Kansas women in agriculture

by

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ABSTRACT

Women have long worked on farms and ranches, although recognition of women involved in agriculture has only become more common in recent years. In the 2017 Census of Agriculture, changes were made to define a producer on a farm. This change allowed for greater recognition of women involved in farming. Kansas saw an increase in female producers involved in agriculture with the change. This study utilizes a survey sent out to women in agriculture who participated in a four-week financial series by K-State Research and Extension. The goal of the survey was to learn more about who these women were, what they wanted to learn, and how they wanted to learn. The results of the study can be used to design programming that will better meet their needs and make them more successful.

Survey results were analyzed and summarized to learn more about women in Kansas agriculture. Questions were asked relating to the demographics of the women followed by their employment, work they do on the farm or ranch, what decisions they are involved in on the farm or ranch, and what type of learning experience they are most interested in. Using USDA data for women in Kansas and comparing that information to the survey results gave an idea of the validity of the sample and similarities.

Women were able to select the programs that were of the most interest to them.

There were 20 options to choose from and women could select as many as programs as they wanted. This information was then compared for the top four categories based on education, compensation, and main occupation. After comparing the top categories tables

were created showing the most selected program types based on the main occupation of the respondents whether they were on the farm or ranch or involved in another occupation.

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CHAPTER I: INTRODUCTION

In the early spring of 2020, K-State Research and Extension hosted a four-week series focused on educating women in agriculture. The series was designed to cover financial management on the farm/ranch and was extremely timely considering the challenging years in the agriculture economy. There were thirty-two locations spread across the state of Kansas, allowing opportunities for attendance of women across the entire state (Peter 2019). Not only did these classes offer educational information but they provided a meal, networking, and the ability for women of different agriculturally related backgrounds to spend time together sharing experiences.

In 2017, the USDA revised how it collected information on farm decision makers and those involved in the farm. This new approach caused changes in the number of farm producers and more specifically female farm producers. With this change in data collection we saw an increase of 27% in female producers, and the number of farms with female producers increased by 23% (USDA 2019). According to the USDA, "the term producer designates a person who is involved in making decisions for the farm operation. Decisions may include decisions about such things as planting, harvesting, livestock management, and marketing. The producer may be the owner, a member of the owner's household, a hired manager, a tenant, a renter, or a sharecropper. If a person rents land to others or has land worked on shares by others, he/she is considered the producer only of the land which is retained for his/her own operation. The census collected information on the total number of male producers, the total number of female producers, and demographic information for up to four producers per farm" (USDA, National Agriculture Statistics Service 2017, 19).

By reading and understanding the definition of a producer per the USDA, it helps to know who these women are, and what they are contributing to the farm. This 2017 update seems to be bringing more recognition to women who are producers on the farm.

While there was an increase in female producers in Kansas, little has been studied or is known about them. The USDA statistics tell us demographically about who they are and gives us an idea of the types of farms or ranches they work on as well as the decisions they are involved in. What USDA data does not tell us, is the level of education of these women, all the roles they play on the farm, and whether or not they would like to be more involved in the decision making process on the farm. As we see an increase in female producers involved on the farm one thing that is hard to measure is if they would feel comfortable being the main decision maker if they needed to fill that role and are not currently.

Kansas women were asked to select classes from a list that would be of the most interest to them. This selection helps us understand what areas women are most interested in learning about. Additionally, there was a question asking how women would prefer to learn. Since there is an array of ways classes can be taught and hosted the goal was to find out what would be most appealing to the women.

Recognizing that Kansas women are contributors in the agriculture economy and provide value to farms across the state makes it worthwhile to learn more about these individuals. Much of this is foundational information to get to know more about the women in Kansas agriculture. As we learn more about these women, and their needs and roles on the farm more programming can be created to continue to bring value to Kansas farms and ranches.

