THE UNIVERSITY OF ARIZONA
Cooperative Extension

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Yavapai County Livestock Needs Assessment Report

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Introduction

Livestock production, particularly cattle, has occurred in Arizona for over 300 years (Collins, 2005). Ranching has been a prominent part of Arizona and Yavapai County's history and still is a large part of the landscape today. With over 46,000 head of livestock in Yavapai County, this accounts for ~22 million dollars of market value sales, mainly from the sale of cattle and calves (USDA, 2022). In addition, today many families want to raise their own livestock for food or as show animals for 4H or FFA projects. Also, only 25% of the land is privately owned, creating unique circumstances when raising livestock on public rangelands managed by the US Forest Service, US Bureau of Land Management or by the state of Arizona (Arizona Commerce Authority, 2023).

A needs assessment survey was conducted to learn the topics of interest and concern for livestock producers and owners in Yavapai County. Using this knowledge, development of future extension programming can occur in these areas to increase the overall knowledge of livestock producers in the county while simultaneously increasing profitability and sustainability in their operations.

Figure 1. Black and red cattle. Photo Source: Adobe Stock

The Assessment

A voluntary, anonymous survey was created, data were collected using Qualtrics software (Version 6/2024), an online survey platform, comprised of 13 questions focused on the issues of livestock operations in the county, as well as the education preferences and demographics of these operators. The questions were either multiple choice or open-ended. For the main questions on livestock, participants were asked to name their top 3 issues or concerns in their livestock operations and with rangeland or grazing. Also, participants were asked to name their top 3 interests in new livestock technologies or practices they would like to learn. These open-ended answers were then compiled and categorized into general topics.

The survey was opened on March 15th and closed on June 30th, 2024. Surveys were distributed through personal interactions, emails to a livestock listserv, industry groups and tribal communities within the county, included in the Yavapai County Cooperative Extension Connection Newsletter for the months it was active, and flyers.

Results

After 3.5 months, 22 responses were collected. Participants were asked what county their operation resided in to ensure results came from Yavapai County. One response was gathered from outside of the county and therefore excluded from the following results.

Who are Our Producers?

In the survey, respondents were asked to self-identify gender, age, and ethnicity. Results indicated, of those participating, 65% were female and 35% male (Figure 2). The largest age group was 46-60 years old (29%), followed by 24% age 31-45, 19% age 18-30. Ages 61-75 were only 14% and 75+ was 10% of respondents (Figure 3). As indicated in Figure 4, 76% of respondents identified as Caucasian, 5% as Latino or Hispanic, and 14% preferred not to answer.

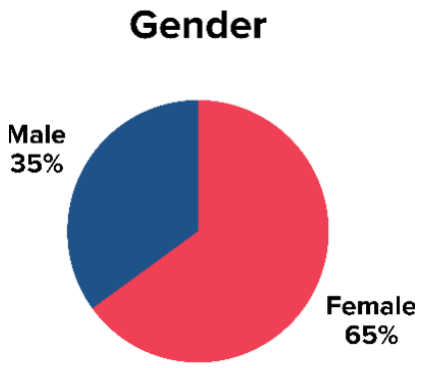

Figure 2. Self-identified gender results.

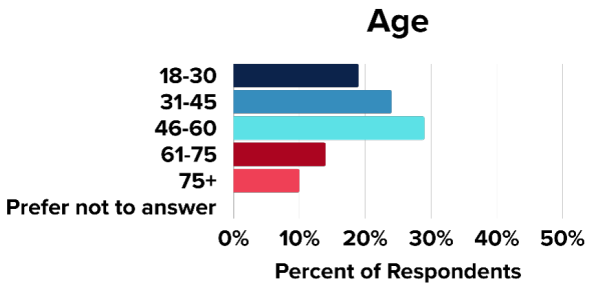

Figure 3. Self-identified age results.

