingling
CEA-Agriculture
University of Arkansas Cooperative Extension Servi
Searcy

Authors: Amy Tallent[1], Jan Yingling[2]

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Many high school students today have a narrow view of the careers available in agriculture and the vast opportunities available within varying college degrees. “Jobs within agriculture are abundant, according to USDA data, but high school and college students do not have high interest in pursuing a career in the field. The Prairie and White County Cooperative Extension Service agents, Amy Tallent & Jan Yingling, hosted an “Ag Explore: Ag

Career Bootcamp" educational program in June 2021. Youth in our counties deserved a broader scope of what Agriculture has to offer for young folks looking to start careers in technology. We knew there were other programs like this across the state, but they weren't accessible to all students. This program was created to bring awareness about the diverse career opportunities in agriculture in Arkansas. The students learned throughout the 3-day program that consisted of 8, on-farm tour stops, focused on the following topics: Horticulture, Row Crop, and Livestock technological careers. The experiential learning module was used as the youth were exposed to drone technology, production agriculture, equipment simulators, AI technologies, and innovative approaches to marketing in cooperation with local producers. There were a total of 72 participants of youth and adults over the 3 days of learning. Based on an end-of-tour survey, 93% of the students increased their basic understanding of careers available in row crops, horticulture, and livestock. Several testimonials received included youth explaining how much they learned about the different aspects of Agriculture and how their awareness of careers in Agriculture increased, due to attending the Boot Camp. One student shared that they are now interested in becoming a county extension agent after attending the program. Several others are interested in pursuing a career in Agriculture. Due to the success and impact of the Boot Camp, plans are being made to repeat the program but focused on different areas of Agriculture, based on our survey results.

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT PRESENTATIONS

BUILDING MARKET RESILIENCY IN IOWA THROUGH ADVANCED GRAIN MARKETING COURSES FOR WOMEN

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
Madeline Schultz
Women in Ag Program Manager
Iowa State University Extension and Outreach
Ames

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As farmers work to manage price risk in uncertain times, more Iowa women are taking on the challenge of improving grain and oil seed prices. In Iowa, 356 women participated in one of 22 Women Marketing Grain courses. Surveys and a focus group indicated women have an interest in learning more advanced grain marketing concepts. In response, the Iowa State Univeristy Extension and Outreach Farm Management Team developed the new Advanced Grain Marketing for Women course. Our goals for the 6-hour course are to offer insights into options trading, share how options marketing tools may fit into an overall marketing strategy, and demonstrate how options trading may impact farm profitability. During the course, we discuss the roles of farmer-owned cooperatives, grain merchandisers, and brokers and the services they offer related to options. By comparing cash markets, forward contracts, hedging and options trading, participants learn the pros and cons of different marketing strategies. The course is designed with several activities to encourage peer to peer learning and deepen understanding. Women engage in conversation as they identify several grains and oil seeds. As they draw charts, they gain an understanding of the trigger points for marketing decisions. Through marketing year scenarios women work in teams to develop a marketing plan and implement an options strategy

throughout the year. They discuss each team's decisions and determine how well various strategies allowed them to market crops above the cost of production. Women attending courses increased their knowledge of how and why options are traded for commodity grain marketing. They learned how options trading relates to cooperative or grain merchandiser contracts, crop insurance, and feeder/processer demand for grain. Women took important actions to access new resources, create networks, and shared information with family or other business partners. When extension provides research-based and hands-on crop marketing education for women, they can create value for their farm business and improve overall economic conditions in Iowa.

MARKETING FOR AG PRODUCERS 2021

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
Brooklyne Wassel
County Extension Agent
University of Georgia
Zebulon

Authors: Brooklyne Wassel[1], Robbie Parks[2], Todd Carlisle[3]

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Agribusiness is Georgia's leading industry with over $74 billion in annual economic impact and 9.9 million acres of operating farmland. Georgia's agricultural producers know how to run their businesses; however, many struggle to leverage digital marketing strategies to reach potential customers. Following the onset of the pandemic, many producers sought new avenues for product sales which necessitated digital marketing and connecting with new clientele. University of Georgia Extension – Pike County partnered with the University of Georgia Small Business Development Center to create a virtual marketing series specifically targeting ag producers and their specialized needs. Producers were invited to attend four free, online sessions: Reaching your customers online, getting your business online, telling your story online and putting it all together. Through the series, participants were taught how to set S.M.A.R.T. goals to align business and marketing efforts, techniques to identify their target customer and craft buyers personas, website implementation and design practices, how to create and optimize business accounts for Google My Business, Facebook and Instagram and techniques to respond to negative feedback on social media platforms. Marketing for Ag Producers 2021 educated 76 participants from 41 counties throughout Georgia representing 15 agricultural commodities. Following the series, 100% of participants reported the information was presented effectively, provided practical skills and knowledge to manage their business, helped them to understand their audience and planned to implement skills learned in the series within 12 months. Furthermore, the series acted as a gateway to resources for producers. Prior to beginning the series, ag producers reported less than 20% utilized the Small Business Development Center and approximately 60% utilized their local Extension office. Following the series, 100% of participants reported they would utilize the Small Business Development Center and their local Extension office going forward to help with their agribusiness. This relationship building and access to resources helps to set a foundation for successful agribusinesses.

IOWA FARMLAND LEASING MEETINGS RESONATE

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
Kelvin Leibold
Farm and Ag Business Management Specialist
Iowa State University Extension and Outreach
Iowa Falls

Leibold, K.[1], Brown, C. [2], Christensen, T.[2], Drollette, R.[2], Hating, P.[2], Johanns, A.[2], O'Rourke, M.[2], Stevens, A.[2], Wright, G.[2]

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Purpose: Over half of Iowa farmland is owned by someone who does not currently farm, of which 34% is owned by those with no farming experience, and the remaining 24% is owned by retired farmers (Zhang, 2017.) Both landowners and tenants look to the Iowa State University Extension and Outreach Farm Management Team to annually provide un-biased leasing information impacting 16.8 million acres in Iowa. Method: In July-August 2021, Farmland Leasing Meetings were offered across Iowa to address questions from landowners, tenants, and others. Planning for the 2-hour meetings began months in advance. A 100-page leasing guidebook was prepared for attendees and meetings sites were organized with county extension professionals. With uncertainty regarding COVID-19, programs were offered both in-person and virtually. Topics included land values, cash rent trends, rental rate determination, legal updates, carbon credits, cost of production, land improvements, water quality, landowner-tenant communication, and

annual reports. Results: The team held 77 in-person meetings and 2 virtual meetings reaching 1,380 individuals from 23 states. Of the 1,380 participants, 738 were invited to complete an online survey after the meetings. There were 297 responses for a 40.24% response rate. Three key leaning objectives were assessed using a Likert scale: 92.49% 'somewhat agreed' or 'strongly agreed' their knowledge of leasing trends and issues increased; 91.16% 'somewhat agreed' or 'strongly agreed' they can communicate better with their tenant or landowner; and 86.01% 'somewhat agreed' or 'strongly agreed' they are more confident to make changes needed. Top participant goals for applying what they learned were assessed by multiple choice: 51% selected 'increase rent;' 33% selected 'increase the information shared between leasing parties (annual reports;)' 32% selected 'improve communication with other parties involved in leasing arrangements;' 23% selected 'send termination notice to end the 2021 lease terms;' 18% selected 'discuss and/or implement conservation strategies.' Discussion: The Farmland Leasing meetings resonated with Iowa and out-of-state landowners. Meetings were effective in extending knowledge and supporting good decision-making based on un-biased information. When landowners and tenants improve leasing agreements, they can create better economic outcomes, conserve soil and water, and minimize communication stress in the farming community.

CERTIFYING FINANCIAL LITERACY FOR IOWA USDA/FSA BORROWERS

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
Patrick Hatting
Farm Management Specialist
Iowa State University Extension and Outreach
Altoona

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Farmers and ranchers often have irregular income and obtaining enough financing at the right time is critical to the success of their businesses. Nationally, farm real estate debt is expected to reach $312.0 billion, and farm non-real estate debt is expected to reach $155.4 billion in 2022 (USDA ERS, 2022.) The debt-to-asset ratio is forecast to increase while working capital is forecast to decrease from 2021. Extension has an important role in supporting smaller and newer farmers and ranchers as they navigate debt in challenging times. One way to improve outcomes is to work with the USDA Farm Service Agency to educate borrowers. The Iowa State University Extension and Outreach Financial Decision Making course is designed to increase the financial literacy of farm and ranch borrowers. The course helps borrowers develop and improve skills that are necessary to successfully operate a business and build equity in the operation. Completion of the course satisfies Iowa Farm Service Agency mandatory borrower education requirements. Borrower certification is provided directly to FSA loan officers in Iowa. The 10-12 hour course is designed to be completed online. A correspondence version is also available. There are eight financial exercises and eight online quizzes covering net worth statement, income statement, analyzing financial statements, production record analysis, financial trouble shooting, 12 steps to cash flow budgeting, cash management, and financing alternatives. As the instructor and administrator of this course, I personally work with students of diverse backgrounds and education levels to ensure the learning objectives are met. Currently there are over 200 active students in the course. In the past three years 192 students graduated from the course. After completing the course, most graduates create a detailed cash flow budget for their own farm and ranch operation. After completing the cash flow budget analysis, it can easily be modified on an annual basis. When extension supports smaller and newer farmers through financial education, they can make good decisions that lead to prosperous farm and ranch businesses and a stronger rural economy.

URBAN AGRICULTURE WORKSHOPS FOR URBAN PLANNERS

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
Hannah Wooten
Commercial Horticulture
UF/IFAS
Orlando

Authors: Liz Felter[1], Hannah Wooten[2], Kevin Camm[3], Catherine Campbell[4]

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Orange County, Florida's population is projected to swell by 700,000 new residents by 2050, exceeding 2 million. Orange County is updating their strategic plan with sustainability elements but failed to consider food for this growing population—despite Florida's valuable agricultural industry. Locals celebrate "foodie" culture supporting

600+ local farms—small, large, urban, and rural—but lack of food system planning threatens the resilience of Orange County farms and communities. As is common with local government decision makers, the County's Chief Sustainability and Resilience Officer prioritizes food but needs agricultural expertise to draft effective ordinances supporting agriculture, in particular, urban agriculture. Realizing the need for agricultural education, county government partnered with UF/IFAS Extension Orange County to receive two 1.5-hour workshops to 29 planners and department directors during May and June 2021. Preceding workshops, an IRB Approved survey was administered (n=19) to assess participants' baseline perceptions of and knowledge about urban agriculture and local food policy. The first interactive presentation explained urban agriculture and food systems. The second hybrid session was collaborative seeking department specific solutions to increase agricultural resilience. The result is cooperation among UF/IFAS Extension and local government who is now developing language to incorporate food into the strategic plan. A follow up survey was administered to planners and policy makers 9 months after the trainings (n=4) where 100% of respondents indicated increased knowledge about the significance of agriculture in Florida, complexities of the food system, and urban farming techniques. It is somewhat or extremely likely that urban agriculture will be incorporated into plans in Orange County. Respondents indicated that more training about physical locations and funding initiatives well-suited for urban agriculture will assist in determining next steps. As a result of responsive, targeted workshops, the county continues to turn to UF/IFAS Extension for local expertise related to food, farms, fertilizer, and trees and a focus on educating planners and policy makers is key.

MASTER-AGRI MANGER WORKSHOP SERIES

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
Blake Carter
County Extension Agent
University of Georgia Cooperative Extension Service
Springfield

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In 2020, the coronavirus pandemic created even more problems for crop, livestock, and specialty crop producers. Although 2021 saw a recovery in commodity prices through higher demand for agricultural products via increased domestic consumption (increased productivity and consumer spending) and record or near record export levels, producers were also faced with higher input prices, labor shortages, continued supply chain disruptions, and higher transportation costs. As a result, the farm economy is experiencing more volatility and uncertainty than we have seen in over a decade. Farmers must become even better at the business aspects of farming. These business aspects include strategic planning and marketing, risk management, creation of the appropriate legal organizational structure, financial management, capital budgeting, and human resource management. A team of faculty from the University of Georgia (UGA) College of Agricultural & Environmental Sciences Department of Agricultural & Applied Economics and Cooperative Extension Service worked together to create the Master Agri-manager program. This program was done in collaboration with the UGA Small Business Development Center, AgSouth Farm Credit, United States Department of Agriculture (USDA) Farm Service Agency, and a Private

Practice Attorney. The pilot Master Agri-manager series consisted of six face-to-face sessions through November 2021.The pilot program was held in Monroe County, GA with a total of 16 participants. Each session of the Master Agri-manager series included 90 minutes of lecture from UGA Extension faculty and collaborative partners with designated time for networking with other participants, interactive hands-on work, discussion, and Q & A. Participants were asked to fill out pre and post program surveys to determine knowledge improvement and value of content. Twenty-five percent of participants self-reported that they will consider converting their farm into a Limited Liability Company. Furthermore, 25% of participants reported they intend to develop a farm business management plan. All of the skills learned will combine to help them improve the business side of their farming or ranching operation. The Master Agri-manager Curriculum is now available for agents to adopt and use in their counties across the state. The goal is to hold two Master Agri-manager Programs per year.

CREATING COST OF PRODUCTION BUDGETS, IT'S AS EASY AS ABC WITH THE AG BUDGET CALCULATOR

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
Glennis McClure
Extension Educator - Farm & Ranch Management Analyst
Nebraska Extension
Lincoln

Authors: Glennis McClure[1]

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Enterprise budgets that provide customized cost of production information for producers are valuable to making management decisions that assist in reducing risks on the farm. Especially in a year where input costs and investments are higher, yet with grain marketing opportunities that should provide profitability, cost and revenue projections should be well worth the time to create.

This presentation will provide an overview of the features of the new online Agricultural Budget Calculator (ABC) program under development at the University of Nebraska – Lincoln. ABC's user-friendly design and online accessibility makes it a budgeting and decision resource for small and beginning farmers and for those that are underserved.

Through in-person and virtual workshops, producers, bankers, and farm managers are currently able to download the 2022 University crop budgets and use the program to modify those budgets or to create their own from scratch. In addition, a risk module, breakeven, and sensitivity reports are built into the program, along with a whole farm component that provides for expense reconciliation and allocation of overhead expenses to an operation's enterprises. ABC is an excellent teaching resource to use when educating producers on the importance of cost of production budgeting and the uses of such information. In this session, we'll share how the budget calculator works for users, analysis, and reports that can be generated from it, and how it has been utilized to date with current evaluation and impact information provided.

DAIRY GAUGE INITIATIVE SOUTHEASTERN DAIRY BENCHMARKING PROGRAM

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
David Bilderback
Extension Area Specialist - Farm Management
University of Tennessee
Loudon

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The purpose of this educational program is to increase the individual profitability of the dairy producers in Tennessee, Kentucky, and North Carolina with funding from the USDA Dairy Business Innovation Initiatives Grant. Dairy Gauge allows dairy producers to compare their farm's financial performance to peers on a financial benchmark, per cow, and per hundredweight (cwt) basis. An Excel spreadsheet is used to create a balance sheet and income statement from readily available information. The information required is an annual milk marketing summary, annual income and expense report, most current balance sheet, and the average number of cows milked. Thirty dairies participated in the Dairy Gauge Benchmark Program in 2021 creating one of the largest data sets in the Southeastern United States. This group represented 14 percent of the milk produced in the three-state area. Tennessee participants accounted for 42 percent of the state's production.

Dairy Gauge program has generated a peer-group of six Tennessee producers that share their cost structure. This group meets annually and discusses their production cost side-by-side. One dairy in 2021 reported changing their cow transitioning program because of the Dairy Gauge data, saving an estimated $200,000. Multiple producers in the group stated the benchmarking program was one of the best educational programs they have completed. As a result of the program, eight dairies in 2019 focused on their cost structure and cost-saving strategies. Those eight dairies reduced expenses by eight percent annually for 2018 to 2019, with a total direct economic impact of $2.32 million. For more information go to https://utdairy.tennessee.edu/dairy-gauge-program/ .

AGRITOURISM: COMMUNITY & ECONOMIC IMPACTS

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
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Agritourism farms are growing in number across the United States (Noyes, 2015), accounting for nearly $1 billion in sales according to the 2017 Census of Agriculture.

To better understand this industry in Ohio, a statewide industry survey was created and then sent out for agritourism farm owners and operators to complete in Summer 2021. This presentation represents findings of an initial effort to better understand industry issues, allowing Extension to focus on potential programmatic opportunities.

As a result of the pandemic, operations adapted in 2020 included the use of online ticketing, reducing the number of events and visitor capacity, and increasing attention to health and sanitation. Interestingly, gross revenue exceeded previous levels in 2020 for most operations, and direct sales were the leading sales category of the five categories surveyed. As far as jobs, full-time year-round employment was reported as minimal. Most operations reported 10 or fewer seasonal employees. Concerning ways in which Extension could best support the agritourism industry, assistance with marketing via social media and websites was identified most frequently. Assistance via strategic planning and using trend research to inform decision-making was also noted by many.

This presentation will dive deeper into survey development, economic impact, and next steps for the researchers to help the agritourism industry across the state of Ohio.

AGRICULTURE AND THE RISE OF FOOD ENTREPRENEURSHIP

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
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Home-based food businesses are increasing as a result of heightening interest in local foods, people seeking additional employment and hobbies during the pandemic, and legislation aimed at increasing “food freedom” and entrepreneurship opportunities. According to the Harvard Law School Food Law and Policy Clinic’s brief Cottage Foods and Home Kitchens: 2021 State Policy Trends, 118 bills covering cottage food or home kitchen laws were introduced between 2018-2021 to expand allowable foods, sales and delivery options of homemade foods. For example, Florida’s cottage food laws recently increased sales limits from $50,000 to $250,000 annually and allowed for online sales and product shipping. Such changes transformed home-based food businesses from supplemental income to potentially profitable business ventures. Agricultural producers often process, make and sell value-added foods from their agricultural products, such as flours, syrups, or jellies. Food product sales can help agricultural businesses increase income and reduce risk by diversifying their operations. Since Agriculture Agents are already working with agricultural producers, they are an accessible first point of contact for producers’ food business questions too. To best serve their clientele, it’s helpful for Agriculture Agents to have a basic working knowledge of food processing and sales regulations that apply to their producers, from dairy products, meats, and eggs to value-added products. Regulations for making and selling foods are confusing, and honest mistakes or “asking forgiveness later” can result in fines, food safety hazards, or losing income from a potentially profitable avenue. As a result of inquiries about selling food products

from local agricultural producers, food entrepreneurs and government offices, the Agent developed and taught Starting Your Own Cottage Food Business. The workshop covered regulations for making and selling cottage foods, risk management tips and business considerations. Since July 2021, seventy-nine people attended the workshop online and in person. The Agent also consulted with individuals to plan their food businesses. Agriculture Agents can benefit agribusinesses by understanding the basics of food processing and sales, as it relates to their local agricultural producers. Supporting diversified food businesses, including cottage food operations, contributes to stronger local economies and food systems.

FARM PULSE FINANCIAL MANAGEMENT – ADAPTING CURRICULUM FOR ONLINE LEARNERS

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
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Imagine sitting down at a computer to complete an online course and instantly becoming confused, overwhelmed, and frustrated with the amount of information. While farming is high-tech, most farmers have limited experience with online education as compared to accessing the internet to check email, pay bills, or simply browsing the web. Online courses should be fun, engaging, and interactive, rather than a source of frustration and stress. Farmers are already experiencing a prolonged period of significant financial stress that has contributed to farmers reevaluating their financial situation and business plans. The Farm Pulse: Financial Management curriculum looked to adapt and update written workshop materials into a more relevant format for use in-person, as stand-alone educational videos, and an on-line course. This curriculum was developed to assist farmers in identifying strengths and weaknesses of their business in order to assist them in making decisions that will improve their farm profitability. This session will highlight the intentional approach used to redesign farm financial management content for an online environment; how we updated course goals, assessments, and beginning farmer learning experiences; integrated technology intentionally for use with multiple devices; and put structure and support in place to promote self-directed learning, including video segments, interactive quizzes and activities, case study examples of dairy, beef and vegetable farms, and application exercises for participants to utilize knowledge gained in evaluating their financial situations. The session will also review the initial results from a pilot group of farmers who participated in the online course.

REVITALIZING A COMMUNITY FARMERS MARKET TO ENHANCE ACCESS TO LOCALLY GROWN

AGRICULTURAL ECONOMICS & COMMUNITY DEVELOPMENT
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The UGA Bartow County Extension Office is striving to address local food insecurity and improve health outcomes by increasing access to fresh, affordable, locally grown produce. This process began with revitalizing the Cartersville Farmers Market, increasing community awareness, and supporting community wellness initiatives.

Bartow County Extension led the health initiative for revitalization of the Farmers Market by forming a partnership with the Cartersville Downtown Development Authority, the previous stewards of the market. In 2019, this community partnership resulted in a cooperatively funded part-time farmer's market coordinator under the direction of Bartow County Extension. The city of Cartersville, Bartow County government and the Cartersville-Bartow County Convention and Visitors Bureau jointly fund the position.

More recently, the Cartersville Farmers Market has focused on reaching out to SNAP eligible participants in Bartow and surrounding counties by expanding SNAP/EBT access. The decision to focus on SNAP benefit recipients would be mission critical because of the health benefits of increasing fruit and vegetable intake along with expanding the customer base for market vendors.

The market returns money to the local economy, provides access to locally-sourced agricultural products, benefits the environment by having food travel fewer miles to

the consumer, and creates a sense of community around food. In 2021, vendors increased sales by 36% from the previous year resulting in $576,810. There was a 42% increase in total number of customers to an approximate 50,391. There was also a 140% increase in EBT sales from the previous year. 95% of customer surveys indicated that the farmers market was their primary reason for coming downtown on Saturday mornings with 70% stating that they would stay downtown to shop or have lunch after the market.

The Cartersville Farmers Market continues to exceed our expectations. This past year is the strongest we've had in both sales and customer demand. Due to the success of the Cartersville Farmers Market, we have become a model for increasing food access through local farmers markets and connecting their benefits as a community health initiative. Many farmers markets in surrounding communities are reaching out to us to learn about this unique partnership.

AGRICULTURAL ISSUES ACCEPTED PRESENTATIONS

LEARNING BY DOING AT THE PRODUCE HANDLING FACILITY IN MILLS RIVER, NC

AGRICULTURAL ISSUES

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In July 2021 the Produce Handling Educational Facility opened at the Mountain Horticultural Research and Extension Center (MHCREC) in Mills River, NC. This facility serves two purposes: 1) to grade and pack fruit for research teams and 2) to demonstrate food safety practices and technologies available in the produce industry. In 2016, the station research teams had identified a serious need to modernize fruit and vegetable sorting equipment. Existing equipment was antiquated, imprecise, incompatible with non-spherical fruit, and did not adhere to modern food safety standards. From a food safety stand point, these are common issues for many farms. Produce farms are responsible to minimize risks of food borne illness by implementing good agricultural practices and good manufacturing practices in packing areas. This is often a complex arena for growers as it requires significant investment in areas where fruit is washed, sorted and packed. It also requires constant employee training and an understanding of post-harvest and food safety principles. With this new facility, our team has been able to offer hands-on trainings for Agents and growers covering a variety of topics. These topics include cleaning and sanitation, equipment and technologies, fruit grading and sizing, pest management and water use during postharvest among others. A total of seven trainings have been offered, reaching 30 Agents and over 300 growers. These trainings no longer focus around PowerPoint presentations but rather on designing activities where participants can be actively engaged. During this presentation we plan to do a virtual tour of the Produce Handling Facility to highlight the different stations set up in the packing house and equipment we have acquired as a result of collaborations with industry partners.This facility is a reality as a result of the teamwork and collaboration between NCSU researchers at MHCREC, NCSU Administration, North Carolina Department of Agriculture & Consumer Services and NC Farm Bureau.

MEETING THE NEEDS FOR ON-LINE AND IN-PERSON PESTICIDE RECERTIFICATION TRAINING DURING THE COVID-19 PANDEMIC

AGRICULTURAL ISSUES

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Agricultural producers and ag-related businesses in Washington and Idaho are required to have a pesticide applicator license to use restricted use pesticides (RUPs).

The Washington State Department of Agriculture (WSDA), and the Idaho Department of Agriculture (IDA) are the license administrators in each state. License holders are required to participate in pesticide recertification classes to maintain valid licenses. For example, individuals with a WSDA Private Applicator License are required to receive 20-hours of recertification credits every 5 years. Traditionally, chemical companies, commodity associations, Extension, Conservation Districts, and others offer these classes in-person. The COVID-19 pandemic of the past 2 years has drastically reduced the availability of recertification classes. To address this need, WSU, and UI Extension in 2021 developed a strategy to greatly expand the availability of recertification classes in Northern Idaho and Eastern Washington. This presentation will address challenges faced in offering a large-scale on-line only program in the early 2021; and a hybrid recertification class in December 2021. Challenges addressed include delivering programming on-line to a neophyte audience using Zoom; limited bandwidth in rural areas of both states; needing to meet verification of attendance requirements of two departments of agriculture; and dealing with negative feelings in the ag industry towards land-grant universities following state mandates that limit in-person attendance at events. In January, five pesticide recertification credits were offered in partnership by the WSU Asotin, Columbia, Walla Walla, and Whitman County Extension Offices. Attendance included 145 individuals participating on-line from 14 different counties. In December, the University of Idaho Nez Perce County Extension Office was added to expand credit offerings to an additional 6-county region in Northern Idaho. 182 individuals participated in the December classes: including 145 on-line and 37 in-person in Clarkston. Since speakers did not have to travel to present, WSU and UI were able to offer these classes for free. Program impacts include 327 pesticide license holders receiving over 1,575 hours of recertification credits provided by Extension in 2021. At a normal fee of $10-20/credit hour, participants saved an estimated $15,000 to $30,000. This figure does not include participant travel time and travel costs.

