



# JOURNAL OF THE NACAA

ISSN 2158-9429

VOLUME 18, ISSUE 1 – JUNE, 2025

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## Developing Programs to Meet the Needs of Utah Women in Agriculture

### Abstract

Utah women in agriculture remain underrepresented in extension programs, despite their growing presence in the industry. To address this gap, Utah State University (USU) Extension faculty established the Utah Women in Ag team. This team launched a social media platform, conducted a needs assessment, and developed targeted educational initiatives, including *Women in Ag Nights* and the *Cattlegirls "Boot" Camp*. Women in Ag Nights provided professional development and networking, while the boot camp delivered hands-on livestock training in a supportive, women-only setting. They scheduled programming to increase exposure to established extension resources. Results demonstrated strong program impact: 95% of boot camp participants (n=37) rated the event as very good or exceptional, 85% indicated frequent application of learned skills, and 51% attended the subsequent *Cattlegirls' Reproduction Workshop*—raising female participation in that event from 26% to 38%. By integrating women-focused programming with established extension initiatives, the Utah Women in Ag team successfully expanded educational access, increased confidence in

agricultural skills, and fostered a stronger sense of community among female producers. Future efforts will expand subject matter coverage, increase statewide accessibility, and strengthen mentorship opportunities to further support women in Utah agriculture.

**Abbreviations:** USDA (United States Department of Agriculture), NASS (National Agricultural Statistics Service)

**Keywords:** cattle, empowerment, impact, Utah, women in agriculture

## Introduction

In 2022, women comprised 12,294 (37%) of Utah's 33,270 agricultural producers (USDA NASS, 2022), a tenfold increase since 2002 (USDA NASS, 2002). Despite the vital role they play in production agriculture, Utah women participate in agriculture-based extension programs at significantly lower rates than men. For example, a range livestock workshop in southern Utah and northern Arizona reaches over 400 participants a year who collectively own or manage more than 20,000 head of cattle. Only 24% of workshop attendees were women in 2022-2024, despite 94–97% of all participants reporting valuable skill acquisition and improved farm profitability because of the workshop (Heaton et al., 2024). Similarly, women accounted for just 27% of attendees at the Rich County Cattle and Forage School in 2022–2023. Researchers found that students in all-female groups for collaborative learning were more likely to participate than in mixed-gender groups, especially in listening, talking, and integrating the information (Feng et al., 2023). This data indicates that women are not benefiting as greatly as their male counterparts from extension programming that increases knowledge, skills, and profitability for agricultural producers.

## Objectives

In 2023, Utah State University Extension faculty formed the Utah Women in Ag team to meet the unique educational needs of women in production agriculture. The team created a Facebook group, "Utah Women in Agriculture," as a platform for members to

share knowledge, experiences, and encouragement. Currently, this [group](#) has 327 members.

To assess the needs of women in agriculture, the team distributed a survey via Facebook and email. A total of 91 women from 15 of the 29 counties across Utah responded. The responses highlighted a need for increased confidence in agriculture and livestock production practices, as well as a desire for a supportive community. When asked about their biggest challenges as women in agriculture, responses included:

- “Not knowing how to do things on my own that farmers/ranchers just ‘know.’”
- “Low interest funding/program availability.”
- “The lack of trust or respect when working in this industry due to being a woman.”
- “Lack of communication with my partner and uncertainty about passing down the ranch.”

Women also expressed interest in improving their livestock and crop production skills, enhancing farm profitability, and balancing family, career, and agricultural goals. When asked what they hoped to gain from the Utah Women in Agriculture group, responses included:

- “Education on all topics and friendships.”
- “Women supporting women.”
- “How others balance life challenges.”
- “Support and science-based information.”

Based on these findings, the Utah Women in Ag team developed the following objectives:

1. Teach and reinforce livestock and crop production skills to empower women as managers, partners, and employees.
2. Increase agricultural profitability by educating women in record-keeping, financial planning, and best practices that they can apply to their operations and share with others.

3. Expand awareness of extension agricultural programming as a valued resource for women.
4. Improve participation in incentive contracts and government programs among women, an underserved population in agriculture, through awareness and education.

## **Methods**

***Women in Ag Nights:*** Utah State University and University of Wyoming Extension faculty hosted three Women in Ag Nights in 2024, with Duchesne County faculty organizing a similar event. Prominent women, who are successfully working in and promoting agriculture, spoke each night. They shared personal experiences in agriculture production and spoke about women playing a key role in the success of agricultural operations.