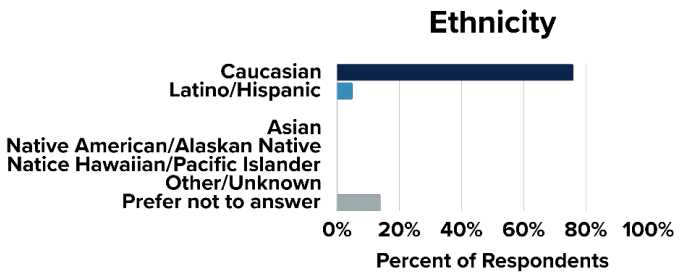

Figure 4. Self-identified ethnicity results.

This survey may be affected by sampling bias because participation was voluntary, and the respondents who chose to complete it may not fully represent the broader livestock-producer population in Yavapai County. The survey had lower participation from younger, older, Latino/Hispanic and tribal producers. As a result, the findings may reflect the perspectives of those more inclined to respond rather than the full diversity of livestock producers in the county.

Livestock Landscape

To develop species specific material for Yavapai County, the survey included questions about what type and how many livestock were under the respondents' care. Producers were able to mark all that applied when asked the question what type of livestock they owned or managed. Of the results, the main species raised in Yavapai County was cattle at 71% (Figure 5). In addition, all those marking cattle also marked horses. This corresponds with the common practice of using horses to move, gather, and check cattle on the vast rugged rangelands most are raised here in the West. In addition, about a third of respondents marked goats (38%) and/or other livestock (29%; Figure 5). When asked to explain their answer for "Other", responses included rabbits, cavy, and poultry such as chickens, turkeys, ducks, and pigeons. Only 10% of answers included sheep (Figure 5).

Participants were asked to categorize their operations by number of head of animals from 0-10, 11-50, 51-100,101-200,201,300, or 300+. The largest category was from 11-50 head of animals. There was also a small showing of larger operations with 201-300 and 300+ categories, each having a response of 14% (Figure 6). By knowing the size of operations, education can be tailored to the type of operation. Usually, those with less animals raise them on smaller acreage and can manage their livestock more intensely. Those with large herds normally raise their animals on rangelands spread out over thousands of acres. This does not allow these producers to manage as intensely. Different methods are used for each situation of livestock production and information can be shared accordingly.

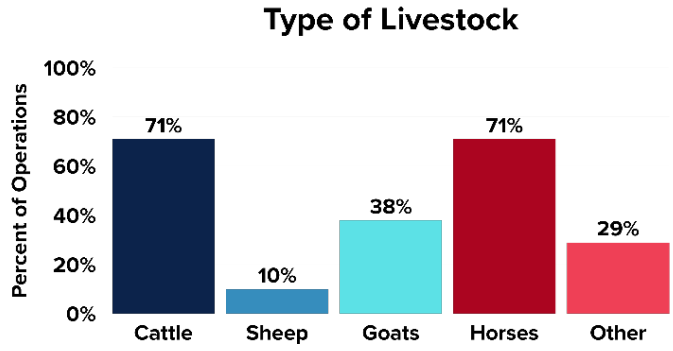

Figure 5. Respondent results for type of livestock raised.

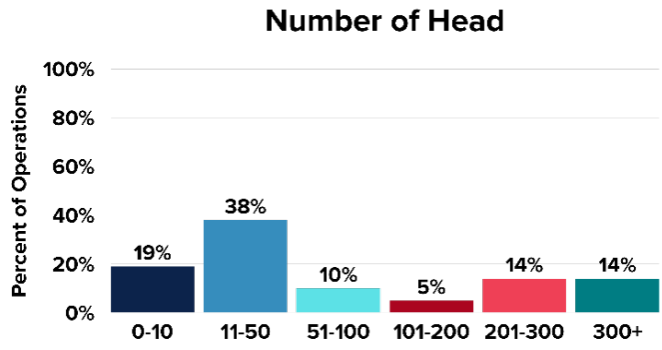

Figure 6. Respondent results for number of head in their operation.