CLIMATE RESILIENT SMALL FARMS IN NORTH CAROLINA

AGRICULTURAL ISSUES

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Changing weather associated with a changing climate presents a growing challenge to agriculture in North Carolina. However, the diversity in size, products, and soils of North Carolina farms are assets to help build resilience to severe weather. Adopting climate resilient agricultural practices, including cover crops, conservation tillage, and high tunnels can help North Carolina farms respond effectively to and recover quickly from severe weather events. NC A&T Ag Agents identified small farms in each of our three geographic regions that both implement some of these practices and keep good records. We partnered with the Environmental Defense Fund to analyze the financial impacts of these practices on three selected farms using financial tools previously applied to larger grain farms in the Midwest. Four (4) educational films were professionally produced, Five (5) fact sheets and printed materials were developed, and multiple public events are being held to share the results and encourage adoption of these practices. Results show that the financial bottom line of these growers increased by $23/Acre in one case and nearly $13,000 total in another. These financial benefits were based on cover cropping, reducing tillage, utilizing high tunnels effectively, and other practices discussed in this project. Growers and agents are hungry for quantifiable information on financial impacts of these agricultural practices that increase climate resilience. These small farm case studies in North Carolina can apply to diversified farms across the country as the methodology and delivery methods relate to many farm types.

FARM STRESS: PERCEPTIONS OF AGRICULTURAL AGENTS AND FARMERS

AGRICULTURAL ISSUES
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Farmers are experiencing extreme stress, such as fluctuating markets, high debts, changing weather patterns, and succession planning. Farming is one of the most at-risk industries for death by suicide, and three out of four farmers, farm workers report being affected by the opioid epidemic (Peterson, et al., 2020; American Farm Bureau Federation, 2017). Mississippi State University Extension Service facilitated four focus groups with agricultural Extension agents and four focus groups with farmers to gain a deeper understanding of agricultural agents' and farmers' perceptions of the current situation of farming, farm stress, opioid misuse among farmers, and perceived openness to financial management trainings. Focus group findings suggest that a few differences in perceptions among agricultural agents and farmers exist. However, agricultural agents and farmers had similar perceptions for the most part. During this session, presenters will provide an overview of the differences and similarities of perceptions among agricultural agents and farmers from our focus groups, perceived farm stressors, perceived opioid misuse among farmers, and available resources that agricultural agents can utilize for farmers experiencing stress.

HOPE ON THE FARM: A FARM STRESS FILM SERIES PREVIEW

AGRICULTURAL ISSUES
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The growing impact of stress on farmers is an overlooked issue threatening the future of agriculture. Farmers are experiencing paramount levels of stress, such as fluctuating markets, finances, climate extremes, and succession planning. Mississippi State University (MSU) Extension Service PROMISE Team, a farm stress prevention initiative, created a four-part film series that tells the real-life stories of four different farmers. During this session, participants will watch one of the 10-minute films that shares the story of a farmer named Edward and covers the everyday stressors of farming. After viewing the film, the presenters will lead a group discussion about farm stress and farm stress resources. Agricultural agents will leave the session with a deeper understanding of farm stress and a list of resources dedicated to assisting farmers experiencing high levels of stress. Funding is provided through grants from the United States Department of Agriculture.

SUPPORT FOR MENTAL HEALTH AS A PRODUCTION TOOL IN FARMING: AN AMBIGUOUS LOSS PERSPECTIVE

AGRICULTURAL ISSUES
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Farm families face stressors to mental health that can interfere with production and safety for all involved in agriculture. Mental health burden in food production has contributed to disproportionate suicide risks among farmers for decades. Losses in farming contribute to stress in ways that increase mental health burden (Rosmann, 2016). One perspective that can help situate farming stress is that of Ambiguous Loss. An ambiguous loss is one that has differing physical and psychological components. For example, something is physically lost (like a farm business) but remains in the psychological presence of a person or family (the identity of being a lifelong farmer or coming from a farm family). Ambiguous losses have long been stressors in agriculture (loss of animals, downsizing, personal injuries). An ambiguous loss perspective broadly informs family therapy and research, and in this program is applied to families in the farming industry. The current program stems from the revision of an early publication addressing ambiguous loss in farming (Boss, 2001, revised to Krekelberg & McGuire, 2021). This interactive program and workbook provide a framework for extension, community-based, and industry personnel to support farm families through difficult transitions. The subject of farmer risk and loss has garnered additional interest due to its application to the COVID-19 pandemic. "Train the trainer" programs have commenced, as well as pilot programs with farm families. Evaluation plans are in development. Opportunities exist for interested partners to join programming and evaluation efforts now in the early phases. One major goal is to provide support to farm families through the trusted channels they are already using such as local extension educators and community-based agricultural educators. In Minnesota, there are plans to train 60 facilitators across the state in 2022, who will then implement the program to 150 farm families. The project is a practical application of prior research to support farmers. Ongoing research will provide an opportunity to refine programming and better support farming communities. The current session will focus on sharing initial responses to the program and promoting opportunities for collaboration with academic, industry and community persons.

REDUCING EMPLOYEE AND ENVIRONMENTAL RISK WITH FOR-HIRE MANURE APPLICATORS

AGRICULTURAL ISSUES
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Wisconsin dairy farms produce approximately twelve billion gallons of dairy manure annually. This manure is a valuable source of crop nutrients, potentially saving farmers $180/cow/year in fertilizer costs. Improperly managed manure can contribute nutrients (nitrogen, phosphorus) and pathogens into surface water and groundwater. Most of the manure, >7 billion gallons, is transported/applied by for-hire manure applicators. These 185 small businesses in Wisconsin are a critical part of proper manure application and nutrient management plan implementation. A comprehensive educational program was developed for front-line employees to address manure applicator training on the topics of spill prevention, proper application, and employee safety. The educational program consists of classroom training, workbooks, spill response training, and manure gas monitoring. More than 500 unique individuals from 76 businesses have completed the training reaching over 1,500 individuals from 2017-2021. Being able to explain key concepts to a concerned citizen or landowner is a measure of success, and >70% felt very or quite confident explaining how to decrease the risk of manure runoff (85%), setback maps (75%) and how to follow a nutrient management plan (74%). The success of our program is evident in the manure spill data. Working with the Wisconsin Department of Natural Resources, 15 years of manure spills and incidents were analyzed. Our target audience applies >60% of the dairy manure yet is responsible for less than 25% of the manure spills/ incidents. This program has led to the launch of similar programs in Michigan, North Dakota, and Oklahoma.

BEERS & STEERS: BRIDGING THE KNOWLEDGE GAP WITH COMMON INTERESTS

AGRICULTURAL ISSUES

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What are two things many consumers love? Alcohol and a good steak. Utilizing common interests with the public can help draw attendance to agriculture awareness programs. The program "Beers & Steers" held by the agent in September 2021 was intended to increase consumer awareness on facts surrounding the purchase, preparation, and consumption of beef products, including the pairing of beef-centered meals with various alcohol choices. The event was hosted in a local brewery, this way attendees could purchase their own alcohol to consume during the program, generating $656 in sales for the business. Each attendee was provided a fact sheet that included information on the beef cuts prepared during the class and information on purchasing beef like marbling characteristics and beef labels (grass/grain fed); preparation of beef like marinades versus dry rubs, determining doneness, and ideal cooking techniques; as well as consumption of beef like nutrition and alcohol pairing tips. This fact sheet allowed attendees to follow along with the program topics and provided a take-home opportunity to serve as a reminder of the information learned or to share with others. During the workshop attendees participated in four blind taste test games. Each taste test highlighted a key point to enhance their eating experience, such as marinades versus no marinades, dry rub selection, importance of marbling, and grass fed versus grain fed beef. While the agent prepared the beef selections live in front of the audience using an electric grill, the participants were able to engage with other exhibits like a beef carcass puzzle and "guess the cattle feed ingredient". The activities spurred further discussion with the agent about beef from pasture to plate and helped dispel common myths surrounding the industry. 82% of survey respondents indicated they increased their trust in the food production system as a result of the course. Attendees indicated on follow up surveys that the Beers & Steers program helped them improve beef purchasing decisions and their ability to effectively utilize cheaper cuts for a better eating experience, resulting in an estimated $9,500 in annual cost savings at the grocery store.

INTEGRATING MENTAL HEALTH DISCUSSIONS INTO AGRICULTURAL PROGRAMING

AGRICULTURAL ISSUES

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Extension has an important role in addressing mental health wellness in the Iowa agricultural industry. The number of calls to the Iowa Concern Hotline increased during the COVID-19 pandemic. Rates of suicide are higher among agricultural producers than most other occupations, as is the prevalence of common mental health conditions, such as depression and anxiety, when compared to the general population (Bjornestad, Brown, & Weidauer, 2019; Cole & Bondy, 2020; Peterson et al., 2020; Rudolphi, Berg, & Parsaik, 2020). Stigma around mental health challenges prevent many rural Iowans from seeking support. Studies show people are more likely to get help if suggested by someone they trust. The extension farm management specialists are viewed by many as trusted consultants and educators. To meet the needs of rural Iowans, I integrated mental health discussions and resources into my everyday ag programing. By adding mental health information into leasing, succession or other meetings, I am able to provide resources to an audience that may be reluctant to attend a mental health meeting. I not only provide resources for the individuals in attendance, but I also ask them to take the resources to people in their families and communities who may be struggling with mental health challenges. In 2021, I engaged 1,070 Iowans in the agricultural industry in mental health discussions. While the results of this program are hard to measure, I know it has impacted lives. In many cases, participants expressed thanks for the information. One individual indicated he was in the act of completing his plan to die by suicide when he saw the resources provided at the ag extension program. He called a hotline and got the help he needed. In his time of need, those resources quite possibly saved his life. When extension professionals incorporate mental health information into agricultural programming, they can reduce stigma and provide resources that support greater mental health wellness in the agricultural industry.

WHAT COMES AFTER THE PSA GROWER TRAINING?: CONTINUING FRESH PRODUCE FOOD SAFETY EDUCATION IN VIRGINIA

AGRICULTURAL ISSUES

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In Virginia, over 500 individuals have completed the Produce Safety Alliance's Grower Training to meet the requirements of the FSMA Produce Safety Rule. What we were finding is that there was no real follow up or continued educational opportunities for these individuals after this training. We found that growers who were not currently certified under GAP or HGAP were very overwhelmed, often not even knowing where to start to begin to meet the requirements. Now that the on-farm inspections have started for all level of farm sizes, we discovered that growers needed help both interpreting what the true requirements of the rule were and understanding how to implement their requirements on their farms.

Along with Local Food Hub, a local non-profit, Virginia Cooperative Extension was named on a grant to develop a course to help meet those issues that we were finding growers were facing. This course has modules that address all of the topics in the Produce Safety Alliance Grower Training except for water (introduction, worker training, animal risk management, cleaning and sanitizing, post harvest handling, required records) as well as an additional module on On Farm Readiness Reviews and Inspections. The course was released in January of 2022 with 15 individuals completing the pilot aspect of this project. The feedback from this course has been incredibly positive- with just about all individuals showing a knowledge gain after completing this course, with an even bigger goal of greater understanding of the rule being met.

In addition to this course, a newsletter was created and sent to all individuals (n=446) who had gone through the course to continue both education about the rule as well as keep VCE in the forefront of the producer's minds as they had questions or needed help incorporating the rule. Agents and specialists from across the state assisted in this process by writing articles and assisting with writing "Do you remember" questions. Virginia Department of Agriculture and Consumer Services' Produce Safety Team was also consulted and asked to contribute to the newsletter as a way to incorporate their educational resources for producers as well.

This presentation will highlight the course that was created (including some challenges and successes), discuss the knowledge gains and overall feedback of the course, how agents who work with growers who fall under the Produce Safety Rule from across the US can use the course, and share the newsletters that were created.

EDUCATING FEDERAL LAND GRAZING PERMIT HOLDERS IN UTAH'S PIUTE AND WAYNE COUNTIES

AGRICULTURAL ISSUES

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Over 70% of the land in southern Utah's Piute and Wayne Counties is federally owned. The forage on these federal lands has been utilized by grazing livestock for generations. Livestock grazing on federal lands is administered through grazing permit systems. These federal grazing permit systems were initiated by the Taylor Grazing Act of 1934. This act and other subsequent acts created 10 year renewable permits granting previous permit holders a first right of refusal for renewing the permits at the end of their term conditional upon meeting the requirements of the permit. Through additional legislation and resulting regulations, the requirements of these permits have become increasingly complex. As the complexity of these permits has increased, a lack of education has left many livestock producers uninformed about the details of the federal permits which they utilize. This lack of education has resulted in many misunderstanding and a significant amount of conflict. As Extension staff in these counties sought solutions to these challenges, it became apparent that much of the most severe conflict was rooted in misinformation. To address these challenges Extension held educational meetings with permit holders explaining the legislation and regulations pertaining to the permits. These educational meetings have confronted many misguided preconceptions and assumptions which have been the root of a significant amount of the conflict and have brought a more civil discourse to the process of permit administration and renewal.

AGRONOMY & PEST MANAGEMENT ACCEPTED PRESENTATIONS

INCREASING EFFECTIVENESS OF REGIONAL PEST AND DISEASE MONITORING THROUGH COLLABORATIVE INITIATIVES

AGRONOMY & PEST MANAGEMENT

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Pest and disease management is critical for maintaining grower profitability and providing regional pest and disease information throughout the season is one way extension can engage in pest and disease monitoring. This talk will feature three pest and disease management initiatives that have been regional collaborations between extension agents, growers, professional scouts, research faculty, state agencies, and industry partners.

A new weevil pest has emerged in parsley and celery crops in south Florida. Growers, scouts, extension agents, and state regulatory personnel have worked together to assess the distribution, behavior, and identification of this pest. This work is ongoing, and the collaborative effort will ensure a more rapid development of management strategies for this pest and more effective extension education program for growers.

Snap beans are grown on 27,000 acres in Florida. In 2020, a new, unidentified pest was causing losses in some areas up to 30%. Scouts, growers, research specialists, and state regulatory personnel collaborated for rapid identification of the thrips species. University extension initiated a regional monitoring program that provided pest populations on a weekly basis throughout south Florida. Scouts, growers, and extension agents provided scouting data across the area, while research faculty utilized the platform to provide timely research insights of the behavior and management of the pest. After two seasons, thresholds have been estimated and insights have been gained regarding population dynamics across south Florida. Growers are no longer reliant on preventative measures and instead utilize these weekly reports for initiating management.

While pest management utilizes scouting to determine course of action for management, disease management is preventative in nature. This is because pathogens are not identified until after infection has occurred and disease symptoms have developed. An industry partner has developed a spore trapping program that provides the potential to detect fungal pathogens before they infect crops. A regional partnership between extension, growers, scouts, and the industry partner was developed to assess a regional approach to monitoring fungal pathogens.

CHARACTERIZATION OF HEAT STRESS EFFECTS ON COTTON PRODUCTION IN THE LOW DESERTS OF ARIZONA

AGRONOMY & PEST MANAGEMENT

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High temperature trends in the low desert of Arizona can have a severe negative impact on cotton production. Heat stress indices have been developed for tracking the effects on cotton fruiting patterns and ultimately yield. This presentation will summarize the culmination of three years of evaluations made to characterize the effects of heat stress on cotton growth, development, and yield. This work was conducted at the University of Arizona Maricopa Agricultural Center located in the low desert region of Arizona. Characterization of the effects of heat stress were accomplished by evaluating flower development, pollen dehiscence, boll symmetry, and ultimately yield and fiber quality. Significant correlations exist between pollen dehiscence and boll symmetry which was found to be significantly correlated to seedcotton yield. The ultimate goal of this work is to develop an in-field and in-season technique for evaluating the ability of a variety to tolerate heat stress where crop canopy temperatures rise above 86 F.

HELPING PEANUT PRODUCERS OPTIMIZE HARVEST TIMING WITH THE AGDD TRACKER

AGRONOMY & PEST MANAGEMENT

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Peanuts are a major agronomic crop in the Panhandle of Florida. Timing harvest so that both yield and grade are maximized is essential to the economic sustainability of peanut producers. Optimizing harvest timing can be challenging for growers for a variety of reasons: 1) peanuts are an indeterminant crop, 2) pods grow underground, out of sight, 3) temperature and available moisture greatly impact the speed with which a peanut crop matures. To assist growers with optimizing harvest timing by tracking crop maturity throughout the season, members of the Florida Peanut Team developed and published the aGDD Tracker. The Tracker presented aGDD data generated by Peanut Field Agronomic Resource Manager (PeanutFARM), an online platform that is tied to Florida Automated Weather Network (FAWN) weather stations. The Tracker showed data for 10 locations and 14 different planting dates (140 different hypothetical fields). The Tracker generated no new data – it was simply a way to combine, organize, and share aGDD data that may not have been as easily accessible from other sources. Growers could follow whichever field(s) most closely approximated their own and see how aGDDs accumulated throughout the season, providing valuable insight for harvest decisions. The Tracker was updated and posted 11 times throughout the 2021 growing season on the Panhandle Agriculture eNews website. Each posting of The Tracker was accompanied by a "Peanut Update" consisting of a recent weather summary, field observations/conditions and related IPM recommendations. The posts were viewed approximately 1,400 times on the Panhandle Agriculture eNews website. Several of the posts were republished in a variety of trade publications furthering their reach. Input from producers and agents indicated that both the information in The Tracker and the updates were useful and served the intended goal of helping to inform harvest timing and IPM decisions. The aGDD Tracker was an excellent utilization of pre-existing resources (PeanutFARM, FAWN, Panhandle Agriculture eNews); combining them in a way that delivered timely, specific, and actionable information to growers. The project is planned to be repeated during the 2022 growing season.

MANURE INCORPORATION: A NUTRIENT MANAGEMENT TOOL IN THE CHESAPEAKE BAY WATERSHED

AGRONOMY & PEST MANAGEMENT

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In the 1980's Nutrient Management Planning was introduced and No-Till planting was promoted as steps to reduce nitrogen and phosphorus losses into the Chesapeake Bay. Since phosphorus was tightly attached to soil particles No-Till to reduce erosion was seen as the primary tool to reduce phosphorus in our waterways. No-Till was heavily adopted in Pennsylvania including in the Amish community and currently about 70% of the acres are planted no-till. However long term manure application in No-Till situations has resulted a concentration of phosphorus in the top inch of soil. This band of phosphorus on the soil surface is so concentrated, phosphorus is now dissolving and leaving the field in clear water. In 2017 Penn State Extension joined with Sustainable Chesapeake, The Lancaster Conservation District and others to promote manure incorporation funded with a NFWF grant($199,000). Agri-applicators a local custom operator invested in improved incorporation equipment and funds were provided to cover the additional cost of incorporation directly to the famers interested in trying the concept. This concept was promoted by Penn State Extension with numerous newspaper and online newsletter articles, at crop production winter meetings and field day events. This concept was adopted by 51 farmers participating in the grant. These producers injected on a total of 4,876 acres over the life of the project (through 2020), reducing nitrogen loading by 35,800 lbs and phosphorus loading by 2,449 pounds in total. The concept was adopted by a significant number of other farmers and Agri-applicators is injecting manure on over 5,000 acres per year. In 2021 Penn State Extension again joined with Sustainable Chesapeake, The Lancaster Conservation District and others to promote manure incorporation in the Amish community with a $300,000 grant from The Campbell Foundation. An Amish equipment manufacturer

was recruited to develop a prototype unit which was introduced at a field day in July of 2021. There is significant interest in the Amish Community to adopt this in the spring manure application season in 2022.

AGRICULTURAL ROW CROP AND PRIVATE APPLICATOR PESTICIDE COURSES IN ALACHUA COUNTY, FLORIDA

AGRONOMY & PEST MANAGEMENT
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Agricultural producers must become licensed to purchase and apply restricted use pesticides needed to manage their commodities when production is challenged by pests and diseases. Pesticide training aids clientele in preparing for core and category tests required for each license as well as providing stakeholders the necessary Continuing Educational Units (CEUs) required for license renewal (12 and 8 CEUs for Ag Row Crop and Private Applicator, respectively). In Alachua County, there are 88 Private Applicator and 49 Ag Row Crop pesticide license holders who need access to this training. The objectives of pesticide training are to increase the knowledge of Best Management Practices in pesticide safety, improve skills necessary for pesticide application (e.g. calibrating application equipment and calculating application rates), and to encourage license holders to adopt recommended practices. Annually, three hands-on workshops offering 4 CEUs each, are delivered. The workshops include a core review segment, spray calibration exercise, label demo and pesticide arithmetic. Post-training evaluations showed that 87% of survey respondents (82 of 94) gained knowledge in pesticide safety Best Management Practices and 92% (67 of 73) indicated their intent to adopt recommended practices on pesticide handling and application. Since these workshops started in 2017, 42 Ag Row Crop and 92 Private Applicator licenses were issued in Alachua County. In conclusion, the trainings provided by Alachua County Extension Agents have provided professionals the means to renew and obtain new pesticide applicator licenses. Furthermore, as a result of obtaining their licenses, post-training surveys revealed that 38% (27 of 92), 8% (6 of 92) and 10% (7 of 92) of attendees expected a $1-3, $4-6, and $7-10 per hour wage increase, respectively.

ALABAMA BERMUDAGRASS HAY GROWERS SUMMIT TARGETS ADVANCED PRODUCERS

AGRONOMY & PEST MANAGEMENT
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The Bermudagrass Hay Growers Summit is an in-state Extension workshop that began in 2017 and is based on a grassroots need to educate advanced hay producers seeking more than basic hay production education. The original objective was to provide current information and timely updates for bermudagrass hay producers in northern Alabama. Typically held in February, the timing allows for immediate implementation of certain practices prior to spring green up. It has evolved into a statewide event after proven success as a regional offering. The workshop utilizes a traditional lecture format with varying educational components, based primarily on past participant evaluations. Educational topics have covered insect pests, weed control, fertilizer requirements and application timing, nutrient management, Industry perspectives, nutrient availability, cash flow budgeting and hay storage techniques. Speakers have included Extension specialists, regional Extension agents, and industry professionals. Average attendance for the target audience is 18 people, with a total of 11,266 acres under their management each year. Due to university restrictions for in-person programming, the 2021 meeting was held virtually and open to anyone (95 in state; 33 out-of-state attendees). Extension news articles, email blasts, social media posts, word of mouth and local advertising are utilized each year to promote the workshop. A mix of PowerPoint presentations, speaker panels and round table discussions throughout the day encourage group interaction. Evaluation results over six years (2017-2022) indicate 98.2% of participants found the information useful to their operation and 98.8% indicated the program met their expectations. The average rating (1-5 scale) of

all topics delivered was a 4.63 across all years, indicating satisfaction with selected topics. Evaluation results show a 29.4% average increase in knowledge and the average, annual economic impact from implementing the information presented of $17,704.60 per person. While it is important to reach new and beginning farmers and ranchers, progressive producers need continued education designed to meet their production needs in an ever-changing farming enterprise.

SPRAY RODEO DAY: TEACHING SPRAY EQUIPMENT CALIBRATION AND PESTICIDE SAFETY

AGRONOMY & PEST MANAGEMENT
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BELLE GLADE

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Spray Rodeo Day is an event designed to educate agriculture pesticide applicators and their supervisors the methods for properly calibrating spray equipment, while also emphasizing pesticide safety. From 2015 to 2020, I have organized five annual Spray Rodeo Days at the University of Florida Everglades Research and Education Center in Belle Glade, FL. Each applicator/supervisor team was asked to bring their large-boom spray rig to the event to use in three hands-on teaching stations: 1) equipment speed calibration, 2) nozzle output, and 3) equipment computer calibration. Each station was designed to teach a specific aspect of equipment calibration, while using each applicator/supervisor team's large-boom spray rig as a teaching tool. Following hands-on calibration events, each team was provided educational materials on worker protection standards for enclosed cab equipment. Each spray operator was provided a questionnaire regarding cumulative acreage sprayed per year by crop type. An important objective of Spray Rodeo Day is to target rigs with nozzle outputs > 10% error, so that these rigs can be properly calibrated prior to the start of the traditional weed and pest spray season. Across five annual events, a total of 49 spray rigs were calibrated, recording a total of 611,534 cumulative acres of sugarcane and leafy vegetables sprayed from 2015-2020. To put this in perspective, one large-boom sprayer servicing 60,000 acres/season, spraying 10% over target rate, would over-apply roughly $150,000 of unnecessary pesticide. Based on survey data collected from the 2015-2020 Spray Rodeo Days, 23 large-boom spray rigs exhibited at least 10% of nozzles spraying out of range, which could have amounted up to $3,450,000 in excess pesticides applied to cropping systems in the Everglades Agricultural Area. With this knowledge and hands-on training, operators will be able to calibrate spray nozzles which will result in more effective spray coverage, reducing the cost of pesticide application and limiting excess pesticides from entering waterways.