***Cattlegirls “Boot” Camp:*** The Utah Women in Ag team hosted the first Cattlegirls “Boot” Camp in Alton, Utah, in 2024. Modeled after the Virginia WISE cattle program (Virginia Cooperative Extension, n.d.), the camp focused on building confidence in livestock production, fostering community, improving communication, and sharing common interests.

The Utah Women in Ag team received a USU Extension Grant of \$25,420 for the Cattlegirls “Boot” Camp and additional programming. Participants paid a \$50 registration fee, which, combined with the grant funding, covered program expenses including advertising, participant workbooks, speaker fees and travel, supplies, venue rental, meals, and livestock handling facilities lease. Organizers advertised through social media and a targeted email list.

Led by women instructors, participants practiced the following hands-on activities in 15-minute rotations:

- Low-stress cattle handling (on foot, by horseback, and in the chute)
- Pregnancy evaluation, nutrition, and foot scoring
- Injection and implant sites, castration, ear tagging, pinkeye treatment, and vaccine handling
- Dystocia management using a calving simulator, newborn calf care, tubing, and warming calves

Classroom sessions included topics such as:

- Cattle marketing
- Balancing ranch and home life (panel discussion)
- How to make sourdough bread
- Selecting and cooking the perfect steak
- Building strong relationships through effective communication



Figure 1. Palpation demonstration by Doctor of Veterinary Medicine. Photo credit: Callie Adams.

The bootcamp lasted one day from 8:00 am to 9:00 pm. A working ranch hosted the hands-on sessions, while a nearby vacation ranch provided classroom accommodation and lodging for participants.

***Integration with Established Extension Programming:*** Organizers scheduled the Cattlewomen “Boot” Camp the day before the Cattleman’s Reproduction Workshop, a long-standing extension program also held in Alton, Utah. This program has successfully provided education on cattle reproduction to over 900 participants in 16 years. Organizers encouraged women to attend both workshops, leading to increased female participation.

Three keynote speakers from the bootcamp shared their expertise at the reproduction workshop. Topics expanded on information provided at the “boot” camp and included: cattle handling and stress effects on reproduction, nutrition and reproduction in cattle, new electronic identification (EID) laws and their impact on ranchers, building stronger relationships and improving communication on the ranch, the effect of rangeland conditions on reproduction, effects of cow size and body condition scoring (BCS) on reproduction, tightening the calving window, and a panel discussion on preparing heifers

for breeding. Following lunch, participants practiced pulling a calf with a calving simulator, body condition scoring groups of cattle, and moving and handling cattle.

## Results and Discussion

***Women in Ag Nights:*** Four *Women in Ag Nights* reached women across Utah and neighboring states with a total of 44 participants ( $n=44$ ). Immediately following a *Women in Ag Night* hosted in Evanston, Wyoming, 39% of participants ( $n = 17$ ) evaluated the content and impacts of the program. Table 1 summarizes the value attendees placed on the information they received. Of the questions asked, participants responded that they would be most likely to recommend the program to others. The slightly lower scores on the importance of the topic matter may indicate that participants were already familiar with some content.

Table 1. Program evaluation for *Women in Ag Night*

Question	Quality of Program Average Score (Scale 1-4)*
How beneficial did you find the content available in the program?	3.5
How likely would you be to recommend this program to others?	3.7
Did you gain information you plan to utilize in the future?	3.3

\* Ratings scale: 1 = poor, 2 = fair, 3 = good, 4 = excellent

Participants at the *Women in Ag Night* also evaluated the instructors and overall quality of the workshop. Results in Table 2 indicate that instructors with careers in teaching and extension effectively conveyed expertise in equine management, education, and ranch development.

Table 2. Presenter evaluation for *Women in Ag Night*

<b>Presenters</b>	<b>Quality of Presentation, Average Score (Scale 1-5)*</b>
Presenter 1: Extension Assistant Professor and equine professional	4.3
Instructor 2: FFA Advisor	4.4
Instructor 3: Extension Professional and ranch owner	4.4
Overall quality of program	4.8

\* Ratings scale: 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent

Participants rated the workshops' overall quality a 4.8 on a scale of 1 to 5, which further confirms the quality of the educational night. Women responded with comments such as, *"Great night of women empowerment!"* and *"So inspiring. I appreciate the chance to meet and visit with others in ag."*

**Cattlegirls "Boot" Camp:** The program attracted 37 women (n = 37), ages 15–63, from Utah, Idaho, Arizona, and Nevada. Among the participants responding to a survey, 95% rated the camp as very good or exceptional, and 85% indicated they would frequently apply the skills learned.