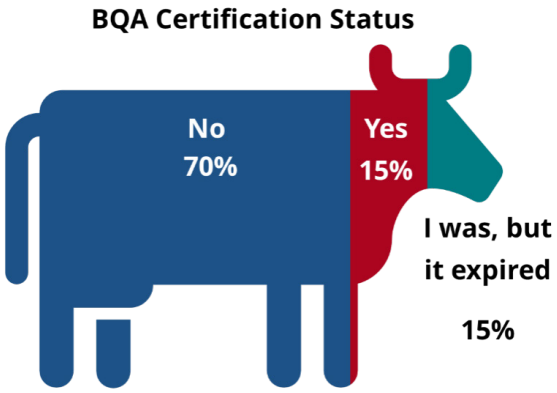

Figure 7. Beef Quality Assurance (BQA) certification status. Graphic created by: Katie J. Hazlewood Spanyers

Beef Quality Assurance

Beef quality assurance (2026) (BQA) is a certification program producers can voluntarily participate in that provides information on animal welfare and management practices to raise cattle. Information provided is backed by research to enhance care of cattle through animal handling, transportation, recordkeeping, and maintaining herd health (bqa.org). To become BQA certified, a producer must take a class held by a certified instructor or take the video version online. Cattle sold from 2010-2017 via video auction that mentioned BQA in the description have received increased premiums of $2.69 per hundred weight compared to those who didn't (Mooney et al., 2019). Once certified, the certification lasts for 3 years. Producers may re-certify once that time is up, or they may partake in other informational courses (such as extension workshops) that count as Continual Education Units (CEUs) to maintain their certification without re-certifying.

In the needs assessment, producers were asked if they currently were BQA certified, not certified or needed to renew their certification. Out of the respondents, only 15% answered yes and 85% answered they were either not certified or needed to renew their certification (Figure 7). Supporting producers in obtaining BQA certification allows the Yavapai County livestock program to build on existing strengths and continue advancing animal care standards.

Livestock Operation Challenges

Respondents were asked to provide the top 3 issues or concerns they had in the herds they owned or managed. These answers were then categorized into general livestock needs areas. The top 3 categories were operations (27%), herd health (15%) and reproduction and range management (12% each; Figure 8). Meat production followed close behind at 11% (Figure 8).

Operational concerns shared by producers included challenges such as constructing and maintaining fence lines, managing feed costs, and meeting organic production

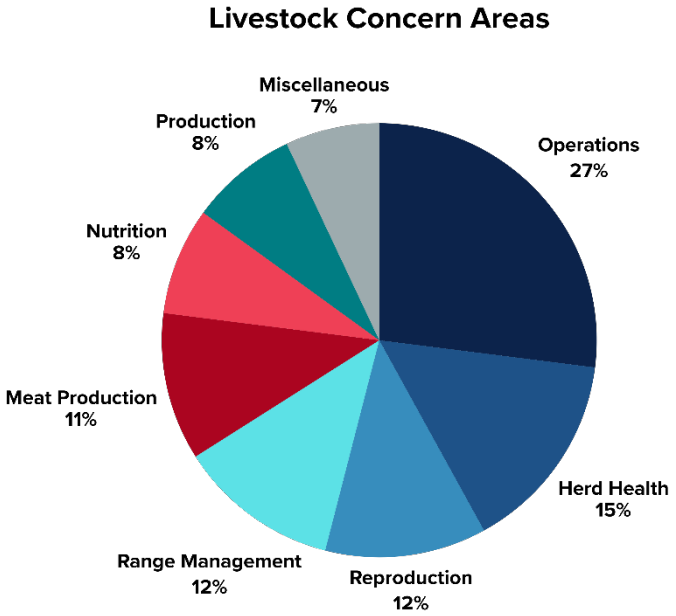

Figure 8. Generalized categories of respondent answers for livestock operational concerns.

standards. While Extension may not be in a position to directly influence feed prices or resolve labor shortages, it remains well-positioned to support producers through programming designed to address these issues in practical ways. In the area of herd health, producers most frequently cited the need for guidance on vaccine and deworming schedules. Reproductive concerns ranged from achieving timely breeding to broader questions about reproductive management.