TAKING PESTICIDE SAFETY EDUCATION AND SOIL TEST INTERPRETATION ONLINE IN THE NORTH

AGRONOMY & PEST MANAGEMENT
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While pesticides can present significant risks to people and the environment, they still play important roles in pest management programs. The Integrated Pest Management (IPM) research and outreach programs at the University of Alaska Fairbanks (UAF) contributes greatly to minimizing risks and reducing pesticide use in Alaska. To reduce risks to people and the environment and to address public concerns regarding pesticide use, the UAF IPM Pesticide Safety Education Program (PSEP) develops training programs and materials to teach pesticide handlers to use pesticides to their maximum effectiveness while constantly seeking to minimize nontarget exposures to people, animals, soil, air, and waterways. These goals complement the regulatory efforts of the US Environmental Protection Agency and the Alaska Department of Environmental Conservation Pesticide Control Program to assure safe and responsible handling of all pesticides in our state. Recently, the UAF IPM team has taken all PSEP training and certified pesticide applicator training online. We have also improved soil test interpretation through the offering of web-based interactive forms to reduce agent workloads and improve uniformity of response. This presentation will discuss the lessons learned during these online implementations as well as survey results from participants.

CORN ROOTWORM DEMONSTRATION PLOT: EVALUATING THE EFFECTIVENESS CORN ROOT MANAGEMENT STRATEGIES

AGRONOMY & PEST MANAGEMENT
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Corn rootworms can be an economic pest in corn by causing injury either by the larvae pruning the corn roots or the adults clipping the silks and interfering with pollination. From a root feeding perspective, it is estimated there is a 15% yield loss for each node pruned back to within 1.5 inches of the stalk. To help producers better understand different management strategies and to look at a new type of host plant resistance for corn rootworm called RNAi, a corn rootworm demonstration plot was established at the Iowa State University (ISU) Southeast Research and Demonstration Farm (SERF) in 2021. The demonstration plot was planted in a field at the farm that had been 15 plus years continuous corn (specifically the area used as a trap crop for corn rootworm). The trial had four treatments replicated eight times. Treatments included no management (glyphosate-tolerant only; no Bt traits or insecticide), granular soil-applied insecticide (Aztec), SmartStax®, and SmartStax® Pro (RNAi). In July, four randomly selected plants from each plot (4 plants x 8 reps = 32 roots per treatment) were dug up to evaluate root injury. Each root was tagged with the treatment and rep number. Roots were then washed by soaking in buckets of water and then power washing. The ISU 0-3 Node-Injury Scale (NIS) was used to evaluate the roots, where a rating of 1 indicates than an entire node of roots (or equivalent) was pruned to within 1.5 inches of the or stalk. In the demonstration trial at SERF, the three corn rootworm management treatments (Aztec, SmartStax®, and SmartStax® Pro) had similar average NIS ratings, and those ratings were all significantly lower than the treatment without corn rootworm management and were also below the economic threshold (0.25 to 0.5 NIS, depends on environmental conditions, corn price, and management costs). Assuming Bt resistance is not an issue, these management tactics are all good options for suppressing corn rootworm. If resistance is an issue, good alternatives would be a soil-applied insecticide, the new RNAi technology, or crop rotation.

ASSESSING AND IMPROVING NITROGEN MANAGEMENT IN WHEAT

AGRONOMY & PEST MANAGEMENT
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Nitrogen fertilizer is one of the single largest expenses for wheat (Triticum aestivum L) production each year and has the greatest influence on yield on a yearly basis, excluding mother nature. Today nitrogen fertilizer prices are at or near record highs, and wheat commodity prices are also approaching record high prices. This scenario is unprecedented and creates a lot of risks and the potential for rewards for farmers and heightens the need to properly manage nitrogen fertilizer. The Post Harvest Nitrogen Efficiency Calculator (wsu.edu) and the Nitrogen Fertilizer Recommendation Calculator (wsu.edu) are two tools designed to help farmers across the country assess and improve nitrogen management in their wheat production systems. This presentation will focus on how to utilize these calculators and provide demonstrations with specific examples. Nitrogen uptake efficiency, nutrient uptake and removal, and pounds of nitrogen per bushel of wheat production will be a major focus. Of course, good nitrogen management starts with proper soil sampling, and this will also be integrated into the presentation.

ASSISTING GRAIN CORN PRODUCERS WITH VARIETY SELECTION IN NORTH FLORIDA

AGRONOMY & PEST MANAGEMENT
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Grain corn is an important commodity crop in the Suwannee River Valley of North Florida. In 2021, approximately 37,000 acres of corn were harvested in counties surrounding the North Florida Research and Education Center-Suwannee Valley (NFREC-SV). Each year, grain corn producers must choose a corn variety

when making planting decisions. With several available options from multiple companies this can be a daunting task. In the past producers have depended on yield data generated from similar trials conducted by industry and Extension from regions with differing environmental and soil conditions. Objectives: (1) To increase knowledge of Florida Best Management Practices and (2) encourage producers to incorporate new grain corn varieties. Methods: Grain corn seed companies provided two varieties that are recommended for the North Florida area along with $400 to help encumber the cost of incorporating this trail at the NFREC-SV near Live Oak. Current recommended production practices are followed during the production season to manage fertility and irrigation to remain in compliance with Florida Best Management Practices. Harvest data is collected and used to create fact sheets and presentations that are distributed or presented at local and regional production meetings in North Florida. Results: Post-training evaluations from grain corn production meetings showed that 89% of the producers (200 of 225) increased their knowledge of grain corn variety selection and 85% of attendees (191 of 225) increased their knowledge of production practices that encourage Best Management Practices. Conclusions: In 2021 the efficacy of 20 grain corn varieties were compared under management practices compliant with Florida Best Management Practices. This research has allowed Extension agents the opportunity to provide producers with timely information to encourage adoption of Florida Best Management Practices in grain corn production and assist with variety selection. Follow-up discussions with local producers have indicated that this data has been utilized to implement new varieties in their existing production system.

EXPANDING PESTICIDE PROGRAMMING THROUGH PARTNERSHIP WITH FLORIDA FARM BUREAU

AGRONOMY & PEST MANAGEMENT
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When the Florida Farm Bureau Young Farmers and Ranchers (YF&R) Leadership Program met to plan the 2021 YF&R Leadership Conference, membership feedback for increased professional development through offering pesticide continuing education credits (CEUs) to attendees was a topic of discussion. Not having offered this opportunity before, a member in the Leadership Program, a producer with whom I have a working relationship with, contacted me for guidance on how to provide the educational content needed to offer CEUs during the conference breakout session. The inquiry resulted in this educational program to enable YF&R Conference attendees to earn pesticide and Certified Crop Advisor (CCA) CEUs for the first time in conference history, while also educating them on the licensing process as well as farm pesticide safety practices. These CEUs allow applicators to maintain their licenses for renewal without taking the necessary exams for recertification. We developed two 50-minute presentations, earning a total of 2 pesticide CEUs and 1 CCA CEU. One presentation focused on the Worker Protection Standard (WPS) and its requirements for agricultural operations including farms, nurseries, greenhouses, and forests. The second presentation focused on pest identification, pest life cycle, and diagnostic resources offered through Extension. Across the two breakout sessions, there were a total of 64 attendees who gained knowledge of pesticide safety and licensing. Of those, 21 attendees earned pesticide CEUs and 1 earned CCA CEUs. Those in attendance without a license, learned about the process for selecting and earning a license. The first ever, CEU breakout session at the Florida Farm Bureau YF&R Leadership Conference was successful in offering educational content and received positive feedback from session attendees. A great working relationship with Farm Bureau at the local level, lead to the invitation to offer educational programming at their State YF&R Leadership Conference.

EDUTAINMENT, FUN PESTICIDE SAFETY EDUCATION PROGRAMS

AGRONOMY & PEST MANAGEMENT
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Pesticide Safety is a necessary education program throughout the United States. Each state requires certified applicators to receive continuing education credits in Core and Category topics. Applicators enjoy category education more because the information presented is more relevant to them, helps them be more efficient, and provides them with new ideas or products for pest control. Core

education is essential to pesticide applicator safety, but this information can be very dry and boring. With a lot of pesticide safety education programs being held virtually, I found there was a need to create presentations that were educational and entertaining. These "Edutainment" presentations teach pesticide safety information in fun interactive ways. These presentations can be done in person or virtually. The first edutainment presentation is Pesticide Safety Trivia, formatted like the popular game show Jeopardy. This presentation allows audience members to create teams and play along. Adding in a competition factor increases audience participation and focus. Safety information is explained in short segments following each trivia question. The second edutainment presentation is a Pesticide Formulations Demonstration. This is a technology free presentation that uses common household items to explain how pesticide formulations work and important safety information related to each formulation. Feedback following this demonstration is always very positive. Participants find it very informative but also fun and applicable to their pesticide experiences. The third edutainment presentation is Personal Protective Equipment Show and Tell. This presentation can be done using PowerPoint or as demonstration with clean unused personal protective equipment (PPE). I prefer to present it as a demonstration. The audience is shown PPE items and information is provided about how and when to wear each item. Audience participation is encouraged by asking audience members for input on how to use each PPE item or to demonstration how to wear each item. By making pesticide safety education fun, applicators learn more and retain the information for the future.

THE JOURNEY FROM AN EPIDEMIC TO SUCCESS.
AGRONOMY & PEST MANAGEMENT

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Minnesota and North Dakota produce 60% of the United States sugar beet, Beta vulgaris. One of the major limiting factors for sugar beet production is the foliar disease, Cercospora leaf spot (CLS) caused by the fungus Cercospora beticola. CLS destroys the leaves of the plants and thus affects the photosynthetic capability of the plants. This disease results in significant reduction in root yield, recoverable sugar, percent sucrose, and increases concentration of impurities resulting in higher processing costs. For many years, growers used fungicides in a rotational program to effectively control. However in 2016, growers in North Dakota, Minnesota and Michigan lost $200 million because of an epidemic as a result of the fungus developing resistance to the major fungicides used for its control. Research was conducted to determine how best to control CLS with experimental, labeled fungicides and experimental varieties with improved disease resistance. Results indicated that mixtures involving multisite with site specific fungicides effectively controlled CLS especially with the experimental (CR+) varieties. Research sites were used for demonstration at field days. Research results were disseminated to growers, other educators, and advisors of growers at seminars, production guide, reports, bulletins, and a radio program conducted during the growing season. Growers quickly adopted the research-based recommendations and successfully controlled Cercospora leaf spot from 2017. Limited amounts of CR+ varieties became available in 2021 and was used on 60% of acres at one Cooperative in 2021. These growers have ordered CR+ seeds for 95% of their acreage in 2022. Using mixtures and CR+ varieties will reduce fungicide usage by at least 33% and will lead to improved recoverable sucrose and profitability in the future.

CROP FOR KIDS
AGRONOMY & PEST MANAGEMENT

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Our society today is seeing a gap of agriculture awareness between generations, as populations urbanize. One of the top five issues in our County, determined by the Row Crop Subcommittee, is agriculture awareness in school-aged youth. The County Extension agent, in 2000, created a program to partner local area schools, the Extension Service, Farm Bureau and local row crop producers together in a comprehensive, row crop agriculture awareness program, to address this issue. This program is still going strong through staff changes and COVID. The program is designed to reach 5th graders at two school districts. The program starts in the Spring semester and is completed the following Fall semester as the youth are then 6th graders. One location focuses on rice and the other focuses on corn production. Extension

staff visits each school in the Spring to teach about plant science, soil science, and crop production. The lessons are age appropriate, hands-on, and tied to the core standards of Arkansas. Over the summer, local row crop producers manage their crop recording inputs and field management. In the Fall, the then 6th graders are bused to the farm to observe the harvesting operation first-hand. The producers interact with the youth as they explain the process of growing crops, caring for plants for optimal yields, and the equipment used to harvest the crops. The producers then donate the profit from one acre of their crop to the classroom. The County Agent then teaches the economics of producing row crops and the class determines if the acre of crops was profitable. Then students are allowed to decide which charitable organization they would like to donate their profit. Farm Bureau provides a tabletop rice mill and Ag Readers for each commodity for the program. Pre & post tests are used to evaluate the student's knowledge increases. Crops for Kids has been a successful program across the county among the students and our producers. Other counties across our state have adapted and replicated the program to meet their local needs to increase agricultural awareness.

ANIMAL SCIENCE ACCEPTED PRESENTATIONS

PROVIDING EDUCATION TO WESTERN SHEEP AND GOAT PRODUCERS

ANIMAL SCIENCE
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The sheep and goat industry in the West and across the country is on the rise. In the spring of 2020 University of Idaho extension faculty Melinda Ellison and Carmen Willmore had planned two in person workshops to provide hands on education to Idaho sheep and goat producers. Because of the pandemic these in person workshops had to be moved to an online format which began the University of Idaho Sheep and Goat Extension webinar series. The program was very popular from the start and so the program was expanded to include Extension specialist Whit Stewart from Wyoming and Chad Page from Utah State University. Bringing in these additional specialists brought more connections, ideas, and programming outlets for the webinar series. A total of 50 webinars have been offered between April 2020 and March 2022 by 86 speakers to a total of 4,115 live viewers (average 82 individual attendees per webinar). Attendees joined from across the U.S. and Internationally. Each webinar was also uploaded to the YouTube channel for people to view at their leisure and links were shared to the Facebook page and with the email list serve. By March 2022, there have been a total of 55,235 views of the uploaded videos online. Additionally, of 586 post-webinar survey participants, 84% indicated that their knowledge of sheep and goat production had increased and that they would adopt new information or techniques in their operation as a result of the webinar. Non-producers made up 9% of the survey participants. The team also began a quarterly newsletter in 2021 to provide additional educational material to the clientele that was seasonal and related to the current topics of the season. With the success of the program the extension team has plans to continue to provide the webinar series well into the future, bringing in more experts and expanding their audience.

2021 MAINE PASTURED TURKEY PROJECT

ANIMAL SCIENCE
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Eighty 5.5-week-old Broad Breasted straight run turkeys were raised on pasture at the J. F. Witter Teaching and Research Center in Old Town, Maine from June 1, 2021 through November 1, 2021. Researchers gathered production data such as: pasture use, feed intake, water use, weight gain and feed efficiency. However, the main hypothesis was to determine the feasibility of a newly designed mobile turkey tractor system. The mobile turkey tractor was built utilizing rigid corral panels for sides and flexible feedlot panels and tarps to create the roof structure. During the Covid-19 pandemic, lumber became scarce and expensive leading the University of Maine to develop alternative methods to construct pasture poultry housing. The mobile turkey tractor was 24 feet long, 10 feet wide, and approximately 9 feet tall. Synthetic tarps were stretched over the sides and top to create shade but left open on the ends to allow ample ventilation. Perches were placed at varying heights throughout the tractor to allow turkeys to choose the heights they were most

comfortable with as they age. Metal t-posts were utilized on the corners to stake the tractor to the ground which were easily removable to tow the tractor forward when turkeys soiled the inside of the tractor. Turkeys were kept on pasture until they reached 18 weeks of age. On average, each turkey consumed 74.4 lbs of feed from the start of the project. Water utilization per bird was 7.7 gallons. Turkey Feed Conversion Ratio was 4.15. The mobile turkey tractor performed well, experiencing temperatures as high 90° Fahrenheit, wind gusts in excess of 50 miles per hour, and up to 3" rains. During the project, 8 educational videos were generated and shared on social media (3030 views) while the project was in progress. Viewers were able to watch construction of the mobile rookery, turkeys enjoying the pasture, students weighing animals, and unfortunate aspects of the project including vandalism and predator attacks. Results were also presented to producers at the 2022 Maine Agricultural Trade Show. A video recording of this presentation has reached 96 views.

STARTING AN ARTIFICIAL INSEMINATION CLINIC FOR CATTLE PRODUCERS IN SOUTHERN ARIZONA

ANIMAL SCIENCE
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Before 2019, the University of Arizona Cooperative Extension Service had not offered an Artificial Insemination (AI) workshop for beef producers. A 2015-2016 needs assessment had ranked AI as a topic not of particular interest to cow-calf operators, who likely saw major barriers to implementation. These barriers include lack of appropriate facilities and labor issues as their cattle are primarily grazing large tracts of public land. I was also likely due to unfamiliarity with the process. In 2017, an AI workshop was held in Graham County with emphasis on how AI could be utilized in Arizona. Following that, recent years have led to an increased interest in adopting AI as a management tool, especially for producers adopting value added marketing strategies. In Fall of 2019 the first UA Artificial Insemination Clinic was held at the University of Arizona's V-V Ranch, located in Camp Verde, AZ, but producers in the southern half of the state wanted to attend one closer to home. However, the University owns neither cattle nor an appropriate facility to host this type of event in this region. A producer offered their facility and use of their cull cattle, and in Fall of 2021 UArizona Cooperative Extension held the first annual Southern Arizona AI Clinic for Beef Producers. Fourteen producers attended this sold-out three-day workshop, with an additional 8 attendees for "day one" only to explore AI for their operation without committing to a full clinic. AI Clinic participants reported an average 84% increase in their knowledge of all topics presented, and indicated they were likely or very likely (4.4, 1 = not likely and 5 = very likely) to implement AI on their own operation following the workshop. Participants rated their confidence in performing AI at a 3.3 (1 = not confident and 5 = very confident). While hosting an AI clinic on a working beef operation came with unique challenges, it was also a realistic experience for attendees and learning objectives were met. This presentation will focus on how we overcame those challenges for a successful program that will become an annual occurrence for Southern Arizona.

PREPARING LIVESTOCK PRODUCERS FOR A FOREIGN ANIMAL DISEASE

ANIMAL SCIENCE
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Producers should learn about foreign animal disease for several reasons and to address several issues: Ability to identify a foreign disease immediately will potentially limit the spread. A limited disease would save millions because a wide-spread disease is estimated to cost over 10 billion dollars. Pre-learning how to effectively contain and eradicate the disease will also potentially limit the spread. Additionally, producers should learn about what records are necessary to help slow the spread, including the tracking of all pig, people, feed, mortality and equipment movements. To increase the chance of the operation's financial survival through a foreign animal disease crisis, the livestock producers should think about some emergency management issues ahead of the outbreak. They should learn about movement shutdown and develop an emergency response secure plan. Depending on their situation, the producer should know how to implement: approved mass euthanasia that is a right fit, an enhance biosecurity plan and a mass

disposal plan that reduces the risk of releasing the deadly virus off the site or into the environment. The producer should think about inactivating the pathogen before moving the carcasses off site, again to limit spread and to reduce the risk of reinfection. Finally, how to continue the business during the outbreak is another issue that should be learned before the crisis. Movement permits for quarantined herds will be essential for financial survival. A plan for average daily gain reduction may be necessary. Feed rationing with limit feeding strategies may need to be implemented. Secure movement plans should be understood and developed before the crisis. As African Swine Fever is rapidly spreading around the globe, most recently within 100 miles of the US, it is time to prepare and educate producers. The Iowa Pork Industry Center team has responded and is continuing the response. So far, 20 workshops were held for over 300 participants and 4 webinars reaching more than 600 have addressed all the issues listed above. More workshops are planned for this summer. Impact documented from a six-month post meeting survey reported changes implemented as result of the trainings: several related to more effective employee entry onto farms and implementing a clean dirty line technology and/or an entry bench. Additionally, participants started developing a Secure Pork Supply plan and implemented a biosecurity manager. Comments from workshop participants included: 'Helped me understand how important biosecurity is. Good hands on training.' Another comment reported that they learned 'How incredibly easy it is to track pathogens.' As a result of this effort producers were assisted, helping them focus on foreign animal disease preparation. The materials developed and used for these trainings are available and ready for application in other states.

ENVIRONMENTAL LANDS MANAGEMENT USING CATTLE GRAZING

ANIMAL SCIENCE
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The State of Florida owns 4,940,120 acres which is about 14.2% of land area of Florida. The purpose of this educational program and tour was to increase the knowledge of land managers of the ecosystem services provided by cattle grazing and of best management practices cattle producers follow to increase productivity and manage forage. The program was held at a public-owned property currently being managed with cattle grazing. The two-part program consisted of seminars covering ecosystem services, phosphorous and nitrogen budgets and soil health, stocking rates and forage management, and body condition scoring and physiology. Specialists from the Ona Range Cattle Research and Education Center and Archbold Biological Station assisted with the program. In the afternoon, the tour included demonstrations on soil testing, weed identification and management, hay production, body condition scoring and winter supplementation of cattle. Participants received a handbook with resources. Participants in the program included officials from Florida Water Management Districts, municipalities, Florida Department of Agriculture and Consumer Services Forestry Division, and the hosts from Pinellas County government. Retrospective surveys were used to determine knowledge gained by participants. They indicated an average knowledge gain of 61% on the topics. Nearly 2/3 of the participants were currently land managers overseeing nearly 1 million acres of land. From the evaluations, 94% stated they felt more equipped in their land management role; 89% stated they have a more positive view of cattle grazing leases as a tool for land management. Comments in our surveys showed we may impact future discussions about land management. The Environmental Lands Management Using Cattle Grazing Program provided an educational program for land managers in a setting with Extension Agents. The end goal beyond knowledge gain and behavior change was for land managers to establish relationships with UF/IFAS Extension Agents; Agents provide science-based resources for their land management decisions. The Environmental Lands Management Using Cattle Grazing Program is being repeated in 2022 with new topics, including wild hog and invasive weeds management and will be held at a new location.

HYBRID EQUINE PROGRAM COMBINES ONLINE AND IN PERSON TEACHING TO TARGET BEHAVIOR CHANGES IN CENTRAL FLORIDA HORSE OWNERS

ANIMAL SCIENCE
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A recent study of horse owners uncovered a fundamental lack of knowledge regarding good animal husbandry practices (Williams et al., 2018). This ignorance may cause unintentional mistreatment of animals and leads to higher costs associated with feed and health care. Additionally, mismanagement of horse manure and poor grazing management can contribute to non-point source pollution of freshwater systems, a major area of concern in Florida. In the spring of 2021, two Central Florida Extension agents with livestock appointments partnered to pilot a ten month online Equine Short Course to meet this need. The course was hosted using the University of Florida's Canvas platform which allowed for live and recorded lectures, guided discussion forums, and the easy sharing of supportive content. Each month participants attended a live lecture online via zoom. These lectures were taught by the course leaders and a number of UF/IFAS State Specialists with equine appointments and topics ranged from parasite control to pasture management. Recordings were made available to those who could not attend live. Following the lecture, a homework assignment was posted in the discussion board with that month's teacher answering questions and providing feedback. At the end of the ten-month program, the participants met at the University's teaching farm for a day of in person hands-on learning that reinforced the lessons that had been exposed throughout the year. A total of 28 people participated in the Short Course with 10 attending the capstone field trip. 100% of those surveyed reported being more aware of equine husbandry best management practices and felt that they were better able to care for their horses, their pastures, and the environment as a result of their participation in the course. 100% of surveyed participants indicated that they had already made one or more recommended practice change because of the Short Course. Recommended practice changes included: soil testing & weed management (18), grazing management (7), body condition scoring horses (7), feeding a more forage-based diet (6), and composting manure (7). This program is being offered again in 2022 and a more advanced version is currently being developed for graduates of the pilot program.

PANDEMIC PONIES: EDUCATING NEW HORSE OWNERS DURING COVID-19

ANIMAL SCIENCE
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During the spring of 2021 and in the height of the COVID-19 pandemic, the Penn State Extension Equine Team suspected that many people were buying new horses for the first time. An informal Facebook poll on the team's page demonstrated that 43% of respondents had acquired a new horse during the pandemic. Horse ownership is costly and requires specific knowledge about horse health, care, and behavior, so in April 2021 we developed a virtual course for new horse owners called "Hold Your Horses: What to Know When Buying a New Horse." The course was held over Zoom due to COVID-19 restrictions and the ability to reach a wider audience compared to in-person events. The course was offered over 3 weeknight sessions and topics included "Considerations When Choosing a Horse," "Finances of Owning a Horse," "Basic Horse Health," "Basic Horse Behavior," "Basic Horse Nutrition," and "Bringing the New Horse Home." The course was free and 142 people registered from 20 states and 2 foreign countries. Post-program evaluations were collected using Qualtrics and showed that, when averaging all three sessions, 50% of respondents did not yet own a horse, and 67% were either planning to buy a horse within the next year or might buy a horse within the next year. When asked how much the program would impact their horse buying or horse care decisions, a total of 61% responded either "a great deal" or "a lot." The program had major impact (over 50% of respondents will adopt this practice as a result of the program) in the following behaviors: consulting a mentor when considering a horse to buy; performing a pre-purchase exam on a horse; determining

a budget for the horse's care; creating an emergency fund for a horse; and monitoring vital signs, body weight, and body condition score. Overall, participants reported appreciating the information provided, indicating that this course is a needed resource for new horse owners.

