

Educational Objectives

Clay County is a rural county with over 300,000 acres of various types of agriculture including corn, cotton, grain sorghum, wheat, rice, and soybeans. "Corporate farming" is becoming a common occurrence whether local farmers want it to or not. Today, there is a smaller number of farms with each having a larger number of acres. The average farmer's age is 57. Farmers are getting older and close to retiring meaning there are fewer younger generation farmers to help take over when they do. There needs to be more young people willing to take over the land to continue to feed, clothe, and house the world. Lots of kids are choosing different paths, such as college, instead of going back to work on the farm. However, those that do go back to work on the farm, need help in learning the ropes and understanding what all goes into being a sustainable farmer as well as a good steward of the land. The Corn Research Verification Program is a tool used to help educate and assist young or new farmers to learn how to grow a successful crop. As extension agents, we can be the connection between the public's concern, the ag industry, and producers. It is our job to help anyone with questions, while providing them with scientific, unbiased answers.

Program Activities

The 2019 growing season was the twentieth year for the Corn Research Verification Program (CRVP). The program is an interdisciplinary effort between growers, county Extension agents, Extension specialists, and researchers. The CRVP is an on-farm demonstration of all the research-based recommendations required to grow corn profitably in Arkansas. The specific objectives of the program are:

1. To verify research-based recommendations for profitable corn production in all corn producing areas of Arkansas.
2. To develop a database for economic analysis of all aspects of corn production.
3. To demonstrate that consistently high yields of corn can be produced economically with the use of available technology and inputs.
4. To identify specific problems and opportunities in Arkansas corn production for further investigation.
5. To promote timely implementation of cultural and management practices among corn growers.
6. To provide training and assistance to county agents and/or young farmers with limited expertise in corn production.

Activities associated with the program included 147 on-farm visits and 127 one-on-one consultations. Each field and cooperator were selected prior to planting. Cooperators agreed to pay production expenses, provide crop expense data for economic analysis, and implement the recommended production practices in a timely manner from seedbed preparation to harvest. The fields were located on commercial farms and ranged in several different sizes. Growers from around the state enrolled in the program in the spring of 2019. Two producers from Knob signed up to do a corn verification

demonstration in Clay County. The two young farmers are hoping to one day take over their father's farm so that he can retire. They did not attend college, so the only background of agriculture they have is from growing up on the farm and working next to their dad. Being a new agent, I needed to learn more myself about growing corn. Prior to planting, soil samples were taken to see what kind of shape the soil was in and what fertility measures needed to be taken. Management decisions were based on field history, soil test results, hybrids, and data collected from each individual field during the growing season. This was a two-year program that started in 2018 to benefit both producers and county agents to better understand how to consistently grow a high-yielding, profitable corn crop. Once a week, trips were made to the field. The field was scouted for insects, diseases, lodging, and any other issue that might cause the corn stress. They would choose a different field the second year. A weather station and rain gauge were placed at the field to keep up with rainfall and temperature. The field was also set up in PipePlanner and Irrigation Scheduler to get a grasp of when the field would need to be irrigated. Pipe Planner is a web-based computer program that utilizes information collected from the producers' field to maximize furrow irrigation uniformity and efficiency. The field information is entered into Pipe Planner and the program calculates proper hole sizes for the Huckabay's to punch in lay-flat polypipe. Their field was also entered into the "Most Crop Per Drop" contest in 2019. The University of Arkansas has been demonstrating irrigation water management practices on cooperator farms for five years. Experience has shown that when applied effectively water use can be reduced by 24% on average with no yield penalty. Reductions in water use of around 40% have been documented. The adoption rate of Computerized Hole Selection is over 40% indicating that this is now a mainstream practice in Arkansas. The Arkansas Irrigation Yield Contest is designed to test the knowledge and ability of growers to produce the "Most Crop per Drop."

Each year the Clay County Extension Office hosts two agricultural field days in the summer, followed by two production meetings in the winter. They showcase on-farm demonstrations in addition to research from around the county and from University specialists across the state. The Huckabay brothers always try to attend Extension's programs because they know they will obtain valuable information that they can take back to their operation. Two field days are held in the summer and are open to the public. A group of mostly farmers and industry representatives tour different sites across the county to go out into the on-farm demonstrations, hear from Extension specialists, and ask questions about those tests. In the winter these same attendees gather in a central location to be informed by those same Extension specialists about the previous and upcoming year. They are informed about the different things or problems they will need to watch for. They are informed on previous research that has been implemented and how it pertains to Clay County's agriculture industry. With so many people handing out false or biased information, it is important for producers, especially the younger farmers, to have a reliable source to get their information to help them be productive and profitable.

Teaching Methods

Not only did the Verification Coordinator, Mr. Charles Capps, and both county agents walk the field each week, the two young farmers, Tyler and Tanner Huckabay, got involved to walk the field as well. This gives the producer first-hand experience on how to grow corn and what to expect when growing a crop. Whenever there were disease and insect pests, they were identified so that later on, they could recognize them and learn how to scout them when they were out in the fields by themselves. They were taught how to use the University of Arkansas' recommendations to control them. The producers, along with the agents were taught what hail damage and other issues looked like. This program also helped

the Huckabay's by collaborating with the Extension agents while helping them to not be afraid to call with questions when needed. Some older farmers are stuck in their ways and don't like to call and ask for help, so it is important that they understand we are here to help answer their questions. Western Clay County ag agent, Stewart Runsick, also helped them each week to walk their rice and learn how to scout it to know what to be on the lookout for. Another point of the verification program is to use the correct amount of inputs and not over-apply fertilizer and pesticides. Over applying these things can cause harm to wildlife and the environment, so it is important to put out only what is required to grow that certain crop profitably.

Results

Tyler and Tanner Huckabay, along with their father, had about 4,000 row crop acres two years ago. After two years of the Corn Verification Program, and learning more about their crops each week, they have expanded their corn, rice, and soybean acres by another 2,500 acres. They are now running half of the farm, around 3,300 acres, while their father still tends to the other 3,200. The Huckabay brothers are also more confident in making pesticide recommendations to their fields. They are better able to go out scouting fields and know what is needed to control those pests. They can make management decisions now that they know what all it takes and what goes into growing a successful crop. The brothers are not afraid to call and ask us questions as needed. They are more apt to listening to the University's unbiased recommendations than companies who are trying to sell them products.

Impact Statement

The Huckabay's stated that after the two-year program Tyler and Tanner, along with their father, are more confident in growing and scouting corn and that they feel more comfortable about doing it alone. They also stated that they would even be interested in doing a soybean verification field in the future. They were pleased with how the season went and how the corn came out. Throughout the year they were able to take what they learned and apply it to their other fields.

Evaluation

Along with farming knowledge, over the past couple of years, the Huckabay brothers increased not only their corn yields, but also their rice and soybean yields. Their input costs have decreased and were lower compared to the state average. They definitely increased their education level and participate in nearly all of Extension's programs that are offered. They are very appreciative of the trainings and information that is made available to farmers, especially those that are new and/or young. They have stated that they would recommend the Clay County Extension Service, as well as the Verification Programs, to anyone who is new, young, or even seasoned to be able to keep up and learn with the ever-changing business of agriculture.