CHAPTER II: BACKGROUND AND LITERATURE REVIEW

2.1 Background

K-State Research and Extension drew attention to women in Kansas agriculture by hosting the farm financial series for them in 2020. Women in agriculture have been a less recognized group in the past, but this program was designed to help women who are doing financial management and record keeping. Each weekly class included a meal, online video session, interactive learning, and networking between the women. This gave women the opportunity to meet others in the same geographic areas they were from or other women who may be doing similar work involving agriculture. The ability to share solutions to different problems and learn how others accomplish tasks was just one benefit to the class being held in person. While growth in knowledge was the primary focus of these classes the opportunity to network was an added benefit.

The author of this thesis was able to attend the classes hosted by K-State Research and Extension. The primary motivation behind going was networking with different women in the area. Learning more about these women's concerns, challenges, and the work they do brought to light the important role they play on the farm. Recognizing how there women support their farm or ranch so that it continues to operate led to the idea of wanting to learn more about them.

Much of our understanding of women's role on the farm comes from data collected by the USDA. With the USDA changing its definition of producer there was a nationwide increase in female farmers and Kansas also saw that. Kansas currently has 32,682 female producers as of the 2017 census data and there are 19,337 women who are listed as principal producers (USDA, National Agricultural Statistics Service 2017b). Male

producers on Kansas farms number 63,670 with 57,356 being considered principal producers (USDA, National Agricultural Statistics Service 2017a). The numbers easily spell out there are more male producers on Kansas farms, but women are still an important part of Kansas agriculture. By seeing that there are women involved, it highlights the importance of having learning opportunities specifically designed for them as well.

The K-State Research and Extension Vision Statement is as follows "K-State Research and Extension is committed to expanding human capacity by delivering educational programs and technical information that result in improved leadership skills in the areas of communication, group dynamics, conflict resolution, issue analysis, and strategic planning that can enhance the economic viability and quality of life in communities." As more data supporting women's involvement in agriculture comes to light it seems that more programming should be available, focusing on the needs of women and the decisions they are making at the farm level. Understanding what these women in Kansas are needing is the first step in being able to serve them better. Making sure they have the relevant tools to make themselves successful whether they are the primary operator or a part of the farm decision making team. By offering the financial farm series K-State Research and Extension began to fill a void in programming that was needed for women in the state of Kansas. Although this opportunity provided a good starting point, there is the challenge of figuring out what women want and need to learn more about. The need to learn more about who these women are and what they want to learn is an area of research that is limited at this time. By completing a survey with some of these individuals the goal is that they can become a better known and served population.

There must be balance when offering these programs and tools to women to make sure their male counterparts are also still getting needed resources. While it may be easy to focus on just what women need during these times many are working with families or husbands on the farm. When looking at feedback from the women in ag financial surveys there are multiple mentions of how this information could also benefit their spouses (My Personal Action Plan 2020). As we saw in the study "Meeting the Extension Needs of Women Farmers: A Perspective from Pennsylvania" women often feel more comfortable in other groups of women to learn tasks. However, there are times that topics should be covered for everyone involved in the operation. For the purpose of this thesis, we will solely focus on the needs of Kansas women in agriculture.

Women in agriculture are a group that has not been widely researched so when creating a survey there were a limited number of examples to look through. The American Farm Bureau Foundation in 2019 launched a survey for women. Their survey was more focused on women in leadership, but they were willing to share their survey and this helped with ideas for relevant information to gather (Farm Bureau n.d.). Creation of this survey was a matter of figuring out what information would be beneficial to learn about Kansas women in agriculture. The goal when writing the survey was to build a foundation of information about women in Kansas. With this information we can learn more of who women in Kansas agriculture are and what they want to learn. From there, new programs can be designed. Knowing this basic knowledge will help K-State Research and Extension gain an idea of what is needed across the state.

2.2 Literature Review

In the 2017 Census of Agriculture the definition of who could be identified as a producer on a farm was changed. The wording now recognizes "a producer as someone

involved in making decisions for the farm." This change in recognition led to more people being considered producers. In 2017, 3.4 million producers were identified which was an increase of 6.9%. There was a 1.7% decrease in male producers while female producers increased by 27%. Female producers now totaled 36% of all farmers. Female producers tend to be most involved in daily decisions and record keeping tasks (USDA 2019).