BEEF QUALITY ASSURANCE IN IOWA INCREASES PRODUCER PROFITS

ANIMAL SCIENCE
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While the Beef Quality Assurance (BQA) program is voluntary, most cattle feeders and many cow-calf producers certify to increase their marketing opportunities. The BQA program is managed and overseen by the National Cattlemen's Beef Association and the Iowa Beef Industry Council, with Iowa ISU Extension beef specialists contracted to provide the educational component to producers. This partnership has been extremely beneficial to both organizations and to Iowa beef producers. Partnerships with auction markets, cattle buyers, feed dealers, veterinarian clinics, pharmaceutical companies, and county cattlemen groups have also been developed to further the reach of the program. Some auction barns have even taken the step to request all cattle producers, whether fed cattle or cow-calf producers, become BQA certified to sell any cattle through their market. The focus of the BQA program nationally is to ensure consumers that beef is healthy, wholesome, and safe; and that beef producers raise cattle with attention to animal welfare, food and worker safety and environmentally sound practices. In Iowa, we stress the importance of evaluating individual operations and making changes to improve production, management, and profitability. Most programs are typical presentations, we also utilize Stockmanship Clinics with nationally known clinicians on cattle behavior and handling practices, and Feedyard Assessment field days with hands-on activities and the Feedyard Self-Assessment scoresheet. Finally, when Covid limited face-to-face opportunities, a webinar was held which included quiz questions throughout to ensure participant attendance. The partnership with the Iowa Beef Industry Council was developed in 2017. In the last three years (2018-21) 174 programs have been held with more than 11,000 producers attending. A 2019-20 survey of beef producers attending Extension programs showed that 68% of respondents learned something new at a BQA training, half changed cattle handling practices, 40% changed record keeping and 40% changed animal health practices, all resulting in a safer, higher quality beef product. Thirty-four percent also shared information about beef production practices with consumers. When averaged, the BQA program added $430 to the beef producers' operations. Because of this program, consumers can be assured the beef they consume is responsibly raised and safe to eat.

FINDING THE IDEAL COW FOR IDAHO RANGELANDS

ANIMAL SCIENCE
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A significant percentage of the beef cattle raised in the western United States spend at least a portion of each year on rangeland pastures. These rangeland pastures can be up to several thousand acres in size. Cattle distribution and utilization vary greatly across rangeland pastures. University of Idaho research suggests that "efficient" 2-yr-old lactating cows use rugged rangelands more sustainably than "inefficient" 2-yr-old lactating cows. Cows that were previously ranked as more efficient in a feedlot setting (using data from GrowSafeTM feeding units) climbed higher and spent more time out of the riparian areas at Rinker Rock Creek Ranch (RRCR) during the hot days of August. Further consideration of the differences observed in the spatial distribution of cattle grazing rugged rangelands during the heat of summer implied that there was a physiological link to the grazing behavior demonstrated by these divergent cattle. Specifically, cattle with greater appetite spend more time resting during the heat of the day at lower elevations possibly due to a larger gastrointestinal tract size. Are differences in observed grazing behavior for efficient vs inefficient cattle grazing rugged rangelands due to 'nature' or 'nurture'? How important is the role of social learning? Research (Bailey et al., 2015) suggests that genetic markers may exist to classify "hill-climber" cows that better fit rugged rangeland environments. If differences in grazing behavior on rugged rangelands can be attributed mainly to genetic influences, then selection of replacement heifers could be aided by using genetic markers as those become available. To answer grazing behavior questions, a University of Idaho

Extension research team installed grazing behavior collars on 35 cows + calves at RRCR during mid (May 18 to June 16, 2021) and late lactation (July 12 to August 25, 2021). First-year study data showed a need for software updates on the cow collars and promise of grazing behavioral differences between cow efficiency groups warranting further study.

ANNUAL FORAGE GROWTH IN IOWA

ANIMAL SCIENCE
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With the shortage of pasture and hay ground many livestock producers are looking for alternative forage feed sources. Annual forages provide producers an opportunity for alternative forage feed sources. Annual forages can extend grazing days into the early spring prior to pasture turnout, through the typical summer slump when cool season pasture growth slows, into the fall alongside corn stalk grazing, and into the winter months with the use of swath grazing. Simply the addition of one week in the spring, three weeks in the summer, and three weeks of additional grazing in the fall can reduce the cost of feed to an Iowa cow herd by nearly $100 per cow. In many cases, producers can raise a forage crop followed by a grain crop on the same land, increasing overall farm production. However, limited current data exists for annual forage crop yields in Iowa. As a result, several Iowa State University Extension staff have established demonstration projects at five research farms over the last three years and one independent farm to determine yields of winter annuals, spring annuals and summer annual forages. The results of these demonstrations have been a springboard to create and fund additional education programs. In the past year, yield results as well as management practices have been shared at more than 20 programs or field days to more than 400 producers. End-of-meeting evaluations show that 65% of participants are currently seeding winter annuals, 56% are using spring annuals and 47% are using summer annuals. Additionally, 13% of non-users plan to add annual forages to their forage base. Evaluations also showed an increase in knowledge of more than one full level increase on a 5-point scale.

EARLY CAREER DEVELOPMENT ACCEPTED PRESENTATIONS

PARTNERSHIPS AND COLLABORATIONS: TAKING YOUR JOB FROM GOOD TO BETTER TO BEST

EARLY CAREER DEVELOPMENT
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Have you ever heard this quote? “Walk with the dreamers, the believers, the courageous, the cheerful, the planners, the doers, the successful people with their heads in the clouds and their feet on the ground. Let their spirit ignite a fire within you to leave this world better than when you found it.” - Author: Wilferd Peterson

Who are these people and how do you surround yourself with people like this in your professional life? There may always be some isolating tasks or situations related to our jobs that force us work alone. This was more evident than ever before during the pandemic. However, during this time of social isolation, it was even more obvious about the value and importance of surrounding yourself with colleagues, volunteers, community partners and collaborating agencies.

Learn how others can make our ‘good’ efforts ‘better,’ and our participation and involvement can make combned efforts the ‘best’ - truly leaving the world a better place because of the work we do and the people we surround ourselves with. From a simple side conversation to standing meetings, communication is key. Time and energy placed in relationship building can pay large dividends over your career.
Learn some tips to indentify how to surround yourself with those the dreamers, the believers, the courageous, the planners, the doers. Just as you will reap the benefits, you will lift up others and encourage their successes too! Who knows, that person could be sitting right beside you!

A NEW APPROACH TO ONBOARDING AGRICULTURE & NATURAL RESOURCES EXTENSION STAFF

EARLY CAREER DEVELOPMENT

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In the last five years, approximately 40 extension professionals have been hired at Ohio State University Extension, not including state specialists, and high turnover is anticipated over the next few years as county staff approach retirement. Furthermore, county staff had identified the need for improvement in onboarding and mentoring. As a result, the revamped onboarding process for ANR staff was initiated in January 2021. The program includes a new process for assignment of mentors, an online library of resources, and a mix of virtual and in-person in-services with hands-on learning opportunities designed to allow staff to begin building professional and personal relationships. Each year, in-services covering the core topics of farm management, soil and nutrient management, diagnostics and pesticides are offered along with alternating topics that include relationship building, conducting farm visits, program planning, reporting, on-farm research, livestock, forage crops, tractor operator skills, and volunteer management. Attending monthly sessions are mandatory for staff under a year on the job and optional for those between one to five years. Up to 23 staff members under five years of experience have participated in sessions monthly since the start of the program. An online library which includes videos and fact sheets on Extension professional conduct and strategies for relationship building with clientele, specialization development, professional development, Extension organizations, teams, annual reporting, county website management, public relations, creative works, service and teaching tips, downloadable curriculum and more. Evaluation of the onboarding process is underway, and the program continues to adapt to needs identified by new staff.

GETTING TO NATIONALS: HOW TO DEVELOP & SUBMIT AWARD-WORTHY CONTENT

EARLY CAREER DEVELOPMENT

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The early years of an extension agent can be a stressful time. Early-career agents are expected to figure out the seemingly endless nuances of University extension systems, local governments, allied industry partnerships, and their clientele. On top of their day-to-day demands, newly hired agents are also expected to navigate the professional development expectations of their job, in which they must demonstrate the approval of their peers through presentations, posters, and recognition/awards. Although job performance is often judged on the recognition an agent receives from their professional associations, there is a lack of training on just how to develop and submit recognition worthy content. Early career agents should be presented with the available tools, technologies, and tricks on how to develop superior content and programs. By outlining the techniques Florida extension agents utilize to win an average of 15 national awards and recognition for the past 5 years, the instructors can help early career agents from other states increase the quality of their content and thereby the likelihood of securing program and content awards. Award recognition is beneficial for increasing the confidence of new agents in their personal abilities, helps bring high-level exposure to incredible programs & content, and creates more opportunities for collaboration and growth within our national association. Many judging committees will speak about the high-quality content submissions that are paired with lackluster abstracts, therefore an early-career training that focuses on developing award-worth content must also discuss the correct presentation of that content. Tips and techniques for abstract writing will be discussed in conjunction with content development techniques. The authors developed an in-service training for Florida extension agents in early 2022 to prepare them for the upcoming award submissions season, we would now like to extend this training to the national level to encourage our colleagues in other regions to submit more quality abstracts and increase the excellence of University Extension systems across the country.

PUBLISHING AN ARTICLE IN THE JOURNAL OF NACAA EARLY CAREER DEVELOPMENT

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In Extension, scholarly activity comes in many forms and most Extension professionals are conducting research and/or programming that may well serve as a topic for an article. The Journal of NACAA is a way to preserve a durable record of your work. Publishing in the peer-reviewed Journal of NACAA is a valuable and gratifying way to build your CV and to establish yourself as a scholar in Extension. Even if you have never published a paper, the Journal of NACAA is a way for members to showcase their work. This facilitated discussion will be led by the Journal of NACAA's current and upcoming Editor, will cover ideas for articles, planning for successful publication, where to find assistance, what reviewers are looking for, and navigating the online submission process.

HOSTING A SUCCESSFUL FORMAL MEETING WITH AN AGENDA OR POWERPOINTS

EARLY CAREER DEVELOPMENT
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Lecture style meetings with PowerPoints can become redundant for producers. Integrating multifaceted delivery methods into meetings can increase producers' attention, interaction, and knowledge gain. The Holmes County Fall Cattle Forum was developed and serves as a model to meet this need and to provide an open meeting arena for producers to exchange ideas and consult industry experts. Objectives: The objectives of the workshop were 1) to facilitate a discussion forum for producers, allowing them to interact with state specialists and industry professionals without a set meeting agenda, 2) provide a platform for producer-to-producer education, and 3) provide an opportunity for producers to inform extension educators on the issues/topics currently impacting their operations. Method: The discussion forum was held in a town-hall style workshop, which allowed producers to seek information on topics that were relevant and timely to their operation, covering a wide variety of topic areas, without the constraints of an agenda-based meeting. In addition, it served as an informal opportunity for industry and extension personnel in attendance to gain a greater understanding of issues that need addressed. Results: Over 6 meetings a total of 567 producers have attended. Of the 205 survey respondents, 195 (95%) reported knowledge gain, and 110 (54%) indicated intended behavior change in the areas discussed. Conclusion: This educational model provides producers in the area opportunity to attend a meeting, without an agenda, giving flexibility and increase relevancy to information provided.

EXTENSION PROVIDES VALUE TO MUNICIPAL FUNDING PARTNERS THROUGH COLLABORATIVE PROGRAMS

EARLY CAREER DEVELOPMENT
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Extension can provide value to municipal funding partners by offering training and CEUs to meet their needs. In Martin County, for many years our Extension office has offered a program, "Protecting Florida's Resources Best Management Practices Summer CEU Series". The series typically consists of six to eight weekly two-hour sessions held during June and July each year. Though the trainings are intended primarily for municipal employees, we also make it open to Master Gardener volunteers and commercial clientele. An average of 64 people have attended annually since 2018. Most attendees are responsible for maintaining the grounds of county and city parks and facilities. Sessions typically offer CEUs and cover topics requested by an advisory team of county and city staff. In 2018, as an example, we offered 106 FDACS CEUs to licensed pesticide/fertilizer applicators attending the program. Topics covered over the years have included pesticide safety, spill prevention, pruning, plant identification, harmful algal blooms, shoreline restoration,

gang awareness, active shooter safety, maintenance of palm trees, and much more. Though it is a large class, instructors incorporate hands-on and interactive learning, such as botanical terminology review activity sheets, Zoom-based polls reviewing common landscape issues, pesticide label activity sheets, equipment demonstrations, stations discussing different pruning cuts in the field, etc. In 2021, we measured knowledge gain and behavior change for the Equipment Maintenance & Safety session (IRB202101319). I worked with County Parks Supervisor Scott Modlin and UF Specialist Dr. Serap Gorucu to plan for the session, including developing evaluation tools and co-teaching. The average knowledge gain was 10.6% across all modules, which covered best practices for safety/maintenance with power tools, PTO equipment, skid steer loaders, and ladders. To quantify behavior change, participants were surveyed via Qualtrics four months after the 2021 training. All respondents (n=11) stated they had made changes in the way they maintain or use equipment as a result of the program. Some of the best practices respondents said they now more frequently follow include: checking surroundings for hazards before using equipment, placing extension ladders the correct distance from structures, and using a seatbelt when you have rollover protection in the cab. The equipment safety practice adoption we documented represents one example of the best management practices we have promoted over the years. By helping county staff obtain CEUs and learn best practices, Extension demonstrates our value to funding partners.

BENEFITS OF AND REFLECTIONS ON EXTENSION CREDENTIALING PROGRAMS FOR INMATES

EARLY CAREER DEVELOPMENT

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As Extension Agents, we strive to serve traditionally underserved audiences and make a difference in their lives and livelihoods. Inmates in federal and state prisons represent one such underserved audience, where extension vocational programs can have tremendous benefit. About four in ten inmates released from state prisons are reincarcerated within three years of release. The Bureau of Justice Assistance found a 13% decrease in risk of reincarceration for inmates who participated in education programs during their confinement. According to the Department of Justice, for every dollar invested in prison education, incarceration costs are reduced by four to five dollars within the first three years post-release of an inmate. The Florida Department of Corrections and UF/IFAS Extension began collaborating in 2021 to offer inmates a series of certificate programs at the Martin Correctional Facility. Through pre-/post-tests and reflective surveys (IRB202101126), we documented strong knowledge gains (16% knowledge gains for Green Industry Best Management Practices, 18% for Business Basics, and 57% for Beginning Farmer). In post-program surveys, inmates also expressed their intentions to adopt recommended practices as a result of what they learned, including rotating crops on the correctional facility's farm to reduce pest/disease pressure and pursuing green industry professional licensing/certification. In 2022, we expanded program offerings to include more horticulture programs, as well as personal finance classes. We are currently planning FY23 programs, based on input from class participants, instructors, and the facility's education coordinator. Providing extension programs to inmates gives them an opportunity for positive growth and development during their incarceration, helps them in their efforts to contribute fresh produce to their community, and gives them credentials they can use when seeking employment after release. In preventing recidivism, extension education programs like ours offer a strong return on investment and help ex-offenders reenter society successfully.

MOTIVATIONAL INTERVIEWING AS A TOOL TO ADDRESS FARM STRESS AND DIFFICULT CONVERSATIONS

EARLY CAREER DEVELOPMENT

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Family farms comprise 96% of U.S. farms (U.S., 2017). The demanding nature of work makes farming a stressful

occupation. Extension educators are working to organize resources to address the growing farm stress needs of farmers and their families. Educators serve a critical role in their local communities, though many educators may enter their career without a complete skill set (Myers, 2011). Educators are more proficient in their subject matter expertise, but may be less competent in other skills, like oral and written communication skills. Motivational Interviewing (MI) is 'a collaborative conversation style for strengthening a person's own motivation and commitment to change' (Miller & Rollnick, 2013). UW Extension educators developed an MI-based professional development program to improve the adoption of a goal-oriented communication technique that would assist educators when engaging with farmers and farm families on farm stress. The four-part training consisted of theoretical introductions of MI, experiential exercises of different MI skills, group discussion, and case examples, highlighting the four key concepts of MI and related MI skill. Initial results suggested educators gained a significant amount of knowledge and reported feeling more comfortable using the MI skill in their work. Participants found the training to be valuable, an average of 4.08 on a scale of 1 to 5, with 5 being very valuable. The goal of this program was to encourage educators to spend more time listening and engaging in techniques that would allow an opportunity for the farmer or farm family member to vocalize their farm stressors and identify reasons to change, rather than being told how and why they should change. This presentation will focus on the MI skills that can assist educators in meeting the needs of farmers and farm families they work with, and inspire positive behavior changes when engaging in meaningful conversations on critical and time-sensitive topics, such as farm stress, farm succession, and other difficult conversations.

ONBOARDING OF AGRICULTURAL AGENTS - NEEDS AND PERSPECTIVES

EARLY CAREER DEVELOPMENT

Marcelo Wallau
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Onboarding and early-career support have been identified as major components of extension faculty success and retention. Traditional onboarding training generally includes aspects of communication and education, program development, learning methods, and logic models. Those topics are generally not part of the curriculum of most agricultural science courses. Given that new Extension agents are hired for specific program areas, onboarding normally foregoes subject matter content, assuming agents will already bring experience and expertise. However, early-career extension agents generally come with narrow background training and a lack of experience in production agriculture, thus facing challenges when working with a broad spectrum of commodities. A recent needs assessment (Halbritter et al., 2021) of agricultural, horticulture, and natural resources extension agents showed a high demand for basic topics on concepts of agricultural practices, analytical capacity, and use of resources (e.g.: support laboratories and extension specialists). Based on that, we implemented the "ANR 101" (agriculture and natural resources), a component of onboarding training dedicated to exploring the multiple facets of being an extension agent, interacting with clients and understanding their needs, and utilizing resources available at our institution to assist them. From Fall 2018 to Spring 2022, 7 cohorts were trained to reach 73 new Extension faculty. The evaluation shows that 80% of participants consider the training and material presented very relevant, and 85% reported it to greatly increase confidence in developing their jobs in extension. Nevertheless, not all needs are being met through currently available training. Continued feedback from colleagues suggested a more in-depth, program area-specific training. The second phase of this project is currently being developed, which will be structured around an on-demand, online platform for specific subject matter training available to agents upon hiring. This will provide a deeper level of training than can be offered in person.

ANIMAL SCIENCES GRADUATE STUDENT MENTORSHIP: PEER TO PEER TRAINING FOR COUNTY AGENTS IN ARKANSAS

EARLY CAREER DEVELOPMENT

Sherri Sanders
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SEARCY

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Never has the role of a county agent been more crucial to assist educating and raising the productive capacity of our farmers as it is today. It is through education and communication that agricultural agents

can bring changes in farmers' knowledge, attitudes, and skills thus helping farmers to adopt proven agricultural innovations. We teach our new, midcareer, or struggling agents skills which will allow them to assist our stakeholders and clientele with non-biased, research-based information that will increase farm productivity, farm revenue, reduce poverty and minimize food insecurity.

Encouraged by our administration, we implemented a training to educate our new and mid-career agricultural agents in three different disciplines – livestock/forages, row crop agriculture and horticulture through Peer-to-Peer training. Agents are inundated with workshops and trainings conducted by specialists; however, we felt this was beneficial for our organization in retention of our new employees. Seasoned agents with specialization in row crop, livestock/forages and horticulture were be utilized to conduct trainings (1-2 days each) in each area to teach the group the "nuts and bolts" of what it takes to be a successful agent with a comprehensive county program. The participants were taught through "hands-on training", field tours, and demonstrations in a low–key relaxed atmosphere.

This program has been ongoing for four years and has proven successful.

The purpose of this project is three-fold: to assist our new, mid-career or struggling agents in developing comprehensive county programming; to improve our retention rate of new hires by making them feel accepted and adequately prepared to properly handle situations in their specific counties as they occur; to encourage and promote a camaraderie based on mutual respect among new agents and seasoned agents.

Gleaning information from others, with proven experience, can be invaluable to our inexperienced agents. Likewise, our seasoned agents have learned from the younger generation too. That is our goal through this program – to create a reciprocal learning environment for the agricultural agents in our state.

HORTICULTURE & TURFGRASS ACCEPTED PRESENTATIONS

THE 9-DAYS OF FLORIDA-FRIENDLY LANDSCAPING™ SOCIAL MEDIA MARKETING CAMPAIGN

HORTICULTURE & TURFGRASS
Norma Samuel
Urban Horticulture Agent & Associate District Extension Director
UF/IFAS Extension
The Villages

Authors: Dejah Staton[1], Rafaella Galvez[2], Norma Samuel[3], Lisa Sanderson[4]

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Florida-Friendly Landscaping™ (FFL) promotes sustainability and conservation of resources. FFL integrates such principles into residential communities through collaborative efforts between homeowners, professionals, and legislative bodies.? While FFL yards are low maintenance by nature, all yards require maintenance. In The Villages, a residential area with a prominent elder population, FFL has gained a negative reputation since some FFL yards have been overgrown and under-maintained. ?Our goal was to utilize social media to increase awareness and ultimately create a positive perception of FFL across Florida, with a focus on The Villages. Facebook has a large share of elderly users, so the UF/IFAS Extension Sumter County Facebook page appeared to be the most effective medium to reach our target audience. By utilizing the pre-established Facebook page, engagement and awareness of FFL's benefits was fostered through regular uploads, conversational relays of technical horticultural information, and interactive writing elements. Our primary social media campaign was the "9 Days of FFL", which featured a post and webinar on a single FFL principle each day leading up to the first day of spring. A total of $293.54 was spent to boost 15 posts between February 10 and March 15, 2021. Both the Facebook page's Followers and Post Engagement increased by 13% and Page Reach by 32% or 18,224 people, and FFL appeared to be well received. Social media, specifically

Facebook, appeared to be an effective medium when seeking to educate more people about the importance of FFL. Similar campaigns should be used to increase popularity of FFL.

MASTER GARDNER VOLUNTEERS - RESTRUCTURING COUNTY MODEL

HORTICULTURE & TURFGRASS
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Master Gardner Volunteers (MGVs) can be an incredible contribution to a county or regional Agricultural and Natural Resource Extension program. They expand the reach of the local Extension Educator, provide educational opportunities to a diverse group of clientele, have connections in the community, and are vocal advocates for local Extension programs. Managing the MGV program can require a lot of time from the county Extension Educator depending on the structure, group size, dynamics, and ongoing programs. Providing a county-based MGV program structure that empowers volunteers to take on leadership roles and decision-making discussions can increase efficiency and effectiveness of both the MGVs and the county Extension Educator. This presentation will discuss the steps taken to restructure the Trumbull County MGVs in 2018-2019 from a program primarily led by the county Extension Educator to a program that is volunteer directed and managed. This structure has resulted in decreased time commitment for the Extension Educator, a renewed sense of ownership of the MGV program by volunteers, and new programs to serve a variety of different needs.

PHYTOPHTHORA OF CONIFERS – NEW AGENTS NOVEL APPROACHES AGAINST AN OLD ENEMY

HORTICULTURE & TURFGRASS
Timothy Waller
Agriculture & Natural Resources County Agent III
Rutgers
Millville

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Phytophthora spp. are omnipresent in horticulture production, however the focus of this USDA-SCBG was to reengage, map out the species affecting conifers and nurseries, and define better commercial recommendations in New Jersey and northeastern region. This endeavor allowed the new agents, onboarded at the onset of COVID-19, an opportunity to engage multiple commodities within a single program. Phytophthora is difficult to manage, and recommendations vary greatly across regions and commodities, yet innovative research in this area has not yet been exhausted. First, a short survey shared through county newsletters, the Rutgers Plant and Pest Advisory, and commodity association listservs, identified 21 grower cooperatives. During sampling visits the agents prepared a list of questions to unify verbal communication and delivered USDA - Web Soil Survey maps of their farms to direct discussions. Site, irrigation, host, and many other metrics were collected in addition to root and canker samples from symptomatic conifers and perennials. A total of 15 plant species, spanning the majority of Christmas tree and commonly infected nursery crops, were sampled. Samples were plated onto a Phytophthora selective media, PARPH, to obtain pure cultures. There appears to be 8-10 Phytophthora spp. contained within the 60+ isolates, however these groups will be sequenced at their ITS and COX2 genes for speciation. Morphological characterization and relation to host crops will aid in future diagnostics. Isolates were then subjected to a novel high-throughput 96-well bioassay to give indication of fungicide (conventional and biological) efficacy on the Phytophthora spp. groups, thus streamlining subsequent time-consuming field trials. Germplasm trials add the element of host susceptibility and thus allow experimental treatments focused on combinations of Phytophthora spp.,

treatments, and germplasm variables. Transplants were sourced from the major Christmas tree nursery regions of the USA for wide industry representation. This project is proving critical data and most importantly reengaging commodity groups. Outreach has taken the form of leading educational sessions for Christmas tree growers, commercial nurserymen, diversified farms, and landscape professionals (300+ overall attendees, at 3 sessions). Pest scouting guides, soil, site, and cultural deliverables are in progress as secondary results of this programming.