Six instructors from Nebraska and throughout Utah taught at the Cattlegirls "Boot" Camp. Results in Table 3 indicate that each keynote instructor effectively engaged participants, with Speakers 2 and 6 receiving the highest "exceptional" ratings (72% and 70%, respectively). This suggests these instructors successfully conveyed their expertise, facilitated learning, and expanded participants' knowledge base. Speakers 1, 3, and 5 had the highest proportion of "Fair" ratings (6–8%), indicating potential areas for improvement in delivery and engagement. Overall, Table 3 demonstrates the workshop's success in enhancing participants' knowledge of livestock production, beef quality, and effective communication.

Table 3. Instructor effectiveness at *Cattlegirls "Boot" Camp*

Topics	% of respondents			
	Fair	Good	Very Good	Exceptional
Instructor 1: Effectively improved my understanding of low stress cattle handling	8	12	42	38
Instructor 2: Effectively improved my understanding of pregnancy diagnosis and dystocia in cattle	0	10	18	72
Instructor 3: Effectively improved my understanding of cattle nutrition	5	20	35	40
Instructor 4: Effectively improved my understanding of communicating to improve relationships in agriculture	0	10	35	55
Instructor 5: Effectively improved my understanding of marketing cattle	5	15	40	40
Instructor 6: Effectively improved my understanding of selecting steak	0	5	25	70

Seven classes at the Cattlegirls "Boot" Camp received over 50% exceptional ratings. In order of ratings, these classes were: calving simulator and dystocia, sourdough bread demonstration, selecting and cooking the perfect steak, evaluating steak quality, building strong relationships on your cattle operation through communication, and cattle pregnancy testing. Participants emphasized the value of a supportive learning environment, exemplified by the comment, *"I enjoyed the hands on with the preg testing. I also enjoyed not feeling inferior with having it be all women."*

**Integration of Established Extension Programming:** Following the Boot Camp, 51% of participants attended the subsequent Cattlegirl's Reproduction Workshop, increasing female attendance from an average of 26% in prior years to 38% in 2024. Post-workshop surveys (n = 36) revealed knowledge gains of 26–67% across key topics such as cattle nutrition, EID law compliance, and communication strategies (Table 4).



**Table 4**Table 4. Change in knowledge from *Cattleman's Reproduction Workshop* topics

Topics	BEFORE Workshop Mean (Scale 1-5)	AFTER Workshop Mean (Scale 1-5)	% Change in Knowledge
Cattle Handling and Stress Effects on Reproduction	2.8	3.8	37%
Nutrition and Reproduction in Cattle	2.6	3.6	39%
New EID Laws and Their Impact on Ranchers	2.0	3.4	67%
Building Stronger Relationships and Improving Communication on the Ranch	2.6	3.8	45%
The Effect of Rangeland Conditions on Reproduction	2.8	3.5	26%
Effects of Cow Size and BCS on Reproduction	2.7	3.7	36%
Tightening the Calving Window	2.6	3.6	37%
Preparing Heifers for Breeding	2.8	3.6	31%

Surveyed participants collectively managed over 4,000 head of livestock, valued at approximately \$8,010,000, and indicated they would use their newly acquired knowledge to enhance profitability and mentor others. Women who attended both workshops expressed the effectiveness of the extension programming, stating, “Excellent!” and “I think I was more comfortable at the repro day because of the bootcamp.”

## Conclusion

The Utah *Women in Ag Nights* and *Cattlegirls “Boot” Camp* successfully increased engagement, skills, and confidence among female agricultural producers. Feedback suggests opportunities for expansion, including:

1. Offering *Women in Ag Nights* statewide, with tailored content based on audience needs.
2. Expanding the *Cattlegirls “Boot” Camp* to a two-day format for deeper engagement.
3. Hosting similar workshops on crop production, equipment safety, and financial management.
4. Continuing to integrate women-focused events with established extension programming to increase participation.

By strategically integrating women-focused events with existing extension programs, female producers gain increased exposure to valuable educational opportunities.

Established extension programs provide a wealth of expertise, networking, and technical resources, but many women may not feel comfortable participating in traditionally male-dominated spaces. By scheduling the *Cattlegirls “Boot” Camp* in conjunction with the *Cattlemans’ Reproduction Workshop*, participation among women increased significantly, demonstrating that targeted outreach can bridge this gap.

Extension services can further enhance their impact by promoting mentorship opportunities, increasing visibility of successful female agricultural leaders, and offering additional hands-on, skills-based training. Strengthening ties between new and existing programs will ensure that female agricultural producers continue to build confidence, access Extension resources, and contribute meaningfully to the industry. This integrated approach enhances knowledge transfer, economic sustainability, and community support, ultimately fostering long-term success for women in agriculture.

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