K-State Research and Extension offered a program in 2020 called "Farm Financial Skills for Women in Ag." Now that data is showing more women active on the farm, K-State Research and Extension is recognizing the lack of available opportunities to women and the need for women to gain skills in the roles they help with on the farm. This program focused on finances and their importance especially in a tough agriculture economy. This series of classes was offered to women across the whole state of Kansas and featured a live online presentation of materials and in person learning covering farm financial topics.

Meals were provided so that not only could women learn together but have the opportunity to network. (Peter 2019)

There are a growing number of women in America who are farmers and ranchers. American Farm Bureau Federation (AFBF) recognizes the fact that these women can be powerful advocates for modern agriculture. Farm Bureau offers programs focused on growing women into leaders for the field. In March of 2019 AFB launched a survey for women involved in agriculture from the farm or ranch to an agricultural business. Of the women surveyed 96% had at least one member of the household working outside the home. When asked about leaders in the agriculture industry 91% of the women agreed or strongly agreed there should be more women. Of the women surveyed, 98% felt that they had the

skills, knowledge, and experience to fill these roles. (Farm Bureau n.d.). Women are continuing to fill the roles in both agriculture and rural communities.

As the number of female farmers continues to grow, there poses another question:

"Is Research and Extension providing targeted education programs to help women succeed?" Educating female farmers is often internationally viewed as a crucial part in improving women's lives, but with a growing number of women working as farmers there is little research to indicate if women farmers in the United States of America are getting the educational resources they need. There was a research survey put together with the Pennsylvania Women's Agricultural Network, which was founded in 2003, to get a better idea of the educational needs of women and what ways would be most comfortable for them to learn in. According to their study, women seemed to prefer if the learning setting was composed of mainly women, was interactive and also allowed networking. There is a feeling that women are not taken as seriously as men when they are farming, and it leads to women feeling there is a greater struggle for them to have a successful business. Extension programs recognizing and providing tools to women is one more way for women to continue to grow in the agriculture field. (Babercheck, et al. 2009)

"Women's participation in farming is as varied and diverse as the kind of operations they run." (Korb n.d.) Determining a women's contribution to the farm can be a challenge for researchers, especially since the 2000s when data collected for USDA surveys changed to reflect what women are doing on farms and ranches. Farms owned primarily by women do tend to be smaller in size and therefore typically have lower sales. Of the farms that women are involved in 20% to 27% of them are likely to be inherited by the women (Korb n.d.). This means that many women farmers maybe older when they are

running the farm and have had a previous career. Despite the fact that women may inherit the farm, new entrants still make up a majority of women farmers (Korb n.d.).

CHAPTER III: SURVEY RESULTS FOR KANSAS WOMEN IN AGRICULTURE

After creating the survey it was sent out to the email distribution list created from the "Farm Financial Skills for Women in Ag" which consisted of 618 participants. The survey was available to participants from 1/28/2021 - 2/21/2021. The survey link and survey information were emailed out twice to Kansans who participated in the "Farm Financial Skills for Women in Ag" workshop series. There were 166 responses to the survey leading to a response rate of 27% from the email distribution list. The responses were analyzed for the results below.

3.1 Demographics of Survey Participants

The workshop series was offered with a focus on women in Kansas agriculture but it was available to anyone who wanted to participate. There were 164 females, 1 male, and 1 person who preferred not to answer their gender that completed the survey. Considering the class was focused on women, it was expected most responses would be from female participants. The goal for this project was to focus on members of Kansas and 165 of the 166 participants in the survey were from Kansas. All those who completed the survey were used in the summary statistics as the program was open to participants just focused on women. For the purposes of this thesis since the focus was on women further text will refer to women and females even though all responses were used in the summary statistics.