HUBBARD SQUASH TRAP CROP AS AN 'ATTRACT-AND-KILL' INTEGRATED PEST MANAGEMENT STRATEGY TO REDUCE CUCUMBER BEETLES AND SQUASH BUGS

HORTICULTURE & TURFGRASS
Ayanava Majumdar
Extension Professor, State Leader for Program Evaluation
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Alabama has a rapidly growing specialty crop industry valued at $165 million in direct sale and $103 million in value-added agriculture. Insect pests in the south are a major limiting factor to productivity and profitability for small producers. Trap cropping is a unique integrated pest management (IPM) strategy that utilizes insect behavior and host preference to deter feeding from the main crop. Trap crops are generally planted on minimal acres and are useful as an 'attract-and-kill' system reducing the overall pesticide usage on main crop. In Alabama, small plot trap cropping using Baby Blue and New England Hubbard started in 2013 at three locations (Brewton, Clanton, and Cullman). Aggregate data from demonstration plots with replicated treatments have shown 16 times more aggregation of cucumber beetles (Acalymma vittatum F.) on the mixed stands of Baby Blue and New England Hubbard. Cucumber beetles are the first pest to become active on Hubbard seedling and the feeding damage is noticeable. Main squash (yellow squash) planted two weeks after the trap crop remain untouched by the cucumber beetles. Squash bug (Anasa tristis DeGeer) adults are extremely attracted to Hubbard squash that leads to 94% reduction in egg load on the main crop. Timely treatment of Hubbard squash trap crops with pyrethrin and spinosad-based sprays can reduce squash bugs numbers to a limited extent. As an incentive for farmers, the large Hubbard squash fruits are marketable and can lead to cost-recovery. We have revised the 'Organic Vegetable IPM Slide Charts' for farmers with new information from trap crop studies; these new IPM slide charts will be available to participants free of cost at the conference. All research and IPM publications are supported by grants from USDA-NIFA BFRD, SARE Research & Education/PDP, CPPM/EIP, and ADAI Specialty Crops Block Grant Programs.

HARVEST FOR HEALTH: HOME VEGETABLE GARDENING INTERVENTION AMONG OLDER CANCER SURVIVORS

HORTICULTURE & TURFGRASS
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The purpose of Harvest for Health was to evaluate how vegetable gardening affects several aspects of an older cancer survivor's life – physically and nutritionally. We accomplished this task through an at-home gardening intervention program in collaboration with the University of Alabama at Birmingham Hospital (UAB Medicine). Participation was limited to cancer survivors who had never gardened but had a location at home for a garden. To achieve our goal, we paired each cancer survivor with an Extension Master Gardener Volunteer. These Master Gardeners served as a liaison and gardening mentor, coaching the survivor through a year of gardening. Participants in the program received either a 4' by 8' raised bed or 4 garden boxes (equivalent in square footage), supplies needed to grow a successful garden and a resource binder filled with garden-related Extension publications. This two-year intervention was divided into an analysis year where UAB Medicine would conduct examination, through medical tests and self-assessment, of survivor's pre-gardening behavior and an "intervention" year of active gardening. Each intervention began with a gardening kick-off for the participants to meet their Master Gardener mentor and receive training from the local Extension agent on raised bed vegetable gardening. Overall, we had 91-percent completion, reaching individuals in 29 of Alabama's 67 counties. Results indicated 92-percent of participants would "most

definitely" continue gardening in the future. A year later, about 85% of survivors say they have continued their new habits, and their test results confirm it. Nutritional impact showed an increase in fruit and vegetable consumption by approximately 1 serving/day within the intervention group versus the control. Physical function improved for 70% of the survivors during their 12-month intervention period. In summary, these studies received a 100% satisfaction rating from participants; the home vegetable gardening intervention among older cancer survivors was feasible and led to improvements in vegetable consumption as well as emotional well-being.

HOME VEGETABLE GARDENING WEBINAR SERIES

HORTICULTURE & TURFGRASS
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SAINTE GENEVIEVE

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Many families in Missouri were affected by the global pandemic. This led to concerns about food safety and availability, therefore increasing interest in growing vegetables at home. A team of horticulture specialists organized a free, 8-session Home Vegetable Gardening webinar series in 2020. The series included comprehensive coverage of basic information from garden planning to growing to managing pests to preserving vegetables at home with over 500 registrants. In 2021 and 2022, we repeated the series, adjusting the class topics each year and charging $50 for the series with 101 total participants. One-hour presentations were followed by a half hour for questions. We also did a 3-session fall gardening series in 2021 with 39 participants, charging $30. Social media advertisement was successful is securing registrants. Sessions were recorded and made available for participants if they could not attend the live session along with links to additional resources. Over 400 garden questions were answered over the 3 years we have offered the series. Session evaluations helped us collect feedback from the participants, evaluate the quality of the classes, identify needs, and observe expectations and perceptions of the participants. Evaluation results showed that the majority of participants were going to take the information they learned from the series and apply it to their current gardens or garden for the first time. We averaged a 35% evaluation response rate and conducted a long-term impact survey for the 2020 series in the fall of 2021, with addition long-term evaluations planned for the 2021 and 2022 series.

THE ART AND SCIENCE OF THE PEST PREDICTIVE CALENDAR

HORTICULTURE & TURFGRASS
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SALISBURY

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Insect pests damage ornamental horticulture crops with their chewing, sucking or rasping mouthparts. Depending on the pest, damage can destroy or disfigure the foliage, flowers, fruit, trunk or stem, devastating the appearance of the ornamental trees, shrubs, perennials or annuals. While it is not difficult to learn which insect pests prefer Quercus alba and which other pests prefer Rhododendron minus, it has not always been easy to predict when the Oak lecanium scale first hatches out or the first hatch of the Azalea lace bug emerges. This prediction is most helpful at such a time, when they are at their most susceptible stage for controls. Now, after years of observation and calculating, we can predict that the Oak lecanium scale needs 789 growing degree-days (GDD), while the Azalea lace bug needs only 214 GDD. Growing degree-days are a measure of the 'heat unit' that accumulate over time. By keeping track of the temperatures starting at 50? F, it is possible to predict the degree-day when insect pest reaches that susceptible stage. Software and technology can be used to calculate growing degree-days of insect pests or a horticulturist can look around the landscape to see what is blooming about the same time the pests are at their most susceptible stage for control according to a Pest Predicative Calendar. Most horticulturists tend to notice when trees, shrubs and perennials are in bloom, and knowing that when the dainty white urn shaped flowers of Enkianthus perulatus 'JL Pennock' begin to bloom (GDD 204), the Azalea lace bug will be out soon. When the fragrant white panicles of Cladrastis kentukea (GDD 627) perfume the air and 3-petaled purple Tradescantia virginiana brighten the landscape (GDD 692), it is time to check the Oak lecanium

scale for crawlers. Using the knowledge of landscape plants when they bloom and insect pests that consistently damage them, it is now possible with the Pest Predictive Calendar to plan ahead and apply controls at the optimum time.

TREE CARE MYTH-BUSTING: PRUNING

HORTICULTURE & TURFGRASS
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Homeowners and landscape professionals alike are interested in proper pruning techniques for their trees and shrubs. Hundreds of popular books and online resources present confusing and conflicting pruning instructions, many of which are not science-based. We reviewed the current, science-based literature on pruning woody plants. In this presentation, we begin by explaining how woody plant physiology predicts tree and shrub responses to pruning, both in the short- and long-term. We then dispel some common pruning myths that increase the risk injuring or killing trees. These include:

heading back young trees,
retrenchment pruning,
pruning at a 45-degree angle, and
sterilizing pruning tools.

Finally, we present a set of science-based recommendations designed to preserve tree and shrub health while maximizing homeowner satisfaction.

CONNECTING PRODUCERS IN NORTH FLORIDA TO CITRUS PROGRAMMING

HORTICULTURE & TURFGRASS
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In North Florida, there has been significant growth in citrus production due to the relatively mild winters, advances in freeze protection, and cold hardy citrus varieties. This region is one of the only regions in Florida where commercial citrus planting is increasing, due to the relatively low incidence of the citrus greening pathogen and its vector. Despite the growth in citrus production, there is still a huge lack of knowledge for growers regarding production practices. In response to this need, state and county faculty members developed the Citrus Health Forum workshop to address the needs of citrus growers in North Florida. The purpose of this educational program was to provide research-based information to growers to improve production practices. The program first began in 2017 and is now held annually at the UF/IFAS North Florida Research and Education Center. It consists of classroom presentations from state specialists followed by a grower panel discussion and a field demonstration. In addition to the educational program, the program features a trade show of businesses and agencies that offer goods and services to growers in the region. Each year, we work in collaboration with the Cold Hardy Citrus Association to help plan the topics addressed at the program. The number of participants have increased significantly, from just 65 in 2017 to 125 in 2022 and include growers from Georgia and Alabama. Since 2019, program evaluations have indicated a 96% (173/180) increase in knowledge of participants. Of those participants surveyed, 60% (101/167) indicated that they planned to make a change to their operation as a result of the information presented and 41% (57/138) indicated that they have already made a change. The Citrus Health Forum is now an established event that has been successful in offering educational content and continues to see positive feedback from growers.

GARDEN IN A BAG

HORTICULTURE & TURFGRASS
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Having access to fresh fruits and vegetables in rural areas can be challenging, especially in economically/ socially disadvantaged populations. Increasing the availability of produce and encouraging the intake of fresh produce is a critical need in these populations. While gardening is a staple practice for many, typically these populations do not practice it. In addition, these clients typically do not engage in traditional Extension education. Objectives: The objectives of Garden in a Bag (GB) are to: 1) increase sustainable and sustenance gardening practices by economically disadvantaged clients, 2) to increase availability of fresh fruits and vegetables in food deserts and rural areas, 3) increase client's knowledge of gardening practices, and 4) develop a platform to educate non-traditional Extension clientele. Method: Garden in a Bag provides free sets of seeds to residents of the county. The GB's are distributed in the spring and fall with seeds appropriate for the growing season. Each GB typically include three vegetable crops and one fruit crop. An informational packet is attached to each GB with planting, growing and harvest information. The GB's are distributed at public offices, local stores, and food distribution sites. Results: Annually, since 2018 a total of 3,243 GB's have been distributed. Data suggests that 83% of residents plant their gardens and report increased access to fresh produce and increased consumption. Recipients also report they have begun or increased their sustenance gardening practices because of the program. Conclusion: In a county where 65% of the residents receive food assistance, access to fresh produce is a critical need. By providing socially/ economically disadvantaged clients residing in food desserts with garden seeds and educational materials, you can increase the quality of their diets, access to produce and ability plant sustainable sustenance gardens for their families.

ALL IN FOR ARBORICULTURE: FROM NEED TO PROFESSIONAL DEVELOPMENT TO EXTENSION PROGRAM

HORTICULTURE & TURFGRASS
Bonnie Wells
Extension Agent II, Commercial Horticulture
University of Florida
Cocoa

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Trees have many social, environmental and economic benefits. Trees increase serenity and healing. They moderate temperatures, lower energy costs, increase property values, improve air quality, conserve water and support biodiversity. However, they can pose maintenance and safety risks if not properly managed. Therefore, professionals that are well-trained in all aspects of arboriculture are a much-needed resource for managing urban landscapes. The International Society of Arboriculture's (ISA) Certified Arborist® program can meet this training need and adds another level of skill recognition for landscape maintenance professionals, golf course superintendents, parks employees, and Extension agents. As an Extension agent serving urban landscapes with little to no tree management experience, I was faced with the overlapping need for arboriculture training for myself and a need for an extension program for clientele. Therefore, I started an Arborist Certification Workshop in Brevard County with the objective to (1) increase the knowledge and adoption of tree care best management practices, (2) increase the number of ISA Certified Arborists® and (3) become a Certified Arborist® myself. With leadership from experienced ISA Certified Arborist® Extension agents, I organized and co-taught a two-day workshop that prepared attendees to take the ISA Certified Arborist® Exam. The exam was offered 2 weeks after the workshop. Ten ISA Certified Arborist® CEUs were offered

for those seeking recertification. Total workshop reach was 29. Post participation survey results (n=27) indicated a consistent knowledge increase in all aspects of tree health care, including pruning, installation, integrated pest management, risk assessment, as well as an increase in confidence in taking the exam. Five out of nine individuals passed the exam and are now ISA Certified Arborists®. Since obtaining my Certified Arborist® recognition, I have expanded my arborist program to include golf course tree care and landscape palm management. These programs have reached an additional, 74 and 249 individuals respectively. I will discuss the outcomes and impacts of pursuing an arborist certification for professional development while building a program for clientele. This program is ongoing and adaptable to all states in the United States and beyond.

FREE SENIOR CENTER FARMERS' MARKETS DURING COVID-19

HORTICULTURE & TURFGRASS
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Free farmers' markets were held at Salt Lake County senior centers to provide fresh produce to low-income and food insecure seniors during COVID-19. Extension Master Gardener volunteers donated excess produce and were highly effective at packing and distributing food at markets. The farmers' market program was adapted by moving markets outside during the pandemic to ensure the safety of seniors and volunteers. Direct-to-consumer dissemination enabled the program to reach target audiences without relying on third parties. In 2020 and 2021, the program provided 3,200 seniors with 17,000 pounds of fresh produce during 53 markets. A 2021 survey found the majority of respondents saved time (89%) and money (95%) due to the markets and the markets increased respondent's consumption (99%) and access (99%) to fresh produce. The farmers' market program provided healthy food and positive social interaction which improved the lives of seniors disproportionally impacted by COVID-19.

DEHYDRATOR ONION YIELD RESPONSE TO BIOSTIMULANTS VARIES BY PRODUCT, RATE, AND ONION DEVELOPMENT STAGE

HORTICULTURE & TURFGRASS
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Dehydrator onions continue to increase in acreage in the California low desert area, in part due to water availability and drier production conditions which limit fungal diseases. As drought conditions in the western US continue to increase, increasing crop production without increasing water usage has continued to gain importance. Various biostimulant products were evaluated over a three year period to document their ability to increase yields. Several products were applied prior to germination and/or at emergence in combination with their additional application post emergence. Another group of products were applied only to foliage, with most treatments initiated at the third leaf stage. This latter set of products were applied twice (3rd and 5th green leaf) in 2020 and 2021, and also compared with three applications in 2021 (3rd, 5th and 7th green leaf), although a few products were only applied once. Number of replicates ranged from 4-6, depending upon the year. Trials were also conducted using two different varieties and utilizing different soil types to ascertain consistency of results. Yield results provided an range of responses. Guarantee Complex was most effective when used as a single application at germination/emergence, with additonal applications usually having little to negative effects on yields, The opposite was true for Liquid Seaweed Concentrate. Yield for foliar only applied products also indicated a range of responses. Yield response by treatment was very similar for 2020-2021, providing a high level of confidence in results. Best average yields were noted from a single application of 20 oz./acre of Vitazyme or two applications of CytoPower, both of which resulted in approximately 5+% yield increases.

WORK SMARTER, NOT HARDER TO REPORT IMPACTS

HORTICULTURE & TURFGRASS
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Palmetto

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Running a mobile irrigation lab (MIL) for homeowners gives us an opportunity to collect a good deal of data on homeowner irrigation behaviors, common irrigation system problems, and much more. For fifteen years data was collected by staff in the field on paper and translated into Word and Excel documents to send as a report to the client after they returned to the office. Overall data was aggregated in an Excel spreadsheet by office support staff. This process limited our client evaluations to two a day at most taking into account in field and in office reporting. In efforts to find a more efficient means of gathering and reporting this information, an intern with a master's degree in global information systems (GIS) was contracted to help develop a better system of reporting.

The intern worked with the extension agent that oversees the MIL to develop a system that combines software applications into a usable format for onsite reporting. Survey123 is now utilized to collect data and then generates reports based on the data collected. This reduced MIL staff time per evaluation by 50%. This system also cut down client report turn-around times from one week to one day.

With this new tool, the intern then created a dashboard in ARC GIS to show charts and graphs from the aggregated evaluation data as well as creating layers on a county map to better identify irrigation issues and trends among our clientele. By using these tools, the MIL has reduced time per evaluation by 50% allowing more visits in a day. We have also saved office support staff time from inputting data into an overall spreadsheet then creating charts and graphs for reporting to funding agencies.

THE IMPORTANCE OF HORTICULTURE IN A BIBLE COLLEGE CURRICULUM

HORTICULTURE & TURFGRASS
Stephen Brown
Professor of Agricultural Extension
University of Alaska Fairbanks
Palmer

Authors: Stephen Brown[1]

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In order for the Alaska Bible College (ABC) to maintain its collegiate accreditation, it needed to provide a required laboratory-based science class for its students. ABC approached the University of Alaska Fairbanks Cooperative Extension Service for help. Upon graduation many of ABC's students will go on to do missionary work in the rural areas of Alaska and developing nations. It was decided that a science class in horticulture would be of the greatest benefit to impoverished people the future missionaries might be working with. The Alaska Master Gardener curriculum was adapted and expanded to include hands-on experiences such as field trips to farms, greenhouses, community gardens, plant laboratories and included a tractor driving school at a local farm. Poultry science was included in the curriculum because its application can provide locals an inexpensive source of high protein food and plant fertilizer.

SUCCESSFUL VIRTUAL EXTENSION HORTICULTURE PROGRAMMING FOR HOMEOWNERS

HORTICULTURE & TURFGRASS
Timothy Daly
County Extension Agent
University of Georgia
McDonough

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Gwinnett County, GA, is a densely populated county of over 900,000 people, the second-largest in Georgia. Many residents are homeowners who do not always have the necessary knowledge to maintain their home landscapes, potentially impacting their value. UGA Extension Gwinnett offers educational programs to help improve the understanding of homeowners on various horticultural topics. We hold them as 'Lunch and Learns' and others in the evening. Subjects covered

include lawn care, household pest control, xeriscaping, tree identification and care, vegetable gardening, and others given by subject matter experts from Extension and speakers from outside our organization. With the onset of COVID-19 in 2020, our Extension office had to switch to online instruction for our programs. In total, UGA Extension Gwinnett has held 39 programs for 714 participants. A program evaluation was sent to the participants. With 107 answering it, 50% responded that they prefer online-only, 42% prefer online or in-person, and 8% prefer in-person only. 83% said they would use the information obtained from the program to change the way they manage their home landscapes. Several respondents commented, "The classes were well organized with texts and detailed pictures. The explanations were clear and concise. Please continue these," and "The programs have been quite helpful, and I have made positive changes to my gardening."

WALK IN THE SHOES OF A FLORIDA FARMER

HORTICULTURE & TURFGRASS
Karen Stauderman
Horticulture Extension Agent II
University of Florida
Sorrento

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Situation: Foot health is often overlooked in the workplace especially when it comes to farmers and agriculture/horticulture professionals. Florida outdoor environmental conditions often result in hot, damp feet, improper footwear, or work boot, which leads to poor foot health overtime. Many of us are reluctant to seek help for our feet which leads to serious complications later. Objectives: 1) After three months, 50% of attendees in three programs will change one behavior and/or adopt a new practice to improve their foot health (exercises, inserts, socks) and improve their physical mobility and 2) Increase knowledge gain of 50% attendees on foot care, safety, and potential foot health risks. Methods: 174 ag/horticulture professionals from three commercial horticulture classes were instructed on foot safety and surveyed on work footwear brand, type of shoe, money spent, and current foot issues. Attendees (n=22) were invited back to an expanded program collaborating with a podiatrist, Doctor of Podiatric Medicine (DPM). He spoke on foot care, safety, improved mobility and increase awareness of personal foot health risks. Also, he assessed and diagnosed all attendee feet. Results: 69% of the audience in attendance were experiencing foot issues. 48% experience foot pain or soreness, 15% had bunions, foot/toe/nail fungal issues, 7% fallen arches and 21% experience daily leg pain. After the extension program with the physician, 89% reported increased knowledge of foot care, safety, and potential foot health risks. 92% were committed to change a behavior to improve foot health including: 73% leg/feet exercises, 50% change shoe type/brand, 27% topical creams and 32% added orthotic/insoles. Conclusion: Twenty-two attendees provided a self-assessed survey after three months for improved or change in foot health. 100% attendees found the information to be helpful and 97% gained relief and improved foot health!

GETTING THE MOST OUT OF MASTER GARDENER TRAINING

HORTICULTURE & TURFGRASS
Sara Rutherford
Associate Extension Agent
Virginia Tech
Emporia

Authors: Sara Rutherford[1], Karen Vines[2], Thomas Archibald[3], Laurie Fox[4], David Close[5]

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Currently, there is not a state-wide evaluation survey tool for master gardener training programs in Virginia. Therefore, there is a need to understand what evaluation survey tools are being used for master gardener training in order to develop a state-wide evaluation tool and improve evaluation capacity building among coordinators. The purpose of this presentation is to demonstrate the need to increase evaluation capacity building among master gardener coordinators, such as extension agents/educators or volunteer coordinators, giving them the skills they need to utilize evaluation data to make improvements, report impacts and convey those impacts to stakeholders and grantors, both locally and state-wide. Data collected during the research project "Evaluating the Evaluation of Master Gardener Volunteer Training in Virginia" indicates

survey tools used to evaluate master gardener training are mainly used for making training improvements. For example, the majority of survey questions collected for the project pertained to training program inputs when compared to the Virginia Cooperative Extension Master Gardener (VCEMG) program logic model. Fewer survey questions dealt with the short, medium and long-term outcomes of the VCEMG program logic model. Results and recommendations from this project will help the Virginia Master Gardener program develop an evaluation survey tool that will give master gardener training programs the information they need to make improvements, report impacts and convey those impacts to stakeholders and grantors, both locally and state-wide. A case will also be made during the presentation to improve the evaluation skills of master gardener coordinators, contributing to evaluation capacity building within the VCEMG program and other master gardener programs around the country. The presentation will be organized through PowerPoint with discussion prompts to engage the audience, allowing participants to learn from each other and figure out how to get the most out of master gardener training.

TRI-COUNTY PECAN DEMONSTRATION

HORTICULTURE & TURFGRASS
Kyle Sanders
CEA - Agriculture
University of Arkansas Syst. Div. of Agri. Ext. Serv.
Lonoke

Authors: Kyle Sanders[1]

[1] Livestock/Horticulture Agent, University of Arkansas Syst. Div. of Ag. Coop. Ext. Service, Arkansas, 72086

Pecans are native to Arkansas and the need for further education of our clientele was evident due to the amount of calls we received about various issues that arise throughout the season including irrigation management, insect problems, and disease. Due to the vast amount of interest in pecans across our counties led us to develop the Tri County Pecan Demonstration.

The mission of the Tri County Team is regional participation in a dynamic, integrated system that provides useful, reliable information and tools for agents and producers throughout the state, not just three counties. Our vision is to develop a better understanding through on-farm demonstrations of our university recommendations and to assist our clientele in understanding and troubleshooting year-round. We as agents, strive to help maximize economic returns, and improve social welfare and environmental health by promotion of efficient and coordinated IPM decision support systems.

Program Activities:

i) 20-30 trees are monitored weekly for insect pests, diseases, irrigation needs and weed problems using recommended Extension scouting techniques at each location

ii) Insect traps were purchased/constructed, installed, and monitored weekly

iii) Fungicide spray schedules were created for both demo locations with rotating modes of action for all pecan diseases but especially, Pecan Scab

iv) Weather stations were added to both locations to help determine temperature and humidity for pecan scab management decisions

v) Soil samples and foliar tissue sampling was completed to be able to recommend fertility for both locations

vi) Recommended orchard sanitation techniques including recommended pesticide applications were implemented to suppress insect and disease levels

vii) Reports were sent weekly to clientele and to the IPM coordinator through FarmDog. Note: We plan to use AgPest Monitoring system this year, as the University of Arkansas is changing programs

viii) Results were reported at the Tri-County Pecan Production meeting/workshop and on the Tri-County Pecan Facebook & Twitter pages throughout the year

ix) Virtual and On-site field days/tours of demonstration area and production practices were conducted

HORTICULTURE CAREER PREPARATION TRAINING IN ARKANSAS PRISONS

HORTICULTURE & TURFGRASS
Sherri Sanders
County Extension Agent - Agriculture
University of Arkansas Syst. Div. of Agri. Ext. Serv.
SEARCY

Authors: Sherri Sanders[1]
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A unique partnership between the University of Arkansas Division of Agriculture and the Arkansas Department of Corrections developed because of the need for horticulture education for inmates. The program is taught in three prison units in the state: McPherson Unit

– Maximum security women's unit, North Central Unit, and the Randall L. Williams Unit – Medium security men's units.

Riverside Vo-Tech School, located inside the prison system provides education in the following areas for inmates: Cosmetology, Computerized Accounting, Business Technology and Horticulture. Horticulture students receive a certificate of completion after 1440 hours in the Riverside program.

Michael Harmon, Agriculture instructor at McPherson participated in the White County Master Gardener training and wanted to provide additional opportunities for his students, like the Master Gardener training. A plan was developed to offer an additional 40-hour Horticulture Course Program with "hands-on/real world" information to aid newly released inmates in becoming employable.

The program includes:

Turf Management
Common Weeds, Diseases, Insects in Landscape and Turf
Basic Soil Fertility
General Pesticide Safety
Trees for Arkansas Landscapes
Plant Propagation – "Hands – on"
Plant Selection (annual, Perennials, Woody Ornamentals Sun vs. Shade)
Cool & Warm Season Vegetables
Tree Fruit Production
Small Fruit Production
Tomato Production in the Home Garden
Soft Skills

How the Program Works

Extension personnel teach the classes at each unit.
Typically spend one day per month at each location.
The ADC/Riverside teachers test the students.
70% or better – passing grade.

A "transcript" of sorts will be on file for the inmate.
Upon graduation of our program the student will receive a certificate of completion from the University of Arkansas Division of Agriculture.

Upon release the participant will be provided with a portfolio developed by Good Grid.
The portfolio will include all earned certificates during incarceration.

We hope to establish a network to provide possible employment opportunities for these graduates.

Buy in from the industry has been received – Arkansas Turf Grass Association and The Arkansas Green Industry have agreed to hire our graduates who have completed the course.

There are some tax incentives for employers who hire felons.