Rangeland and Grazing Concerns

Rangeland plays a vital role in cattle production across the West, offering a valuable feed source on land that is often unsuitable for farming and too remote for development. Similar to other western states, Arizona has limited privately owned land, and producers often rely upon receiving permits to graze on publicly owned lands. In Yavapai County specifically, less than 25% of the land is privately held, including areas within cities and towns (Arizona Commerce Authority, 2023). This presents unique challenges for producers, especially considering a single cow requires 25–30 pounds of dry feed per day. Depending on forage availability, this could translate to over 40 acres per cow per year if relying solely on rangeland. These conditions add layers of complexity to livestock management alongside the daily demands of herd care. Respondents were asked to provide the top 3 issues or concerns they had with their rangelands and grazing.

Feedback from respondents highlighted specific challenges related to rangeland and grazing, with grass and land management (26%; Figure 9) named as the top concern with responses including brush management and drought conditions. Relationships with government

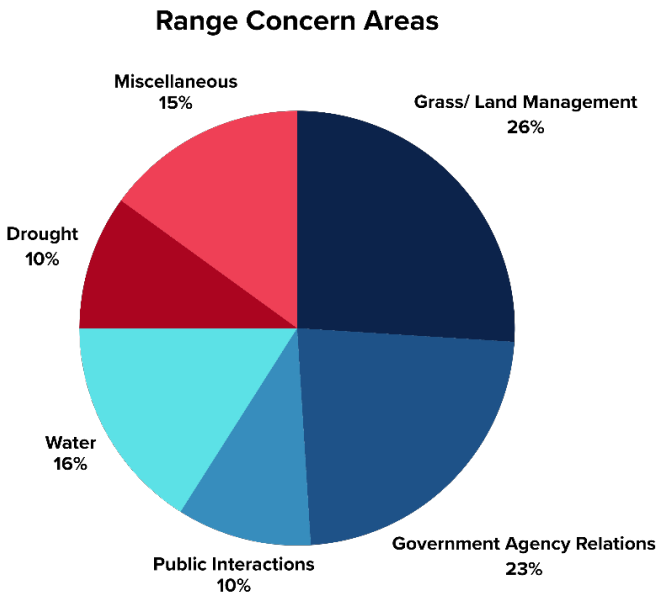

Figure 9. Generalized categories of respondent answers for range concerns.

agencies (23%; Figure 9) emerged as another top concern of respondents.

Interest in New Technology

Participants were asked, "what are 3 new livestock technologies, practices, or concepts you would like to learn more about?". Results indicated that 25% of respondents highlighted herd health as their top priority (Figure 10) including items such as vaccination protocols and deworming schedules for their livestock. In addition to herd health, respondents were interested in artificial insemination (AI; 13%) and genetics (13%) such as genetic testing their herds (Figure 10). Range technology (13%; Figure 10) included drones on rangeland.

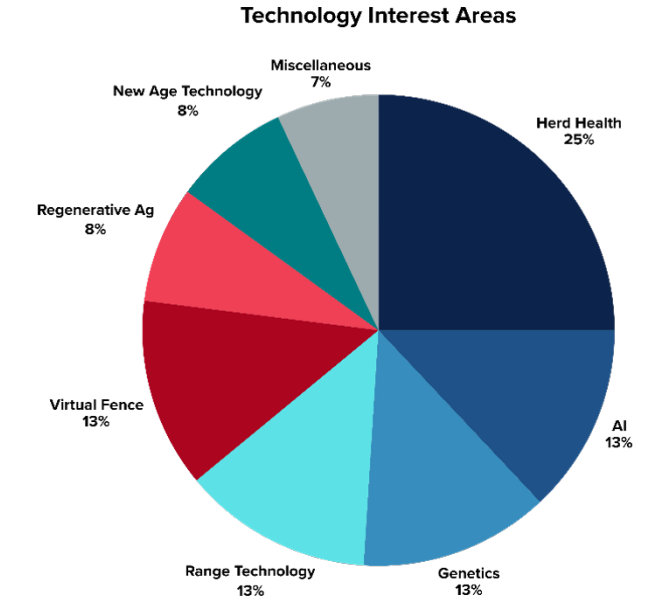

Figure 10. Generalized categories of respondent answers for areas of interest in technology and practices. AI stands for artificial insemination.