Female veterans in Kansas who are involved in farms or ranches make up 1.8% of the responses to the survey (Table 3.1). When comparing this data to the 2017 Agriculture Census for Kansas we see the USDA recorded 1.2% of female producers in Kansas had served in the military (USDA, National Agricultural Statistics Service 2017d). While

slightly different questions the numbers give us an idea of the female, farmer population that have been in the military.

Table 3.1: Kansas Women in Agriculture who are Veterans

Veterans	Number of	Percentage of
	Responses	Responses
No	158	95.2%
Yes	3	1.8%
No Answer	5	3.0%

Survey participants were given the choice to respond with what race they were. The options for race that were available are as follows: American Indian, Asian, Black or African American, Hispanic, Native Hawaiian, Native Alaskan, White, or other. Twenty respondents chose not to select an answer but those responses that were selected are in Table 3.2.

Table 3.2 Race of Kansas Women in Agriculture

Race	Number of	Percentage of
	Responses	Responses
White	144	98.6%
Hispanic	2	1.4%

When looking at the 2017 Agriculture Census data for Kansas we see that producers of Hispanic, Latino, or Spanish Origin were not included as race but as a separate selection. There were four hundred and eighteen women that identified with those characteristics out of the 32,682 responses. According to the USDA, 1.3% of Kansas producers are of Hispanic, Latino, or Spanish origin which is similar to the number received in response to the survey, where 1.4% of respondents identified with the same characteristics. White producers made up 98.3% of the female producers on the 2017 Agriculture Census for Kansas and in the survey, data collected they made up of 98.6% of

responses. For perspective, on the USDA data there are only 1.7% of female producers in Kansas who selected a race other than white (USDA, National Agricultural Statistics Service 2017d).

Looking at the graph of age ranges (Figure 3.1) there is a good representation of participants from the survey in each age category. The USDA 2017 Census data is broken into different age ranges. If women in Kansas agriculture were to be surveyed again making those age ranges match between this survey and USDA would create better data to compare. Of note though from the survey is the fact that the 50 – 70 year old range accounts for 48% of the responses and when looking at the age range of 55 – 74 for the USDA Agriculture Census data those participants compromised 51% of responses (USDA, National Agricultural Statistics Service 2017d).

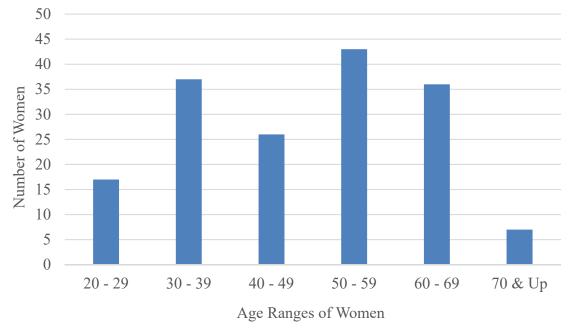


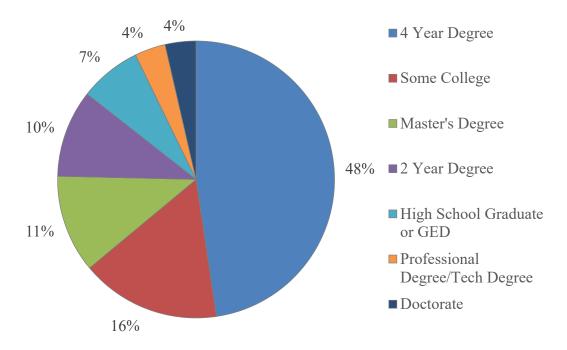
Figure 3.1 Age of Kansas Women in Agriculture

Looking at this pie chart (Figure 3.2) women involved in agriculture in Kansas are clearly individuals who value their education. For the respondents to the survey 48% have a

bachelor's degree. When looking at the United States Census information for the education level for Kansas residents 25 years old and up they show that 33.4% of residents have a bachelor's degree or higher (United States Census Bureau n.d.). For those women that completed this survey 63% of them had a bachelor's degree or higher. Women in Kansas Agriculture are a group of women that value their education.