LEADERSHIP AND ADMINISTRATIVE SKILLS ACCEPTED PRESENTATIONS

INCLUSION, DIVERSITY, EQUITABILITY AND ACCESSIBILITY (IDEA) IN YOUTH DEVELOPMENT PROGRAMMING
LEADERSHIP AND ADMINISTRATIVE SKILLS
Nicole Thompson
Extension Educator
Penn State Extension
Coudersport

Authors: Noelle Guay[1], Vanessa Spero[2]

[1] 4-H Extension Agent, University of Florida Extension , Florida, 33415
[2] 4-H Extension Agent, University of Florida , Florida, 32926

Presenters will address their current experiences with programming for the LatinX and Disability Community as it pertains to youth. Provide insight on how to help these communities engage more fully in extension endeavors.

IDEA PANEL DISCUSSION
LEADERSHIP AND ADMINISTRATIVE SKILLS
Nicole Thompson
Extension Educator
Penn State Extension
Coudersport

Authors: Dr. John Diaz[1], Noelle Guay[2], Vanessa Spero[3], Laura Valencia[4]

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Panelists will address the topic of DEI. Panelists will answer questions relating to DEI programming.

Panelists will provide their individual experiences with DEI programming specifically outlining their experience with DEI challenges and DEI successes within their extension positions.

ENGAGING INTERNATIONALLY TO MAKE IMPACT LOCALLY

LEADERSHIP AND ADMINISTRATIVE SKILLS
Norma Samuel
Urban Horticulture Agent & Associate District Extension Director
UF/IFAS Extension
The Villages

Authors: Norma Samuel[1]

[1] Urban Horticulture Agent & Associate District Extension Director, University of Florida/IFAS Extension, Florida, 32162

In 20218 an estimated 44 million persons living in the U.S. were considered foreign born. These persons bring with them a rich heritage/culture of food, song, dance, and other traditions and values that may influence their participation and implementation of extension programs. The author has been engaging in international extension work with University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) Extension since 2008; led multiple extension team projects to the Caribbean, completed an ACDI-VOCA assignment as an international volunteer in Ghana; served four years as the Chair of the Caribbean Agricultural Extension Providers' Network (CAEPNet); and is currently serving a second two-year term as President of the Board of the Global Forum for Rural Advisory Services (GFRAS). GFRAS is an international nonprofit based in Switzerland that advocates for extension and rural advisory services at the global level. The author serves as a mentor to the newly formed GFRAS network, the North American Agricultural Advisory Network (NAAAN) based at Colorado State University serving the U.S., Canada, and Mexico. The author has been instrumental in directly training and or organizing and facilitating trainings at country, regional and or global levels in areas such as extension competencies, extension methods, agriculture disaster risk management, safe and effective use of pesticides, and revitalization of the extension and 4-H youth development programs in The Bahamas. UF/IFAS Extension faculty participating in some of these international opportunities indicated they have made modifications to their programming based on their experiences working with similar cultures locally. Persons attending this presentation will benefit from the author's wealth of experience on international extension engagement. They will learn: how to justify to local policy makers and other stakeholders the reasons for engaging internationally; tips to develop, implement and evaluate an international extension program; opportunities for engaging internationally; and most importantly, how to translate lessons learned abroad to the local context.

DON'T LOSE YOUR MARBLES - REFOCUSING YOUR PRIORITIES

LEADERSHIP AND ADMINISTRATIVE SKILLS
Lee Beers
Extension Educator
Ohio State University
Cortland

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Not many positive aspects can be attributed to the COVID-19 pandemic, but the move to telework and general shut down in 2020 and 2021 provided a once in a career opportunity to reset schedules as we return to "normal." Clientele expectations have shifted, many Extension staff picked up new hobbies, found new ways to be productive at work, saw their families grow, and generally adapted to working in new environments during the pandemic. As we move back into a routine that looks more like pre-COVID, this is a great time to refocus our Extension priorities to find better life/work balance for Extension staff. We only have 168 hours each week to divide into home, work, sleep, and other activities. Finding a balance in these hours to promote happiness in our careers can be challenging, and many of us struggle to make it work and lose our marbles. This is a perennial challenge, but with dedicated support of Extension leadership, and reframing the conversation of life/work balance into 168 hours can help Extension staff find a balance that works for them personally and professionally. This presentation will provide tools for Extension leadership to have honest conversations about the true cost when life/work become unbalanced.

INTRODUCING THE NEW JOURNAL OF EXTENSION VIA CLEMSON UNIVERSITY PRESS

LEADERSHIP AND ADMINISTRATIVE SKILLS

Melody Rose
Extension Agent III
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GREENEVILLE

Authors: Tom Dobbins[1], Drew Griffin[2], Stephen Brown[3], Melody Rose[4]

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JOE is the rigorous, refereed flagship journal for Extension professionals nationwide with two million readers annually. JOE expands the research and knowledge base for Extension professionals and serves as a forum for peer-reviewed original and applied research on emerging and contemporary topics vital to Extension education. Through its commitment to author development, JOE also fosters authors' professional development at all stages, from students to professionals, and creates a national community of Extension researchers and educators.

JOE has undergone many changed in the last year and is now published by Clemson University Press, under the auspices of a team of publishing professionals working to increase the journal's impact through the assignment of DOIs, broader indexing, and targeted marketing.

JOE has also undergone a rebranding and transitioned to a new publishing platform which features a built-in manuscript-submission system allowing authors to track progress of their manuscripts and access key metrics, such as the number and locations of downloads for published works, as well as adopting a policy whereby articles are published online as soon as they are finalized to reduce turnaround time between submission and publication. For citation and print purposes, collected articles are then separated into four issues a year, designated spring, summer, fall, and winter.

JOE also transitioned to an editorial model including Associate Editors, all of whom are Extension professionals. Authors benefit from collaboration with professional editors and from engagement and feedback from nationally recognized subject specialists. JOE is a tool all Extension professionals use in many facets of their Extension career to build and grow dossiers, conduct research-based needs assessments, and showcase programmatic efforts via knowledge exchange using the Journal.

JOE is known by many Extension professionals, but with so many new hires across the nation, and along with the new editorial model, it is essential Extension professionals recognize the many benefits publishing and/or peer reviewing in the Journal of Extension can have for their overall Extension career(s).

EXTENSION RETREATS: BUILDING SYNERGY, COLLABORATION, AND FUN

LEADERSHIP AND ADMINISTRATIVE SKILLS

Nicholas Simmons
County Extension Director and Commercial Livestock Agent II
Cantonment

Authors: Nicholas Simmons[1]

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Extension professionals across the country are called to provide the current, research-based information to clientele to make the quality of life greater. We are often attending training, workshops, in-service or field days to provide clients and peers the latest information in our field. At the core, Extension educators are asked to be the "experts in the field" for many challenges we face. It is important however, to understand that Extension educators are professionals, who work in a professional environment that should invest in them both professionally and personally. Understanding that an Extension office, unit, district, or department needs to work as one unified body to promote Extension excellence is critically important now more than ever. Synergy is defined by Harris and Moran as a cooperative or combined action and occurs when diverse or disparate individuals or groups collaborate for a common cause. The objective is to increase effectiveness by sharing perceptions and experiences, insights, and knowledge. (Harris, & Moran, 2011, p.233). We will discuss how synergy happens at the macro level to encourage collaboration among colleagues in Extension. Along with synergy, there needs to be an opportunity for the group to find strengths among themselves to allow better service to the stakeholders. Nonetheless, incorporating fun and entertainment provides a more relaxed setting for colleagues to gather. In this session, Extension educators learn and discuss: Interactive ways to engaged with faculty and staff of an

Extension unit to build comradery among peers. How to plan and develop fun, educational retreats or field days for staff. The importance of team building and synergy. Why unity in an Extension unit is essential for professional excellence.

BEYOND ORGANIZATIONS: NEW MODELS FOR GETTING THINGS DONE

LEADERSHIP AND ADMINISTRATIVE SKILLS
Mark Platten
County Director
CSU EXTENSION
Woodland Park

Authors: Mark J. Platten[1]

[1] County Director, Colorado State University Extension, Colorado, 80863

The purpose of this presentation is to explore how current organizations are a social technology – a means for getting things done, creating economic value, and maintaining social order and cohesion. We are witnessing the emergence of new organizational forms and ways of getting things done. These organizational forms are more fluid, porous, and distributed. They are often less stable and predictable than industrial era organizations. Enabled by a new set of technologies, these new ways of organizing are forcing us to re-think legacy management structures and approaches. Wikipedia, Uber, Airbnb, and many other efforts are signals of networked, distributed, open-organizational technologies that are rapidly overtaking and replacing the ones we've relied on for the last several centuries. Not only are the structures and flows of organizations being transformed in this new environment, their function and purpose are, too. I'll look at the drivers of change over the past 40 years including access, context, and intelligence. Next I'll explore how we're getting things done in this new, disruptive environment including: resource allocation, boundaries, planning, synchronization, recruitment, compensation, and scaling. We'll look at each one of these areas and where Extension might benefit, or be left behind depending on how we're able to adapt. From there we'll explore the five skills individuals will need to thrive in future organizations. These five skills include: make yourself known, befriend artificial intelligence (AI), build your tribe, share risks and assets, and make sense of big data and be able to share what is relevant and accurate. The final phase of the presentation will cover the four components of successful organizations as we approach the third decade of the 21st century. These include how the organization learns and adapts, how we incorporate AI to work on our behalf, how well we understand the needs of our employees and clients, and how creative we are encouraged to be. My intent is to create lively conversation regarding how Extension could envision itself to lead, rather than respond to the changing business environment and plant the seeds of possibility of what, and who we could be.

ONE SIZE DOES NOT FIT ALL: ENGAGING DIVERSE STAKEHOLDERS THROUGH VARIED IMPACT COMMUNICATION METHODS

LEADERSHIP AND ADMINISTRATIVE SKILLS
Blake Carter
County Extension Agent
University of Georgia Cooperative Extension Service
Springfield

Authors: Robyn Stewart[1], Blake Carter[2]

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Cooperative Extension has a long history of creating significant and meaningful impact through research, educational programs, and other outreach efforts. Extension agents are uniquely positioned to engage a diverse audience when reporting the impact of these efforts. Developing local, regional, and state engagement is critical for a number of reasons including Extension funding and resource development, identification of unmet needs and critical issues, and the development of collaborative opportunities. Extension stakeholders might include fellow agents or state staff, community pillars like commissioners and local producers, and external partners like federal agencies or commodity groups. Given the diversity of the Extension audience, it is critical to avoid a "one size fits all" approach to impact reporting. Participants in this session will: (1) Identify key stakeholders who can be engaged through impact reporting; (2) Learn different types of impact data that can be collected; (3) Discuss benefits and pitfalls of formal and informal methods of impact reporting; and (4) Evaluate which methods of reporting might be valuable to which stakeholders.

NATURAL RESOURCES/ AQUACULTURE ACCEPTED PRESENTATIONS

NATURALIST SERIES

NATURAL RESOURCES/AQUACULTURE
Eric Barrett
Associate Professor
Ohio State University Extension
Canfield

Authors: Eric Barrett[1], Kristen Eisenhauer[2]

[1] Associate Professor, Ohio State University Extension, Ohio, 44406
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OSU Extension started a partnership with our Ohio Certified Volunteer Naturalists and Mill Creek MetroParks to expand public programming relating to natural resources. The idea was to bring nature to life through innovative topics and presentations relating to 'hot topics' around nature and wildlife and to build public awareness of nature in the Mahoning Valley. Innovative and engaging were requirements for program topics and speakers. One of the first programs featured composer and naturalist, Lisa Rainsong, who mesmerized the public by connecting the sounds of nature to music composition. Another exciting example was inviting a geologist who helped explain what Ohio looked like during the ice age, and helped the public see the connection between dinosaurs and birds of today. With targeted publicity and program efforts for each engaging session, attendance grew to average nearly 70 for each program during the first year. As the pandemic took many presentations online, the program continued to grow to an average of over 141 per session. As a result of the series, OSU Extension's ability to connect the public to nature increased, as did participation in the annual Ohio Certified Volunteer Naturalist (OCVN) Program which trains individuals to be effective volunteers at local parks and nature centers. Since it's inception in 2017, 34 public programs have been offered with total participation of 2,290 nature lovers. This presentation will share the partnership development aspects of the program, the ideas for generating exciting topics along with innovative speakers, tips for marketing and promotions, as well as the impacts of increasing programming relating to natural resources.

CONGRESSIONAL NATURAL RESOURCE BRIEFING IN UTAH

NATURAL RESOURCES/AQUACULTURE
Jody Gale
Sevier County & Central Southwest Area Agent
Utah State University Extension
Richfield

Authors: Jody A. Gale[1], Travis T. Khyl[2]

[1]Sevier County & Central Southwest Area Extension Agent, Utah State University Extension , Utah, 84701
[2] Executive Director, Six County Association of Government, Utah, 84701

Federally administered lands and natural resources in Utah are local, national and global treasures. The management, conservation and preservation of these resources are controversial and are frequently litigated. Local people value these lands as part of their sense of place, community, family traditions and livelihood. For many these lands are central to their rural lifestyle, which is more important to them than business. People who are "not from around here" also value these lands as part of their sense of national and global heritage where they can recreate, experience adventure, and find wilderness solitude. The control of these resources are political footballs that are kicked back and forth with every national election and appointment. Utah State University Extension is a partner with the elected officials and staff of the Associations of Government for eleven of Utah's twenty-nine counties. To help address these public land natural resource issues we began providing an annual educational briefing tour during the August congressional recess in 2000 for members and staff of Utah's US Congress delegation. In 2019 we changed our audience to educate staff members and staff to the members of the US Congress House and Senate natural resource related committees. Our educational, experiential tour features local experts, governor's cabinet, staff and members of Utah's delegation, and Extension educators who teach participants about issues and help present potential solutions. Issues include, catastrophic wildfire, forest management, grazing, wild horse and burros, and other western issues important to Utah's people, elected officials and US Congress. We raised over $130,000 to provide Ethics Committee approved reimbursable travel scholarships for 20 participants and costs for 2019, 2021 briefings. We have 17 applicants for 2022. Among other notable impacts, participants reported helping committee members increase BLM's budget by $20 million annually for the wild horse and burrow crises.

PIKE COUNTY ADOPT-A-STREAM TEACHES WATER EDUCATION, CONSERVATION AND COMMUNITY

NATURAL RESOURCES/AQUACULTURE
Brooklyne Wassel
County Extension Agent
University of Georgia
Zebulon

Authors: Brooklyne Wassel[1]

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Water is the fabric that holds communities, landscapes and ecosystems together through time. Additionally, water is recreational, educational and transformative. Though these concepts seem elementary, education surrounding water resources is greatly lacking in communities such as Pike County. This is evident by non-point source pollution, erosion on local construction sites and calls to the Pike County Extension office concerning water. Using Georgia Adopt-A-Stream as a tool kit for resources and vehicle for educational outreach, the Pike County Extension Agent, along with the local Adopt-A-Stream coordinator, held 29 hours of certification workshops across 12 months. This series successfully passed 40 certifications comprised of field demonstrations and written exams which created a network of community members who are passionate about our waterways. Through this collaborative effort in creating ambassadors for our water, the Pike County Adopt-A-Stream group was formed that actively monitors five stream sites throughout the county each month. After four, local educators became Adopt-A-Stream certified, water education is now implemented in the public school system using Adopt-A-Stream, Project WILD Aquatic and other resources provided by the Extension office. Water will continue to be an important issue and topic of education, but through the Pike County Adopt-A-Stream series, our community now has access to knowledge, resources and empowering actions that they can take into their own backyards. This provides the community the ability to truly move the needle in terms of water education and conservation.

NATURE JOURNALING TO IMPROVE ENVIRONMENTAL OBSERVATION AND IDENTIFICATION SKILLS

NATURAL RESOURCES/AQUACULTURE
Krista Stump
Natural Resources Agent
University of Florida
Kissimmee

Authors: Krista Stump[1]

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With the influx of image recognition technology, people are relying less on their own observations and more on smartphone applications to identify plants and wildlife. While this advance in technology provides many benefits, observation skills are essential for environmental literacy and awareness. A nature journaling educational tool was developed as a method to incorporate scientific observation and identification practice in plant and wildlife programs. The measurable objectives were 1) to increase participants' knowledge about plant and wildlife identification methods by 50%, and 2) for 50% of participants to practice scientific observation skills while completing an at-home activity. The nature journaling tool was incorporated into 8 classes from 2021-2022 reaching 152 participants. These classes covered topics such as birding, invasive plants, and healthy living. The activity included an introductory briefing about nature journaling methods and examples. Then, the participants were tasked with finding a plant or wildlife subject, recording observations, and adding a graphic or diagram to the entry. They used these observations to practice identifying the selected plant or wildlife subject. The participants' relative knowledge gain was measured using a retrospective online test. The content of the test was tailored for each educational program but focused on the knowledge gained directly from the nature journaling activity. Of the respondents (n=32), there was a 72% relative knowledge gain about plant and/or wildlife identification. 81% of the respondents completed the nature journaling at-home activity at least once. In addition, ten nature journal entries were collected (with permission) from students for program evaluation purposes. Nature journaling allowed program participants to hone their observation and identification skills while out in nature. By practicing these skills, they improved their environmental literacy and awareness which can lead to behaviors that protect plants and wildlife, support natural lands, and improve overall wellbeing.

UTAH'S RANGE AND NATURAL RESOURCE CAMP, INFLUENCING PARTICIPANTS TO SELECT LAND MANAGEMENT CAREERS

NATURAL RESOURCES/AQUACULTURE
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Roughly three-quarters of Utah is publicly owned land. The overlap of rangelands and this ownership pattern is predominantly coincidental. Because the bulk of the public-owned rangelands are under federal control, decisions on their use and management will continue to not be made by the citizens of Utah alone. Hence, the stewardship of federal lands will be increasingly driven by issues on the national agenda. Since the viability of local enterprises depends on access to these federal lands, it behooves all to better understand where different kinds of rangelands are located, who controls them, and how these differing ecosystems are put together, function, and change under alternative management scenarios. The Utah Section of the Society for Range Management (SRM) has spent the past 49 years promoting and educating the youth of the state so that they will step into these federal management roles and take into consideration the state's best interest. The development of a youth range and natural resource camp in 1973 was the beginning of this effort. Today the question is, how effective has this effort been? A survey was developed and given the past three years to the camp participants, it revealed that 44% of the campers are planning to seek a college degree in some area of natural resource management. Though impressive in terms of meeting the future needs, an instrument has been developed to determine the effectiveness of the past ten years. The results of this long term survey will be shared to illustrate the effectiveness of youth camps on career selection by the participants.

BIOCHAR DEMONSTRATION KILN

NATURAL RESOURCES/AQUACULTURE
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Biochar are charcoal particles mixed with soil. Participants will learn about building a portable flame cap kiln for demonstrating how to make biochar with clientele. Details such as burn permits, fire safety, a water source, and lighting and quenching the fire are discussed. Emerging markets for biochar include: 1) An agricultural and horticultural soil amendment that improves water and nutrient availability; 2) Contaminant adsorption for dairies, landfills or mining; 3) Hazardous fuels reduction in forests and wildland urban interface communities, as well as reduction of yard waste; 4) Production of bioenergy fuels including syngas and bio-oil; and 5) direct carbon sequestration: the half-life of a biochar molecule is 1,000 years. Benefits and challenges of using biochar are discussed, including raising awareness about biochar; creating markets; feedstock properties and variability; and matching biochar qualities to specific applications. Biochar is popular with early adopters.

USING GPS COLLARS TO MONITOR WILD HORSE AND LIVESTOCK INTERACTION

NATURAL RESOURCES/AQUACULTURE
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The management of wild horses and burros (WHB) is a highly contentious issue in the West. 26,770 WHBs

has been set as the appropriate management level (AML) nationally; however, the Bureau of Land Management (BLM) states the current 95,000 head could exceed 160,000 by 2025 (BLM, 2017). Livestock producers are commonly involved in WHB management conversations as they frequently share rangeland with horses. Studies have shown that animals do not use space evenly, generally due to variable resources in the area (King et. Al. 2021, Owen-Smith & Martin 2015). It is also known that WHBs share some dietary overlap with other ungulates, both livestock and wildlife (Scasta, Beck & Angwin (2016). It is much less understood what spatial overlap of these animals looks like and how/if it creates competition for optimum habitat. Recent studies have shown promise for the use of global positioning systems (GPS) to be used in spatial overlap studies. Hennig, Beck & Scasta (2018) show that horses sometimes reside outside their Herd Management Area (HMA) and share critical habitat with livestock and wildlife. Other studies (Perry et al. 2015, Gooch et al. 2017) utilize GPS to highlight horse interactions with elk and pronghorn. There is a need for more GPS studies among horses, livestock and wildlife. United States Geological Survey (USGS) and Colorado State University researchers currently have 10 GPS collars on horses in the Sulphur Springs HMA in central Utah. These collars have been on since November of 2020. To better understand spatial overlap and interaction of horses and livestock we have placed 20 GPS collars on two different bands of sheep that winter on allotments within the Sulphur Springs HMA. The collars went on in January of 2022. GPS data will be collected from the sheep in April of 2022 when they leave their winter allotments. The process will be repeated next winter. It is anticipated that the GPS data will help clarify the spatial overlap of horses and sheep by showing how they interact on shared rangeland. This type of understanding provides key insights that will help shape future management practices.

HELPING PONDS AND PEOPLE WITH HEALTHY PONDS CERTIFICATION PROGRAM

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Extension agents are faced with the need to communicate stormwater pond best management practices to audiences that do not understand the functions of these systems. This gap makes recommendations based on science difficult to achieve. Most community members and many pond professionals do not connect stormwater ponds to downstream water quality. However, stormwater is the leading contributor to water pollution and ponds are the primary stormwater best management practice for water quality. Until recently, pesticide licensing programs, which only address proper chemical application, were the only training offered by extension agents that worked with pond managers. The goal of the Healthy Ponds Certification Program is to expand the tools in this audience's toolbox to increase pond function while making them easier to maintain. A team of five worked with twenty-one UF/IFAS researchers and specialists to create a peer-reviewed, online course providing over twenty-one hours of continuing education curriculum and a four-hour in-person field day. The program is designed to help improve water quality and wildlife habitat as well as reduce erosion in and around stormwater ponds. The strategies taught increase stormwater pond function while making them easier to maintain, reducing chemical treatments, and increasing water quality, wildlife habitat, and biodiversity. Since the program began, two years ago, eight extension agents

have participated in the training. Trained agents have the opportunity to access, facilitate, and offer the program to improve the understanding of the physical, biological, chemical, and cultural best practices for stormwater pond management to their clientele. Among the sixty-four pond professional graduates, 70% reported that they are able to communicate better with their clientele. After the field day, 30% of the graduates stated that they will incorporate water testing into their maintenance protocols. The Healthy Ponds Certification Program is a new clearinghouse for stormwater pond research and recommendations.

EXTENSION PROGRAMMING TO ENCOURAGE RESPONSIBLE STEWARDSHIP OF NEW JERSEY'S MARINE RESOURCES

NATURAL RESOURCES/AQUACULTURE
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New Jersey has 130 miles of coastline along the Atlantic Ocean. The marine ecosystems along this coastline and the inhabiting marine resources support very valuable tourism, aquaculture, and commercial and recreational fishing industries. The sustainability of New Jersey's marine resources and the associated industries rely on the implementation of responsible stewardship practices by a diversity of stakeholders. Multiple extension programs through Rutgers Cooperative Extension educate stakeholders on the science and management of New Jersey's marine resources to encourage responsible stewardship practices. The Coastal Stewardship course has been offered annually since 2019 to educate stakeholders about the ecology of local marine ecosystems and to promote responsible stewardship using shellfish biology, restoration, and aquaculture as the primary teaching tools. A total of 197 students participated in the course from 2019–2021, which was offered in a HyFlex format in 2019 and then via webinar during the pandemic. Short-term (n = 81 respondents) and long-term (n = 40 respondents) program evaluation data have documented statistically significant increases in knowledge gained, improved preparation to get involved with local issues, and use of what they learned to follow responsible stewardship practices such as volunteering with local non-profits. The Introductory Fisheries Science for Stakeholders (IFISSH) course has been offered annually from 2018–2022 to educate stakeholders on the science, management, and responsible stewardship of fishery resources to be better prepared to make progress on and get involved with issues impacting commercial and recreational fisheries. A total of 421 people have participated in the IFISSH course, either in-class or via webinar, to learn more about fisheries biology, oceanography, climate change, stock assessment, and fisheries management. Short-term (n = 223 respondents) and long-term (n = 59 respondents) program evaluation responses have documented statistically significant increases in knowledge gained, sharing of knowledge gained with others, and getting involved with fisheries science and management issues, including participation on fisheries management advisory panels. These courses and additional programming have been successfully educating stakeholders on the responsible stewardship of New Jersey's marine resources to provide the knowledge needed to get involved with and make meaningful progress on local issues.