Education Preferences

In the survey, participants were asked about their preferences regarding educational materials. These questions included what their preferred method of receiving education was, as well as how much time and money they were willing to spend when attending a workshop. Respondents indicated the vast majority preferred "in person" education with hands-on exercises (including field days and one-on-one site visits; 26%) and workshops (25%) being the top responses in this multiple answer question (Figure 11). On average, less than 12% responded that they would like to receive educational information through static methods such as newsletters, fact sheets, or via the website/social media (Figure 11).

Almost half of respondents (43%) indicated that 3-4 hours was the ideal amount of time for a workshop. Second to this, respondents indicated 6-7 hours in a workshop would provide the most value (Figure 12). The majority of participants (67%) were willing to spend $20-$25 on an educational experience (Figure 13).

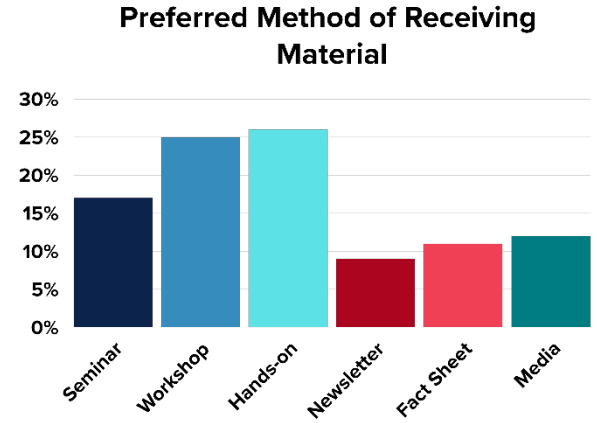

Figure 11. Respondent results for preferred method of receiving educational material. Hands-on includes field days and site visits. Media includes the Extension website and social media.

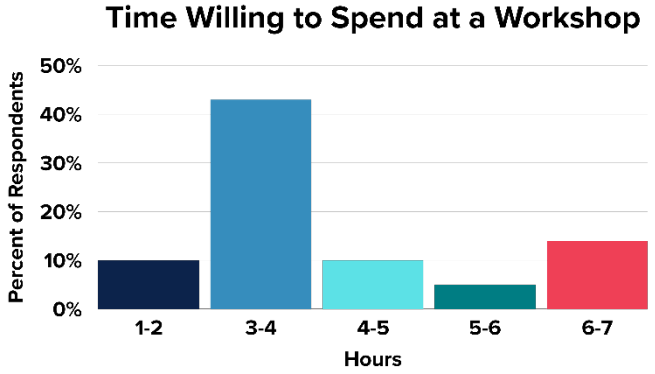

Figure 11. Respondent results for preferred method of receiving educational material. Hands-on includes field days and site visits. Media includes the Extension website and social media.

Figure 13. Respondent results for amount ($) willing to spend at a workshop.

Future Opportunities for Extension Programming

The results of this needs assessment provide a clear direction for future Extension efforts in Yavapai County. Several key areas emerged where programming can be expanded or refined to better support livestock producers and address the evolving challenges they face.

The distributions shown in Figure 5 confirm the USDA Agriculture Census, that cattle are the main livestock raised in Yavapai County (USDA, 2022). Programming will be primarily focused on cow/calf operations. Additional programs will provide education on other stock, particularly goats.