To see women in agriculture valuing their education leads one to believe that women may be interested more programs adding to their skills. That does bring up one concern though with these numbers. Since the survey was sent to individuals who were wanting to learn and better their abilities at farm finances, they may have been individuals who value education higher than the whole population of Kansas women in agriculture.

Figure 3.2 Percentage of Women in Kansas Agriculture's Education Levels



3.2 Employment and Income for Women in Kansas Agriculture

Figure 3.2 shows the percentage of levels of education for Kansas women in agriculture. This graph shows us the number of responses in each category and what they do with those degrees whether on or off the farm or ranch. 60 of the 166 respondents in Kansas agriculture that completed the survey hold a job that is something other than just working on the farm, ranch, or agriculture business. Including agribusiness makes it so that 86 of the 166 responses hold jobs besides just farming or ranching. These jobs have a wide variety from bankers, teachers, healthcare workers and many other jobs. Women on Kansas farms and ranches are involved in both the farm or ranch and in other careers.

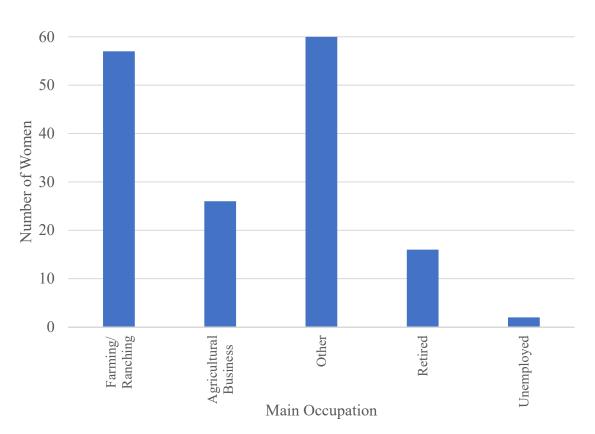


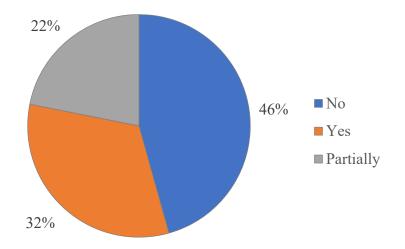
Figure 3.3 Primary Occupations of Women in Kansas Agriculture

Figure 3.4 examines women who are involved in some way on the farm or ranch.

Those individuals not involved on farms or ranches were able to select "Do not live on a

farm/ranch." By doing that we can see from the data many women are actively helping on the farm or ranch, but they are not compensated. Compensation was not defined on the question so technically this could include non-monetary compensation such as farm products or housing. This graph highlights the fact that we have many women participating in agriculture who are not compensated for what they do. The concern with this is getting a true representation of the contribution women are making while participating in agriculture. Compensation can often be away that we see a reason to count someone's involvement so if they are not compensated, they may not get credit for their contribution. There were 54% of the responses that marked they do receive some type of compensation for what they are contributing to the operation. So over half do receive something for the work they are doing on the farm or ranch.

Figure 3.4 Percentage of Women Compensated for Work on the Farm



As we saw in previous data many women involved in a farm or ranch also had an off the farm job. In Figure 3.5 we can see that only 29 of the 166 responses have 100% income come from the farm. All the categories though show representation from women in them. The highest category is 1% – 24% with 34 responses of the 166 women who answered the survey. Women in farming and ranching fall into many different categories of what their household income looks like. Most farm or ranch operations are unique and how they operate can vary. This data shows that many may have different ways of operating their farm/ranch and providing an income for their family.