RECYCLING PROGRAM MATERIALS ON SOCIAL MEDIA TO PROMOTE RECYCLING

NATURAL RESOURCES/AQUACULTURE
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Millions of tons of plastic, trash, and other debris reach our coasts and ends up in our oceans. Rutgers Cooperative Extension (RCE) worked with the National Oceanic and Atmospheric Administration and other partners to develop the Mid-Atlantic Marine Debris Action Plan, published in May 2021. The action plan outlines goals and objectives for the partners to achieve a reduction in the amount of marine debris entering local waters. One goal is to engage at least 50,000 people in educational interactions that will promote the reduction of common consumer debris items, such as single-use plastics, by 2026. Social media was seen as one of the best ways to quickly interact with a large audience, but only through targeted messaging. RCE currently has fact sheets with information on recycling wetsuits and proper disposal of marine flares. These were used to develop informational graphics as part of a social media messaging campaign in the last half of 2021. These messages included a series of Facebook posts on the RCE of Ocean County page (https://www.facebook.com/RCEOceanCounty) covering wetsuit

recycling, proper disposal of marine boating flares, and the 2021 New Jersey plastic pollution law. The social media messages were posted on Facebook on a weekly basis in the fall of 2021 and again in spring 2022. The fall 2021 messages generated 3,597 views and 164 engagements (likes, shares, comments, etc.) and 292 connections to the online fact sheets. This presentation focuses on the particulars of starting a social media messaging effort and tips and trick to make the process easier, yet impactful, by recycling available program materials.

TEACHING PRODUCERS HOW TO EFFECTIVELY CONTROL FERAL HOGS WITH TRAPS AND DRONES

NATURAL RESOURCES/AQUACULTURE
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Feral hogs are non-native invasive pests to North America. Their presence has been document by the United States Department of Ag in 29 states. Feral hog damage includes farm crops, pastures, livestock, timber, wetlands, and landscapes. This results in crop losses, threats to produce safety, transmission of diseases and threats to livestock, people, and pets. They pollute water and irrigation sources, and compete directly with native wildlife, causing habitat loss. According to the Arkansas Ag Department, damage from feral hogs in Arkansas is estimated at $19 million annually. They are located in all 75 Arkansas counties. The Arkansas Feral Hog Eradication Task Force and federal agencies have begun pilot efforts to remove feral hogs on private lands in four areas of the state (12 of 75 counties). To fill the gaps in support of these efforts, the UA Division of Ag, Cooperative Extension Service developed a protocol for using traps to catch the whole sounder and implemented the use of drones to survey and document damage. Drones are also utilized to identify hog populations using infrared technology. Understanding the composition of feral hog sounders and their habitats allow Extension educators to assist farmers who seek sustainable tactics for reducing feral hog damage on their farms. This presentation will inform participants about the biological characteristics of feral hogs, the protocol used for educational demonstrations, grant funding used for equipment and educational materials, and how drones are used to detect and document feral hog damage.

SUSTAINABLE AGRICULTURE ACCEPTED PRESENTATIONS

PASSION FRUIT: AN ALTERNATIVE CROP FOR FLORIDA

SUSTAINABLE AGRICULTURE
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Situation: In 2021 agricultural production costs and land prices increased significantly in North Central Florida. This creates substantial challenges for new farms to begin and existing farms to expand. The need for high value crops on small acreage is increasingly important. Passion fruit is a new high value crop that has not been previously grown commercially in North Central Florida. The objective is to help small farms begin, grow, and become profitable with passion fruit production. Methods: Three key components are necessary to launch passion fruit as an alternative crop: establish production methods, grower adoption of the crop, and effective marketing. Two EDIS publications support current and prospective growers with the fundamentals of passion fruit production. Growers that are seeking alternative crops now have the option of passion fruit. They are also provided with basic marketing options as well as passion fruit market analysis. Growers are directly supported with a recurring site visits and regular communication. Plant pathogen diagnostic services and production recommendations have been provided. A production meeting is planned for both current and prospective growers to share the latest information and encourage two-way communication between IFAS and the growers. Results: Small farms (n=10) in North Central Florida have planted passion fruit on small acreage, averaging ¼ acre, in 2021. Additional small farms are in the process of establishing passion fruit. Small farms that planted in 2021 are beginning to produce an initial crop and those that planted in 2020 have achieved profitability. Conclusion: Passion fruit is an emerging alternative crop that has significant growth potential to generate profitability for regional small farms and benefit consumers with high quality Florida Grown passion fruit.

USING FACE-TO-FACE TOURS TO PROVIDE EDUCATION AND AWARENESS TO SUSTAINABLE AGRICULTURE

SUSTAINABLE AGRICULTURE

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On-farm tours are an excellent method to provide education and awareness to other educators, farmers and the general public about local food systems, sustainable agriculture and diversified agricultural enterprises being implemented in Nebraska. Nebraska Extension has partnered with NCR SARE and the Nebraska Sustainable Agriculture Society to conduct these tours in recent years. In 2021, despite concerns for the pandemic, a driving tour to several farms and local entrepreneurial enterprises was conducted with 25 participants throughout the day. I conducted 2 diversified ag tours in 2018 & 2019 each year with 88 and 73 participants, respectively. In 2018 a SARE sponsored tour visited 5 diversifed enterprises in southeast Nebraska; including two organic vegetable farms. a hog confinement facility converted into a shrimp farm, a portable saw-mill used to repurpose damaged trees into lumber or used to make biochar, and an organic grass farm. A survey following the tour of the 5 enterprises with n=51, indicated on a scale of 0-5, with 0-poor and 5-excellent, the average knowledge gained was 4.25 for these five enterprises. Comments of tour participants included, “There are more producers involved in sustainable ag than I realized.” “Small farms can be profitable.”

The Southeast Nebraska Diversified Ag Tour has been held for 15 years. It was initiated to bring awareness of all the diversified agricultural enterprises possible in southeast Nebraska. The 13th tour was held in 2018 with 24 participants that visited a nursery, a winery and distillery, and a sheep and pasture poultry farm that direct markets its animals. Fifty-nine percent gained ideas of possible diversified agriculture enterprises/opportunities from other producers. Seventy-one percent agreed or strongly agreed thy gained knowledge about the advantages diversifying a farm/ranch may have. Comment from a participant, “I particularly enjoyed the opportunity to meet the ag producers. The diversity of the visits helped me open my eyes to the creativity and hard work of southeast Nebraska producers.”

MARKETING AND EXPANSION OPPORTUNITIES WITH SPECIALTY SWEETPOTATOES IN FLORIDA

SUSTAINABLE AGRICULTURE

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Sweetpotato is an ideal crop to be grown in Florida’s subtropical climate and sandy soils, however the production acreage is relatively small. According to the National Sweetpotato Collaborators Group Progress Report, Florida ranks sixth in the Country with only 4305 harvested acres in 2021. Challenges include limited herbicide and insecticide labels for broadleaf weeds and wireworm, restrictions regarding movement outside the State because of weevil, and limited seed supply chains, particularly for newly developed cultivars. Sweetpotato has recently been recognized by UF as an emerging crop for Florida and Seed-it funds were dedicated to explore new cultivars with improved quality, nutritional advantages, increased productivity, and pest resistance traits for Florida. A multi-State effort was launched to initiate sweetpotato cultivar trials, particularly with newly developed purple-flesh breeding lines, in three UF locations – Live Oak, Hastings, and Fort Pierce. Ten cultivars were obtained from three different breeding programs – NC State, LSU, and CAREnergy. The trials were planted on approximately 0.25 acres at each site in a randomized complete block design with four replicates. Results varied from site-to-site, but both the purple splendor and the purple majesty were consistently high yielding. They also showed tolerance to pressure from both wireworm and weevil. To date, results have been presented at the Tri-State Cucurbit and Emerging Vegetables Annual Conference at the Jackson County Extension Office on January 25, 2022 and at the 46th Annual Meeting of the National Sweetpotato Collaborators Group in New Orleans on February 11-12, 2022. A collaborative effort was established between a grower in North Florida and a certified grower in North Carolina to obtain slips of purple majesty for expanded sweetpotato acreage in Florida. Two young minority farmers in North Florida also intend to obtain some of the newly developed cultivars to expand their farm-to-school efforts in Putnam County. Local marketing efforts include a youtube video by Chef Leslie Moyers (Culinary Director with Indian River

Food Bank) making sweetpotato pudding, an extensive evaluation survey by Chef Tracy Nazzaro (Traders Hill), and a local sweetpotato pie contest hosted by the Azalea City Brewery in Putnam County.

CONTAINER-GROWN BLUEBERRIES AS A SUSTAINABLE FARMING PRACTICE

SUSTAINABLE AGRICULTURE
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Recent innovations in above ground, high density, container production of highbush blueberry ("Vaccinium corymbosum") transcend a lack of suitable soils and change reliance on traditional production methods. By building suitable, low pH, high organic matter soils in a 15- 20-gallon containers placed upon infertile, non-berryland soils, growers can diversify their operations into a profitable high-value, early season crop that is in demand for wholesale markets and/or draw consumers to the farm.

Four blueberry cultivars have been evaluated over 7 years in above ground containers positioned in replicated blocks totaling 10 acres on a commercial New Jersey farm. Cultivars are Duke, Top Shelf, Legacy, and a mixed block of 7 other blueberry lines. Each cultivar is tested at 3220 plants per acre compared to an average 1200 plants in traditional operations. These plants are selected for grower appeal, consumer market, phenology, and morphological differences.

This multi-treatment, multi-culture applied experiment is conducted on a previous mining operation with an infertile gravely, cool soil. Crop rows are 8 feet apart for ease of measurement, equipment travel and grower tours. The media selection is a customized blend of organic compost, nutrients and microbes. Container bags for blueberries and other smallfruit are used under raised overhead shadecloth. Multi-year data will be provided on soil fertility, microbial activity, irrigation management, IPM, chlorophyll analysis, crop growth, yield, and other factors. Production practices and farm site overview will be provided in a short, narrated video. Adapting such technology to local conditions could prove promising to farm and farmer sustainability in terms of land use and profitability.

THE TEN MISTAKES ALL NEW BEEKEEPERS MAKE

SUSTAINABLE AGRICULTURE
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Interest in beekeeping has increased tremendously in recent years due to demand for locally produced foods and widely expanded pollination needs. Apiculture is also extremely attractive as an agricultural production system for those with limited land resources. With the surge in interest has come a surge in questionable formation available to new beekeepers via internet sources. Seeking information from undependable sources regularly leads the neophyte astray resulting in significant monetary losses and a negative experience. This educational presentation frames the ten most common mistakes made by new beekeepers and provides the extension agent with simple, constructive advice which can lead to a productive and rewarding experience for the bee keeper.

SUSTAINABLE FOODWAY PROGRAMING IN RURAL UTAH NATIVE AMERICAN COMMUNITIES

SUSTAINABLE AGRICULTURE
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Native American culture, migrations, and spiritual history predominately revolved around food grown or gathered. This remains the foundation of Utah Native American nations in Southeastern Utah connected to the Four Corners region, otherwise known as the Colorado Plateau, in the United States. Revolving recent history has placed significant impacts to Southeastern Utah Native American land management systems and access to clean water supply, reducing the amount of horticulture farming operations in the last century. Limited occurrence of horticulture crop production has resulted in limited supply of heirloom seed sources and associated agriculture cultural practices within these communities. Traditional horticulture crops include the

Three Sisters, melons, peppers, and fruit and nut crops. To counter current events, Reagan Wytsalucy is building Utah State University(USU) Extension programing and educational garden spaces that are culturally relevant for all communities in San Juan County, UT. The educational garden spaces serve to provide Horticulture production workshops for youth and producers, Master Gardener field training and volunteer certification, healthy food resources, food preservation education, and encompasses local cultural practices. Expected USU Extension programs to eventually include SNAP-ed and Create Better Health programs and to support and preserve Native American agricultural practices. Successful development of the garden space and initiating educational programing has been positively received in the local community and the volunteer base continues to grow. Participants receive greater access to healthy foods and associated Extension resources, the San Juan County Master Gardener volunteers' needs for certification are met, and an avenue to preserve and retain Native American agricultural practices are continuing to be developed.

ON-FARM EVALUATION OF SORREL (HIBISCUS SABDARIFFA) VARIETIES FOR CENTRAL FLORIDA COMMERCIAL PRODUCTION

SUSTAINABLE AGRICULTURE

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Sorrel (Hibiscus sabdariffa) is a flowering plant native to West Africa that is very popular in Afro-Caribbean culinary culture. While much of the plant is useable, the most common product derived from sorrel is a deep red tea made from the calyces with a flavor reminiscent of cranberry. While not commonly grown commercially in the continental United States, there is increased interest among Central Florida small farms to grow and market sorrel to the large Afro-Caribbean population in the Orlando and Tampa metro areas. In partnership with a plant breeder from the University of the Virgin Islands and with funding from a Southern SARE grant, the purpose of this study is to trial four sorrel varieties on two Central Florida farms over a two year period to determine optimal varieties for Central Florida growers. Two research sites were selected on two farms using organic methods in Lake County, Florida. Four varieties were tested: 'Festival' and 'Black,' which are photoperiod-sensitive, and 'Day Neutral' and 'Local,' which are not. Each research plot utilized a randomized block system with 4 blocks consisting of 7 plants per variety. Data was taken on the 2nd, 4th, and 6th plant for each variety in each block and consisted of weights of mature sorrel calyces with and without the inedible seed boll. Planting occurred in June 2021 and the season concluded in November 2021 when the plants began to senesce. A large fusarium outbreak rendered data from one site unusable. SAS GLIMMIX's linear modeling tool was used to evaluate the data from the surviving site. 'Festival' produced no marketable calyces until November and Black produced none. For calyces bearing bolls, the sorrel varieties 'Local' and 'Day Neutral' had comparable mean yield responses. The no-boll calyces assessment revealed that 'Day Neutral' had a significantly higher mean yield than 'Local.' The yield was explained by the week of the year rather than the month and the mean yield responses for with- and without-boll calyces followed a similar pattern. The largest yields were achieved in weeks 40 and 41, with yields gradually declining in week 42 for both varieties.

STARTING A FARM EDUCATION PROGRAM FOR U.S. MILITARY VETERANS

SUSTAINABLE AGRICULTURE

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Some U.S. Military Veterans return from military service and are interested in farming or ranching but may not have had direct experience. Some may not initially have access to land, nor do they want to go into a formal educational program. These beginning farmers want to

learn the most efficient and sustainable methods for farming and ranching today and greatly appreciate hands-on learning. Many veterans face physical and psychological issues and disabilities upon leaving the service. Using individual interviews and nominal group technique, veteran stakeholders in Idaho were queried as to their preferences in program design. Through this process, veterans asked for a program specifically for them, to allow them to develop farming and ranching businesses with a supportive cohort of other veterans.

The University of Idaho Extension education program dubbed, "Harvest Heroes," is now in its fifthyear, and was funded by the USDA-NIFA Beginning Farmer Rancher Development Program beginning in 2019. The program includes lectures from knowledgeable experts, some of whom are veterans, on a variety of sustainable farming topics as well as providing networking opportunities with other beginning farmer veterans. Each class include hands-on activities such as farm planning, seed starting, developing a flower basket business, growing hydroponic tomatoes, and other activities oriented towards beginning farming business and sustainability, as well as providing opportunities for veterans to find their farming niche. Program participants have donated over 3,000 pounds of produce to local food banks each year.

This presentation will outline the process employed to begin and expand a farm education program for U.S. Military Veterans. Over 100 veterans and family members in Idaho have participated in at least one Harvest Heroes program and many of these veterans have started farm businesses and are selling their farm goods at local farmers markets. Over half of participants who were already farming, or ranching have implemented a new method such as cover cropping, or other sustainable land use technique.

MEETING THE NEEDS OF SMALL ACREAGE PRODUCERS THROUGH THE UTAH URBAN AND SMALL FARMS CONFERENCE

SUSTAINABLE AGRICULTURE
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Every state has a unique agriculture profile and Utah is no exception. According to 2020 US Census data, Utah was the fastest growing state from 2010 to 2020 and rapid urbanization has led to a loss of farmland and increase in small acreage urban farming. To address this need, Utah State University Extension developed the annual Urban and Small Farms Conference in 2013 which is supported by Extension specialists and county-based faculty from across the state. The conference targets novice to experienced producers seeking technical production information, business and marketing guidance and improved knowledge of local/urban agriculture issues. Conference evaluation results from years 2013 to 2016 found 60% of respondents had incorporated a sizable/significant amount of material presented at the conference into their operation; most respondents were small scale growers selling through farmers' markets, farm stands, and restaurants, and 54% had increased their farm sales since attending the conference. This presentation will provide details of the Urban and Small Farms Conference and highlight impacts generated from conference sessions.

MEET THE MEAT

SUSTAINABLE AGRICULTURE
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Connecting consumers with their food can be challenging in today's world! With a multitude of options at the meat counter, consumers can often be overwhelmed with the amount of choices when it comes to buying their meat. Should they choose organic, grass-fed, pasture–raised, or conventional? What do these terms even mean, and why does certain meat cost more?

Meet the Meat is a program designed to address these issues and connect local producers and consumers. Participants start the evening workshop by learning how animals move from farm to table, where different cuts of meat originate within the animal, and what marketing terms are used to describe meat. The group then hears from several area producers on their farm practices and learn why they produce meat the way that they do. Finally, the workshop concludes with a chance to cook hands-on with the local meat products with the guidance of a professional chef.

This workshop has led to a greater understanding and

appreciation of local meats among participants in our community, as well as encouraged local universities and chefs to purchase meat from local producers. Following the workshop, half of the participating chefs subsequently purchased local meat from featured producers, and 46% of traditional participants had plans to purchase local meat following the workshop. One participant stated, "I now feel confident picking out quality meat and know what to look for when I am shopping at the grocery store or farmers market."

CASCADING WATERWAY: MULTIPLIER EFFECT OF COMBINING GRASSED WATERWAY AND INLINE WETLAND BASINS

SUSTAINABLE AGRICULTURE

Wm. Bruce Clevenger
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DEFIANCE

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There is no single Best Management Practice (BMP) for all soil conservation and water quality concerns. Agricultural landscapes in crop production have unique characteristics that require matching the BMP to the site that addresses the local resource concern. A Cascading Waterway combines two conservation practices into a single design and offers a potential multiplier effect. BMPs often mitigate soil erosion for surface water flow areas and/or non-point source pollution from nutrients moving off production fields. The Cascading Waterway is a grassed waterway built in a concentrated surface water flow area of a field with constructed water basins that pool water in-line with the water flow. In 2019, three Cascading Waterways were constructed at the Defiance Agricultural Research Association (DARA) site/farm in Defiance, Ohio. Each of the three designs were unique by combining traditional grassed waterways with differing numbers of water basins: one design having a single water basin, one design with two water basins, and a third design with three water basins. All Cascading Waterways have the basin(s) in-line with the waterflow from the headwater to the discharge. Each design varied in waterway length and the number of water basins according to the surface drainage area of the field. In 2020, a multi-agency and private industry partnership was established to monitor water quality components throughout the three-basin Cascading Waterway. A first of its kind, mobile sampling and analytical lab was deployed from March to April of 2021. Preliminary results begin to explain how dissolved, suspended, and total solids, Ammonia-N, Nitrate/Nitrite-N, dissolved phosphorus, and total phosphorus are moving through the grassed waterways and three stages of the water basins. The water basins are increasing biodiversity within a cropland landscape by naturally selecting aquatic plants and animals to inhabit the basins. The Cascading Waterways have been part of public education at a fall field day, a summer soil health research project, a self-paced BMP tour, two educational videos, and public conservation newsletters. The Cascading Waterway BMP has the potential to be designed and implemented in a variety of regions and land uses to aid in soil conservation and water quality.

STARK SUSTAINABLE SOIL INITIATIVE

SUSTAINABLE AGRICULTURE

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The issue of global water quality and its relationship to healthy soil and sustainable ecosystems led to a unique collaboration between The Ohio State University (OSU) Extension Program, university researchers at OSU's College of Food, Agricultural and Environmental Sciences (CFAES) Rattan Lal Carbon Management and Sequestration Center (CMASC), the Herbert W. Hoover (HWH) Foundation and a group of local producers. The project, identified as the Stark Sustainable Soils Initiative, provides relevant small farm field research, educational programs and materials, and applicable knowledge that 1) benefits local producers' understanding and decisions about soil health and sustainable agricultural practices and 2)provides relevant outcomes for assessing the carbon footprint of small landholder production systems on the most common soil type in the county, Canfield silt-loam. This five-year (2020-2024), $500,000 study engages twelve participating small farms located across Stark County (Northeastern), Ohio, as research sites to assess the impact of farm management practices on soil health, crop yield and nutritional quality. Each field site has five mapped GPS locations where

soil cores, crop staging and yield measurements, and nutritional quality samples were collected, analyzed, and correlated alongside farm management survey data from each operation. Two additional in-field assessments were added and conducted this past year. The first focused on measuring soil carbon through digital imaging and the second investigated soil microbial communities and their activity under various tillage and fertilizer management systems. A summary report of all data, including trends and highlights for each field site was prepared and shared with individual farmer participants via an in-person or virtual summary visit. The project has also hosted two annual Town Hall Meetings for participating producers and the interested public to learn more about the project and to share a summary of the collective results, impacts and notable findings to date associated with the initiative.

CARBON MARKETS: FACTORS AND CONCERNS PREVENTING FARMER ENROLLMENT

SUSTAINABLE AGRICULTURE
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Farmers face multiple risks with everything they do to produce the crops and livestock they raise. So, participating in the carbon market exchanges will be no different.

To generate a high-quality carbon credit, farmers are being asked to change tillage practices, with no-till being the desired practice. This is a major change with potentially high risk of yield reduction in the early adoption phase of implementation. Couple that with carbon companies incorporating cover crops, this could be a major cause of concern to growers with little or no experience with these systems. Costs associated with changes to production practices, from different planter equipment to managing cover crops, may or may not be offset by revenue generated through selling carbon credits. Farmers are also eligible for carbon markets with reductions or better utilization of synthetic nitrogen fertilizers.

To date, it is estimated that only about 1-2% of farms have enrolled in some type of private carbon market program. What are the reasons for the low enrollment and how can Extension be a source of reliable, researched based information to assist growers and landowners with this long-term management decision?

Ohio State University Extension surveyed farmers and consultants across Ohio to determine intent to enroll in carbon markets in the future. Growers indicate not having enough information as the number one reason they have not come to a decision to enroll. The survey also asked what other variables are preventing enrollment as well as information needs for making the enrollment decision.

BUILDING CAPACITY IN CLIMATE CHANGE ADAPTATION PRACTICES

SUSTAINABLE AGRICULTURE
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Current and projected changes in Maine's climate present new opportunities and risks for agriculture, such as a longer growing season and increased risks of spring frosts, summer droughts, wetter springs, and more frequent and intense rainfall. In many cases, climate adaptation practices identified as helpful by farmers and agricultural advisors (e.g. irrigation and weather-based decision support tools) require new knowledge and skills, not just for the farmer but also for their agricultural advisors. We conducted a comprehensive needs assessment of agricultural advisors who work directly with farmers to identify their knowledge gaps and training needs as related to helping farmers adapt to climate change. Sixty-one advisors in Maine from Extension, Natural Resources Conservation Service, conservation districts, state agencies, private crop services, and non-profit organizations completed an online survey during the spring of 2021. Drought, extreme precipitation events, and changes in water availability were rated as severe or major climate change risks by 70% of respondents. Eighty percent of the respondents said they are interested in helping farmers address climate change, and the same portion said they would be likely or extremely likely to participate in professional development opportunities to improve their ability to do so. Survey respondents reported being least confident in providing recommendations to farmers about the following climate adaptation practices: 1. irrigation and water source development; 2. drainage, water diversion, and other ways to address too much water; and 3. using

weather-based decision tools. Survey results were used to develop a three-year professional development program that was launched in October 2022. In each year of the program, a cohort of 16-24 trainees will focus on one of the three climate adaptation practices enumerated above. The educational approach combines expert presentations with on-farm, peer-to-peer, individual, and hands-on experiential learning. The program does not aim to create topic experts, but rather to help trainees become well-informed advisors who, in the context of their current positions, will help farmers frame the right questions, address relevant considerations, evaluate options, and connect with the most appropriate resources and experts. Results from the first year of the program will be presented.

GROWING BABY GINGER IN MOVEABLE CATERPILLAR TUNNELS

SUSTAINABLE AGRICULTURE

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Freehold

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Ginger (Zingiber officinale) is a perennial plant that is native to tropical regions of Asia. The continental United States imports most of its ginger from other countries, or from Hawaii, but baby ginger can also be grown locally in temperate regions using low-cost season extension methods. This program was designed to document best growing practices for baby ginger production in temperate regions, and to introduce potential customers to this niche crop to help develop the market for local farmers. In 2021, field trials of baby ginger (var. Peruvian Yellow) were conducted in Central New Jersey at the Rutgers University Cream Ridge Specialty Crop Research and Extension Center using moveable caterpillar tunnels. Eight replicated beds of ginger were planted in twenty-foot rows occupying approximately 600 square feet of field space in the caterpillar tunnels. The ginger was harvested over a four-week period (October 13 to November 3) and yields were measured weekly to determine the optimum harvest dates. Yields ranged from 2.1 to 2.7 lbs. per foot of bed space with an average return of 14.6 lbs. of ginger harvested for every 1 lb. of seed that was planted. A total of 438 lbs. of baby ginger with a retail value of over $7,000 was harvested from the original 30 lbs. of seed that was planted. No significant differences were observed when comparing weekly yield measurements, suggesting that baby ginger can be harvested on any date within this time period without sacrificing yields. After being harvested, ginger samples were donated to local restaurants and other businesses with a survey to complete, indicating their satisfaction with the crop and how likely they might be to purchase it from local growers in the future. The results and recommended growing practices for baby ginger were communicated directly to approximately 250 growers through various outreach methods including twilight meetings, field tours, and in-person and virtual presentations. Additional extension practices included the production of two YouTube videos (728 views) and four social media posts (1,933 people reached). This project has received support from the NJ Vegetable Growers Association for the 2022 season and has led to communications with growers from as distant as Oregon who are interested in improving their production practices for baby ginger in temperate climates.