With a majority of respondents either not certified or needing to renew their BQA certification, there is an opportunity to engage more producers and promote BQA as a standard of practice. Future programming can include regular in-person certification workshops, integration of CEU-eligible sessions into existing events, and outreach efforts to highlight the economic and animal welfare benefits of certification.

Operation management is a key concern for livestock producers, particularly in areas such as feed management, labor limitations, and herd productivity. Extension can build on existing offerings by developing workshops and resources that address core management topics such as nutrition, recordkeeping systems, and cost-effective herd health protocols. Reproductive management remains an important part of this, but future programming can also incorporate broader operational tools that help producers optimize their resources, improve herd performance, and adapt to changing conditions. Extension currently offers programming such as the biannual Hands-on Artificial Insemination Clinic (https://extension.arizona.edu/artificial-insemination-clinics-v-bar-v-ranch), which contributes to producers' reproductive management strategies. Additional programming in this area could further support producers by addressing more advanced or specific reproductive topics. These efforts aim to provide meaningful, alternative solutions that strengthen livestock operations and promote long-term sustainability.

Given the complexity of managing livestock on public lands, with collaboration from other Extension faculty, educational efforts can be tailored to improve understanding of key range management topics, such as plant identification, forage evaluation, and range monitoring protocols. Additionally, Extension is well-positioned to serve as a neutral facilitator, helping producers navigate interactions with government agencies that oversee public land leases, an essential component of cattle production in the region.

Interest in new technologies such as virtual fencing reflects a growing desire for sustainable, forward-thinking solutions. Extension can respond by hosting demonstrations and field days and partnering with researchers and technology providers to pilot new tools. Vaccine schedules, nutrition, record keeping, and biosecurity are all herd health topics Extension can provide education on in the future to meet this need. Artificial Insemination (AI) is a reproduction technology that has gained traction in the recent past. By using collected bull semen, producers are able to enhance their genetics without the need of purchasing and maintaining a bull. As stated above, UA Extension provides a biannual hands-on clinic covering the ins and outs of AI. Innovations like virtual fencing are also gaining attention, representing a growing interest in technology-based practices.

While cattle are the primary livestock raised in Yavapai County, survey responses indicate that producers also manage goats, poultry, equine, and other small stock. This presents an opportunity for Extension to expand its programming to these additional species. Future efforts

Figure 14. Goats. Photo Source: Adobe Stock

may include workshops focused on health, nutrition, and management practices specific to small stock, as well as, educational resources for youth involved in 4-H and FFA projects. Online materials such as fact sheets and videos can also be developed to support producers working with non-cattle livestock. These efforts will ensure that Extension programming remains relevant and available to the full spectrum of livestock producers in the region.

Survey responses indicate a strong preference for in-person, hands-on learning. Future workshops will be designed as mainly half-day events, incorporating field demonstrations, peer learning, and interactive components. Moderate registration fees can help enhance the quality of these experiences by supporting more outside speakers, provide greater hands-on experiences through demonstrations or models, and can make the workshop environment more enjoyable with snacks and refreshments. Taking this information into account, workshops will be planned mainly for a half day (3-4 hours) with some occasional full day clinics (6-7 hours) in a more quality, hands-on or in the field type setting.

By building on these insights, the Yavapai County livestock program can continue to grow in relevance and impact, supporting producers with practical, research-based solutions that strengthen operations and promote long-term sustainability.

Conclusion

Through this study, meaningful connections have been established within the community by meeting livestock producers, engaging with industry groups, and gaining firsthand insight into local operations. The findings from this assessment will guide Extension in developing relevant programming that supports both the profitability and sustainability of livestock production in Yavapai County.

Key areas for future focus include promoting BQA certification, strengthening operation management education, and introducing practical tools and technologies. Extension also has the opportunity to support producers in navigating public land use and to broaden programming to reflect the variety of livestock species raised in the region. By aligning future efforts with the priorities identified in this report, Extension can continue to provide meaningful education to producers and contribute to the long-term success of livestock operations across the county.

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