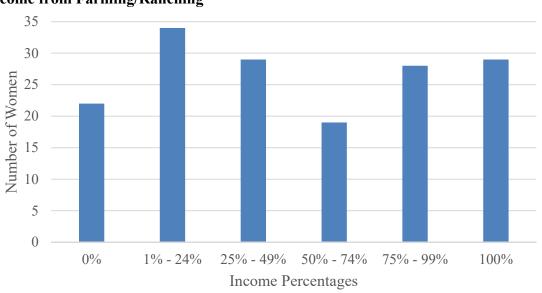


Figure 3.5 Number of Women in Kansas Agriculture whose Percentage of Household Income from Farming/Ranching

3.3 Kansas Women in Agriculture on the Farm or Ranch

Women can become involved in farm or ranches in many ways (Figure 3.6). Some may marry into the farm, start their own, inherit, or work alongside family. One of the questions asked was when their involvement in the farm began. There was a wide range of answers from those involved only a year to one person who had been involved in the farm

or ranch for seventy-three years. This illustrates the wide variety of experience and knowledge that women have when involved in farms and ranches.

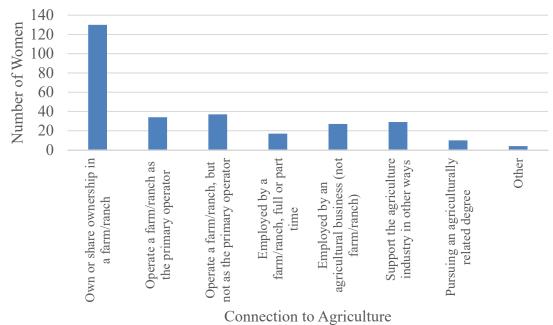


Figure 3.6 Number of Kansas Women's Connection to Agriculture

Women play many different roles in agriculture. Some own, operate, or share ownership while others support the agriculture industry in other ways. Others that attended the class are more indirectly involved or hoping in the future to start their own farm. 34 of the 166 participants marked that they were the primary operator. This means that 20% of those completing the survey run their own operation.

Survey participants were asked to mark all types of decisions they were involved in on the farms. While there is representation in each category record keeping is the largest category, with 130 of the 166 participants selecting it meaning 78% of survey participants are involved in record keeping. On the 2017 Kansas Agriculture survey 75% of women marked they were involved in record keeping and/or financial management (USDA, National Agricultural Statistics Service 2017d). While the USDA survey combined the two

categories there is still a strong presence of women doing the record keeping on the farm.

One interesting note is that the survey sent out to these women found more women involved in making livestock decisions while the USDA Census of Agriculture found more women involved in crop/land use decisions.

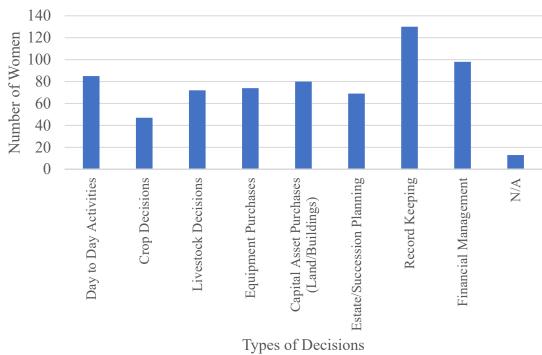
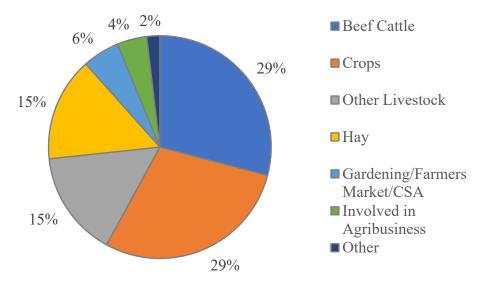


Figure 3.7 Types of Decisions Kansas Women are Involved in on the Farm

Kansas women in agriculture are most involved in beef cattle and crop farming as can be seen in (Figure 3.8). According to the 2017 Agriculture Census data for farms with female producers 31% of women are involved in farms with beef cattle. Crop farms where any of the producers are female according to the 2017 agriculture census data show 29% of females involved with this farm type (USDA, National Agricultrual Statistics Service 2017c). While we see a 2% higher number of females involved in beef cattle than in the 2017 agriculture census shows, feedlots were not separated from the group in the data collected for this survey. It is interesting to note that we see 29% of women involved in

crop farming for both the agriculture census data and the survey done with a smaller sample. Followed by the category of other livestock. Contained in this category of other livestock are: Dairy Cattle, Horse, Goat, Sheep, Poultry, and Swine. Participants in the survey were able to pick all categories that applied to their operation. Survey participants that selected other listed agritourism, growing Soilganix, hunting, and individual sales of pork and beef.