COMPARATIVE STUDY OF YIELD, PRODUCTION COST AND WATER USE FOR PRODUCER MANAGED FIR (FURROW IRRIGATED RICE) AND FLOODED RICE IN CLAY COUNTY ARKANSAS

SUSTAINABLE AGRICULTURE

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In Arkansas the FIR (furrow irrigated rice) production systems, where rice is grown in rows and on beds, has increase from 4,156 acres to 200,000 acres from 2012 to 2020. The increase in FIR acres is attributed to recent research indicating that FIR can increase yields and reduce water use when compared to the flooded irrigation system, thus making rice production sustainable. To support the above statement field research on producers' farms was conducted in Arkansas Counties including Clay County. The objective of this research was to study the difference in yield, production cost and water use between FIR and Flooded rice production systems. Based on three years of study (2018-2021) with three different farmers we concluded that average yield of FIR was lower by 15 bushels per acre. The cost of production for FIR was near equal to flooded system per acre whereas FIR fields has lower water usage of 2.5 ac-inch when compared to flooded fields. To summarize it was concluded that there was not much difference in both production systems. High

yielding rice can be produced sustainably with less water and tillage. The advantages include time and expense savings, water savings, crop rotation for weed control, and the ability to incorporate no-till by adding a third crop to the bedded production system. Teaching methods included field days showcasing on farm demonstrations, production meetings and in field training. There were 12 on-farm demonstrations, two field days, two production meetings and other educational events where area producers and other respective clientele were able to gain knowledge on making this system work and the advantages. Data from this study will be published so that anyone wanting to try FIR will be able to see what the true cost and savings of the system will be. This presentation will share more details of the furrow irrigated rice system including input costs, water savings and yield.

TEACHING & EDUCATIONAL TECHNOLOGIES ACCEPTED PRESENTATIONS

OUTCOMES FOR IN-PERSON VS. VIRTUAL DRONE PREPARATION COURSES

TEACHING & EDUCATIONAL TECHNOLOGIES
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Situation: According to the Federal Aviation Administration (FAA), those wishing to become commercial drone pilots must obtain an Unmanned Aerial System (UAS) Certificate through the FAA. To acquire this certificate, one must pass the Part 107 Exam with a score of 70% or higher. Our objective is to determine whether in-person Part 107 exam training classes yield superior knowledge gain compared to virtual delivery methods. Methods: The University of Florida/IFAS Extension Central District Drone Team offers 2-day in-person and 3-day virtual Part 107 exam training courses utilizing various instructional methods to teach participants the subject matter required by the Part 107 Exam. Subject matter included FAA regulations, airspace classification, weather, radio communications, airport operations, aeronautical decision-making, and emergency procedures. In-person attendees receive hands-on drone flight training. Results: From 2019 to 2022, a total of 35 people completed in-person UF/IFAS Drone Exam Prep courses, while 88 attended virtual classes. Pre- and post-tests showed in-person participants had a 97.5% increase in knowledge while virtual attendees had a 79.8% increase in knowledge. Conclusion: According to a 2019 study by Research and Markets, the drone service sector is expected to add 100,000 jobs by 2025 with companies spending upwards of $25 million on drones and drone services. A combination of in-person and virtual Part 107 exam preparation courses maximizes the opportunity for those looking to enter the drone workforce to pass their exams and obtain a commercial license. However, there are strengths and weaknesses for either delivery method that may result in different learning outcomes. Based on our results, our in-person attendees outperformed virtual attendees in knowledge gain. This is a strong indicator that in-person preparation courses may be best delivery method for ensuring prospective pilots obtain their license.

SHOWCASING APPLIED POULTRY RESEARCH WITH THE PUBLIC IN REAL TIME USING SOCIAL MEDIA

TEACHING & EDUCATIONAL TECHNOLOGIES
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This project was designed to conduct and showcase applied poultry research at the University of Maine through social media. Five and half week-old Broad Breasted Turkeys (N=80) were placed on pasture at the J. F. Witter Research and Teaching Center in Old Town, Maine on 1 June 2021 until the birds were 18 weeks old. The intended purpose of the project was to collect production data such as: feed intake, water use, pasture use, and growth rate and test out a newly designed mobile rookery system. During the Covid-19 pandemic, lumber availability decreased while prices increased significantly. The mobile rookery system designed at the University of Maine utilized rigid corral panels as sides and flexible feedlot panels to

create an arching roof that was then covered with a tarp to provide cover for a large group of birds while remaining mobile. Every aspect of the trial was recorded on video in the field and reported on social media. Viewers were able to watch construction of the mobile rookery, turkeys enjoying the pasture, students weighing animals, and unfortunate aspects of the project including vandalism and predator attacks. Viewers were also invited to watch as researchers explain how the forage, feed intake, and water use data were collected, how to identify predators in the wake of an attack, assessing heat-stress in birds, and how researchers at the University of Maine care for birds on pasture. A total of 8 educational videos were posted on social media by students working on the project with a total 3033 views while the project was in progress. In addition, 112 freshmen Animal Science students were shown videos of the project to highlight research and production practices of pastured poultry. Results were presented at 2022 State of Maine Agricultural Trade Show. The recording of this talk has 96 views. Commenters on the videos were over whelming positive with most commenting on the quality of the videos. The study generated needed production data for pasture turkeys, tested a new idea for turkey housing, and reached thousands of people.

THE STORY OF AN ONLINE OPUS: ORCHESTRATING A MASTER GARDENER PROGRAM TO A CANVAS COURSE MANAGEMENT SITE

TEACHING & EDUCATIONAL TECHNOLOGIES

Madeline Flahive DiNardo
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WESTFIELD

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New Jersey Master Gardener programs are traditionally delivered as live classroom lectures. The necessity to switch to online programming provided incentive to develop a curriculum that could engage and challenge new students and provide Master Gardener Program Coordinators with resources for future training programs. A team of Master Gardener Coordinators developed a 19 module course using a Rutgers University licensed Canvas Course management site. The module topics are based on the traditional training program. Each module has three sections: Lesson Materials, Resources and a To Do List. In the Lesson Materials section, learning objectives, based on lecturer input, are listed. Lecturers provide a PDF copy of their presentation, and a recording of the lecture is posted in the section. The lectures are recorded in Zoom and then uploaded to the Canvas site for editing and close captioning using a Kaltura video editing application. The use of the recordings allowed for an expansion of the program to include asynchronous learners. The Resources section includes Extension publications and website links related to the module topic. To keep students engaged and measure knowledge gained, each module has a pre-quiz to take prior to the lecture and a post-quiz to complete after the lecture in the To Do List section. The quiz questions are based on the learning objectives for the module. The course has an open book midterm exam and closed book final exam with a final exam study guide provided. Most of the quizzes and exams are graded using the Canvas SpeedGrader feature. Students complete a two part Integrated Pest Management (IPM) assignment. Three county Master Gardener programs participated in a pilot of the curriculum in 2021. Thirty-six (36) students participated in the course with an average course grade of 91.5%. Scores for the two IPM assignments were 88.3% and 92.3% respectively. The course site had 27,801 page views with an average of 772 per student. For 2022 Master Gardener training, the online course is being replicated by four counties and three county programs are using modules for hybrid Master Gardener training programs.

SOCIAL MEDIA-BASED VIRTUAL EVENTS AND EVALUATION SYSTEM FOR COMMERCIAL HORTICULTURE EXTENSION PROGRAMS DURING THE PANDEMIC

TEACHING & EDUCATIONAL TECHNOLOGIES
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Alabama has a rapidly growing specialty crop industry valued at $165 million in direct sale and $103 million in value added products. To support producers with timely information during the pandemic lockdown (2020-2021), Alabama Extension Commercial Horticulture Team developed social media (SM) events like the biweekly 'Q&A Friday' interactive shows, monthly 'Commercial Horticulture Webinar Series', and the biweekly 'Virtual Farm Tours' (VFTs) using Facebook as the primary platform ('Alabama Extension Commercial Horticulture' channel and 'Alabama Farmer Connection' group). While VFTs connected mentor farmers with beginning farmers, the Q&A and Webinars directly connected Specialists/REAs with a diverse audience. Participatory quizzes and the use of cartoons really engaged the audience on the channel resulting in higher click-throughs. A consistent Virtual Events Monitoring and Evaluation System (VEMES) allowed collection of quantitative and qualitative data throughout the pandemic years. Overall, the Extension horticulture team completed 120 events that reached 2,271 direct and over 57,000 indirect participants. Facebook channel subscriptions rose significantly (77%) in two years; about 20% audience were totally new to Alabama Extension. Over 328 queries were answered by Extension team via the Q&A shows. VFTs showcased 23 mentor farms that lead to several distinct knowledge and awareness changes for farming practices mentioned by farmers (n=35) with 90% immediate use of information. There was 100% support for continuing VFTs and webinars. Since a large number of correlated SM metrics were tracked in both years, a Principal Component Analysis was conducted to reduce variables from webinar series to two dimensional independent components (PRINQUAL Procedure in SAS). Nonparametric test (Wilcoxon) were done to analyze follower changes. Results indicated significant differences in participation and engagement for webinars between years; the change could be related to COVID-19 vaccinations starting in Dec 2020 leading to audience returning to workplaces. In addition to statistical analysis, the team used Microsoft Power BI for data visualization and decision-making during team meetings. With strong public support for current information, monthly webinars and VFTs continue to provide useful information to nearly 3,800 subscribers on Facebook. Supported by USDA-NIFA BFRD, USDA SARE, CPPM/Extension IPM, Organic Transitions, and ADAI Specialty Crops Block Grant Programs.

CROPSTV: A NEW WAY OF DELIVERING AGRONOMIC RESEARCH-BASED INFORMATION TO PRODUCERS

TEACHING & EDUCATIONAL TECHNOLOGIES
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With the inability to hold the two largest agronomic educational programs normally offered in the winter

of 2020 – 2021 due to pandemic restrictions, the ISU Crops team needed to find an alternative method of providing research-based programs during this time. The team pivoted and created a new virtual program called CropsTV. This program was designed to reach people through livestreaming and on-demand viewing. A total of 35 livestreamed topics plus 10 pre-recorded on-demand topics were created and delivered in CropsTV by ISU Extension campus and field specialists. Additionally, all livestreamed topics were available after their initial debut for on-demand viewing. CropsTV subscribers had access to view all 45 topics on-demand until March 15, 2021. Additionally, subscribers had access to additional resources for each CropsTV episode via the viewing portal or the chat box while episodes were being livestreamed. A total of 1,038 registrations were received for CropsTV in 2020-2021, with nearly 50% of participants never having previously participated in either of our two large winter agronomic extension programs. Twenty-two percent of participants came from outside of Iowa. On-demand views totaled 20,275 with an average of 451 views per topic. The total viewing time equaled 1 year, 145 days, 15 hours, 18 minutes.

Additionally, a total of 1,627 Certified Crop Adviser (CCA) credits were provided. At the conclusion of CropsTV, an evaluation was sent to subscribers. From that evaluation, 90% (n=137) of respondents stated they will use information learned from CropsTV in their farm operation, and 78% (n=106) indicated they have shared information learned with others, and when asked how many, the average response was they had shared information with 7.3 other people. This novel, “live and on-demand” programming format allowed the ISU Crops Team to reach more people with research-based agronomic information both in and outside of Iowa. Additionally, the ability to access presentations on-demand provided participants with access to more topics than what they would normally get at an in-person event. With a positive response and success of this program, CropsTV is back for Season 2 this year and has become a part of our Crops Team programing.

RADIO & PODCASTS: PRODUCTION, REACH, & IMPACT

TEACHING & EDUCATIONAL TECHNOLOGIES

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Reaching new audiences and maintaining public support is an ongoing challenge for Extension. The purpose of this educational program is to engage a broad audience of agricultural producers and agricultural consumers, and to raise awareness of Extension as a valuable and trusted resource. We produce a half-hour long weekly radio show and podcast which provide mini-training sessions directed toward beginning and intermediate level gardeners and farmers. These programs have helped to improve knowledge and awareness while also mitigating impacts of emergency situations by sharing time critical topics such as insect outbreaks, livestock diseases, and disaster preparedness. Broadcast media, however, is often undervalued as an educational tool due to its indirect nature. Podcasting lies in a grey area between broadcast media and long trusted factsheets. Podcasts allow listeners to choose topics of interest while building familiarity with the hosts. Extension Calling reaches an estimated 20,000 AM and FM radio listeners. The show was adapted to a podcast in 2018. Now in its fifth season, the 183 episodes of the podcast have been downloaded over 16,000 times. We have approximately 50 unique listeners each week, putting it in the top 50% of podcasts worldwide. Feedback from listeners across the East coast show our audience to be a broad variety of farmers, gardeners, and the general public. Many people reach out to us with questions following the shows or just to let us know they enjoy listening. One farming listener said we, “provide a lot of good information,” a non-farming listener stated, “I can always glean from you what is pertinent to my raised bed/container gardening,” and another simply stated, “It’s nice to hear something good on the radio.” This project’s unique cross-platform format allows a marriage between broad radio outreach and targeted topic based podcasting thus engaging a broad range of listeners who may otherwise not know the value of Extension resources. This presentation will share the history of, and the steps and time needed to produce and publish a weekly show. We will also review ideas for measuring impacts and the research regarding the ability of podcasts to increase information retention.

YOU HAD HOW MANY REGISTRANTS? HOW TO LEVERAGE CANVA AND FACEBOOK GROUPS TO EXPAND THE MARKETING CAPACITY AND SCOPE OF YOUR EXTENSION PROGRAMMING

TEACHING & EDUCATIONAL TECHNOLOGIES

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While boots-on-the-ground, in-person efforts remain at the core of Extension programs, the pandemic has allowed a unique opportunity to leverage digital technologies to reach a broader audience. A key part of any program is for promotional efforts to capture the interest of the target audience, get them to register for the program, and more importantly, get them to show up. Facebook has been a useful tool for Extension professionals for a number of years, but is often emphasized for its use in delivering educational content. For Lincoln County Extension, Facebook is more heavily used as a marketing and promotional tool to expand the scope of both in-person and virtual programs. There are two critical components to program marketing through Facebook: developing effective promotional materials and getting them in front of the right audiences. Lincoln County UGA Extension only has 791 followers on Facebook, but program promotions typically reach anywhere from 5,000 to 30,000 individuals. In the last two years, these promotional efforts have resulted in over 2,000 registrants and 458 participants for six programs (both in-person and virtual) that represent 13 countries, 38 states, and 105 counties in Georgia. In this presentation, learn how Lincoln County Extension has used Canva to develop promotional materials and Facebook Groups to get those advertisements in front the right audience for free.

MULTI-STAGE ENGAGEMENT OF PRODUCERS IN ON-FARM RESEARCH

TEACHING & EDUCATIONAL TECHNOLOGIES

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On-farm research is one of the components keeping Extension at the forefront of evaluating new practices for producers. It allows Extension Educators to address localized issues with multiple stakeholders and involve producers in disseminating the results. As research has found, the majority of producers will contact other producers who have adopted the technology before deciding on the viability of the practice, so producer involvement is critical. To have practical impact, on-farm research must be conducted in a non-bias research manner with findings connected to the producers through peer networks. To create active producer participation, we have involved our Ohio producers in the planning, implementing, and reporting the results of our 2019-2021 on-farm research. This multi-stage engagement allows producers and Educators to use on-farm research as a foundation to build relationships and trust across the industry.

The multi-stage engagement strategy starts with Educator/Producer discussing the production issues and identifying possible solutions. Next, we work with the producers and representatives of the industry to set up and implement replicated research to evaluate the identified solution. During the process we produce videos documenting the progress of the research study. We focus on interaction of the Educator and producer as they work together on the study and draw conclusions from the results, encouraging producers to tell their story. During the next winter meeting season, we discuss the results and future research with all the agronomy meeting attendees. Asking, “does this make sense to you”? “if not what are we missing”? This allows them to be an active participant in improving the research as we move forward. It also encourages producers to volunteer to put out plots, improving the validity of our research. This active participation has allowed for Educators and producers to work together

to solve farming issues, forming a closer partnership. Evaluations have shown that this closer partnership has help increase the relevance of OSU Extension with producers. With over 150 producers surveyed we have found: 64% report they are now more interested in partnering with OSU Extension to conduct on-farm research, 92% are more likely to use OSU Extension as a resource. The majority of producers have also told us that for them to consider changing a production practice, they need to see over a 5% return on their investment.

USING FACEBOOK LIVE FOR PRODUCER EDUCATION: A REVIEW OF FOUR YEARS OF IMPLEMENTATION

TEACHING & EDUCATIONAL TECHNOLOGIES
Kalyn Waters
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Developing an effective communications channel to reach clientele is critical for an agent's success. Social media provides tools which allow agents to increase their reach through live video interaction. Facebook LIVE videos have six times as many interactions as traditional videos and have 3 times the watch length. This gives agents a powerful and unique opportunity to reach producers through Facebook LIVE videos. Objectives: The objectives of using Facebook LIVE to educate producers were 1) to use live social media videos as a platform to educate producers on current/relevant topics, 2) use videos as a nontraditional platform to reach producers who would not typically be exposed to Extension programming, and 3) develop a model for agents to use that is effective at increasing the reach of their programming in an efficient manner and creates a means to capture impacts. Method: Facebook LIVE was used to create informal educational videos and share/broadcast formal meetings on various topics. These videos were recorded/broadcast on an established Facebook page and then shared to groups with corresponding interests to increase reach. Results: Fifty Facebook LIVE videos over four years were published to Panhandle Agricultural Connection on various cattle production and forage management topics which were viewed by an international audience. These videos resulted in a total of 612,667 views and a clientele reach of over 2,600,000. The total estimated of economic impact from collected survey data is $114,875,550. Conclusion: Through development of an audience and understanding of promotion of the agent's LIVE posts, the reach of the program was tremendously increased, beyond the measure of traditional extension. Facebook LIVE is an effective tool that allows agents to increase their reach to clientele in an effective way without a dramatic increase in workload.

MAINE FARM NEWS

TEACHING & EDUCATIONAL TECHNOLOGIES
Donna Coffin
EXTENSION EDUCATOR
UMaine Extension
DOVER-FOXCROFT

Authors: Jason Lilley[1], Rebecca Long[2], Donna Coffin[3], Tori Jackson[4]

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This newsletter started amid the pandemic need for up to date information on the rapidly changing COVID-19 programs, guidance, and financial programs that affected Maine farmers large and small.

Four County Extension staff have been collaborating to get this newsletter into the hands of farmers. It started as a weekly newsletter and later changed to twice a month. The initial email lists included county farming newsletters from three regions of the state as well as a regular statewide beef newsletter and livestock email lists. A total of 2,044 were included on the initial e-newsletter that is sent using the Constant Contact platform. It has since grown to 2,918 (2,652 delivered). Since the start of this combined newsletter the average open rate averages 35.9% and the average click rate is 15.2%. Industry average for educational entities is 28.8% open and 1.8% clicks. The majority of the newsletter is a collection of information the authors glean from a variety of sources that are added to a newsletter template. Links to events, new resources, grants / loans, surveys, and Covid-19 guidance continue to be a staple of the newsletter. The e-newsletter is now sent twice a month on the first and third Saturday to the combined email list. It is resent four days later to folks who did not open the initial e-newsletter. It is also shared on social media through three Facebook pages and an Instagram account through county pages. The February 19th newsletter had a reach of 200 on social media. The highest frequency items clicked by clients who opened the newsletters include: 124 clicks (12.7%) for a Workers Compensation Survey Request; 71 clicks (6.5%) for the Agriculture Infrastructure Investment Program; 63 clicks (5.8%) for a Tractor Safety Checklist; 50 clicks (5.6%) for the

Maine Hay Directory. Other agriculture organizations and service providers see this newsletter as a valuable method to get relevant information into Maine farmers' hands and make frequent requests for information to be included.

SO YOU WANT TO FARM IN MAINE? USING BRIGHTSPACE

TEACHING & EDUCATIONAL TECHNOLOGIES
Donna Coffin
EXTENSION EDUCATOR
UMaine Extension
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The So, You Want to Farm in Maine (SYWTFIM) short-course has been offered as a workshop series through UMaine Extension for many years. Usually offered regionally and in-person, this is now the third year it was available online only using BrightSpace and synchronous Zoom sessions. SYWTFIM is designed to introduce farm business management topics such as enterprise budgeting, cash flow projections, recordkeeping, business planning, insurance, taxes, and regulations to those who are starting farms in Maine. Each class is designed to be interactive and features many guest speakers, including agriculture service providers from an array of sectors and those who are currently farming successfully. The 2022 series offered a different approach as participants included 44 aspiring farmers as well as 13 UMaine undergraduates, providing the opportunity for richer discussions and connections between those interested in starting Maine farms imminently, as well as students, with a variety of backgrounds and experience. The undergraduates were teamed with aspiring farmers to create draft business plans and enterprise budgets over the course of five weeks. Income from those plans totaled over $2 million. All participants had the opportunity to receive USDA Farm Service Agency borrower training credit, with 25 participants receiving this credit. Also, undergraduates receive one course credit for successful completion. This model is new to UMaine and is seen as an innovative way to create deeper connections between Cooperative Extension and the School of Food and Agriculture as undergraduates do not always know what Cooperative is and does, and the aspiring farmers may not have any previous connection to campus.

EDUCATION AND CONSERVATION THROUGH CONVERSATION: THE ART OF RANGE PODCAST

TEACHING & EDUCATIONAL TECHNOLOGIES
Tipton Hudson
Washington State University
ELLENSBURG

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The Art of Range is a first-of-its-kind podcast produced by Washington State University Extension in cooperation with the Society for Range Management. It has been designed to address risks in ranching. The title "Art of Range" plays on the idiom that range management is both art and science. A science is a body of knowledge to be acquired. We know much about the biophysical world and the numerous ecological interactions among organisms. An art, classically understood, is the practice, the application of a body of knowledge. Rangeland management is an art as well—those whose livelihoods depend on making good decisions over a lifetime on the land require skill, not just knowledge, developed from continual adaptive learning. Sustainable rangeland-based livestock production is important to society as one of the only methods of food and fiber production that relies on naturally occurring plant communities. In fact, both ranchers and sociologists believe that the main threats to the continued viability of ranching as a socioeconomic business enterprise are economic and political rather than ecological. Social problems require social solutions. Social solutions require deep, integrative thinking that is increasingly rare in an increasingly digital society. We cannot and should not automate mental labor. Conversation, including recorded conversation, engages our highly plastic human brains in ways that strengthen our abilities to synthesize complex information. The Art of Range podcast broadcasts interactive conversation with some of the brightest minds in rangeland management, including ranchers, researchers, and resource professionals, on the toughest topics related to ranching risks. This talk will discuss why conversation is important and why the Art of Range podcast is an effective way of communicating science and directing ranchers and natural resource professionals toward regenerative and sustainable rangeland-based livestock production.

2020 AM/PIC KEYNOTE SPEAKER PROFILE

Dr. Jewel Bronaugh, U.S. Deputy Secretary of Agriculture, will be a speaker at the NACAA AM/PIC in West Palm Beach, Florida July 17 – 22, 2022. Dr. Bronaugh's professional roots have been in agriculture, nourished with a firm foundation of Cooperative Extension. Before joining the USDA, Dr. Bronaugh was the 16th Commissioner of the Virginia Department of Agriculture and Consumer Services (VDACS). She previously served as the Virginia State Executive Director for the USDA Farm Service Agency (FSA) in July 2015. Preceding her FSA appointment, she served as Dean of the College of Agriculture at Virginia State University (VSU) with oversight of Extension, Research and Academic Programs. Formerly, she was the Associate Administrator for Extension Programs and a 4-H Extension Specialist.

In the spring 2019, Dr. Bronaugh launched the Virginia Farmer Stress Task Force to raise awareness and coordinate resources to address farmer stress and mental health challenges in Virginia. This network continues to ensure state's farmers recognize the importance of mental health and have the necessary tools and support available to them before. In the fall of 2020, she helped establish the Virginia Food Access Investment Fund and Program, the first statewide program of its kind to address food access within historically marginalized communities.

Dr. Bronaugh has spent a lot of time with farmers, ranchers, and forestland owners in her career. She is motivated and inspired by their optimism even when the current road and road ahead is challenging. She is an advocate for all customers and stakeholders who rely on the USDA daily.

Dr. Bronaugh received her Ph.D. in Career and Technical Education from Virginia Tech. She is passionate about the advancement of youth leadership in agriculture. Dr. Bronaugh is from Petersburg, Virginia. She is married to Cleavon, a retired United States Army Veteran.

ANNUAL MEETING AND PROFESSIONAL IMPROVEMENT FUTURE CONFERENCE DATES

2023

Des Moines, Iowa.....August 12-17

2024

Dallas, Texas.....July 14-18

2025

Billings, Montana.....June 29-July 2

2026

Denver, Colorado.....July 11-15