Figure 3.8 Percentage of Types of Farms or Ranches Kansas Women in Agriculture are Involved In



An overwhelming number of women are involved with bookkeeping on the farm Figure 3.9. The sample that was surveyed was involved in the workshop that was hosted for the skills of bookkeeping but as seen in previous data and the USDA data this is an area that women seem to be highly involved in. Animal care is the next highest category. As we see in Figure 3.4 though 29% of women were involved in beef cattle and 15% of women were involved in other livestock.

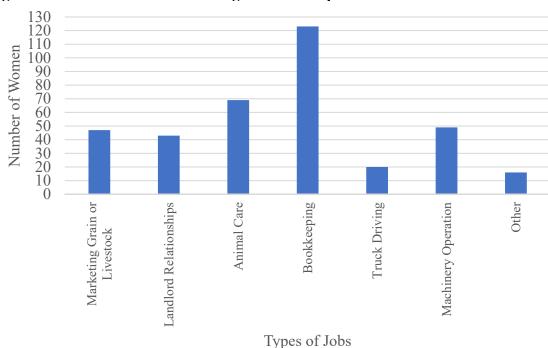


Figure 3.9 Jobs Women in Kansas Agriculture Help with on the Farm or Ranch

An overwhelming number of women are involved with bookkeeping on the farm. The sample that was surveyed was involved in the class that was hosted for the skills of bookkeeping but as seen in previous data and the USDA data this is an area that women seem to be highly involved in. Animal care is the next highest category. As we see in Figure 3.4 though 29% of women were involved in beef cattle and 15% of women were involved in other livestock.

Crop and pasture acres listed in Table 3.3 to provide a farm size metric. The livestock count included all livestock on the farm or ranch. It was not divided out by the different species.

Table 3.3 Kansas Women in Ag Average Acres and Livestock

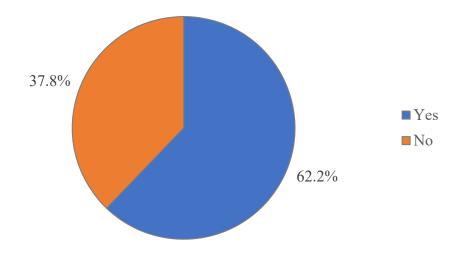
Category	Averages
Crop Acres	1757
Pasture Acres	972
Livestock Head*	262

*Outlier data was removed from the livestock average

3.4 Kansas Women in Agriculture's Involvement in Farm or Ranch Decisions

Kansas women in agriculture play many roles on the farms and ranches they are involved. 62.2% of women would like to be more involved in decision making on the farm or ranch. Those who responded "Yes" were asked to answer a follow up question about what they felt was the largest obstacle to being more involved.

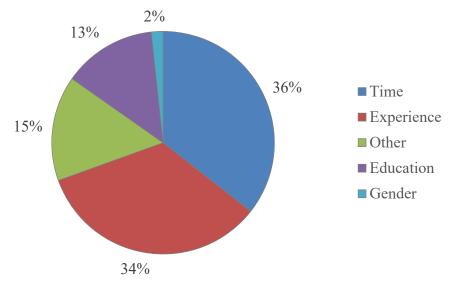
Figure 3.10 Would Kansas women in agriculture like to be more involved in management decisions on the farm or ranch?



Time is the largest obstacle to women being involved in more decisions on the farm or ranch. In Figure 2.3 we can see that 86 of the respondents are involved in agribusiness or other jobs. With many of them holding off the farm jobs having the time to also be a part of farm decisions could be a challenge. Experience is the next largest category. If women are busy at another job or running the household, having the time to be involved or to get the experience they need to be more involved in making farm or ranch decisions maybe a

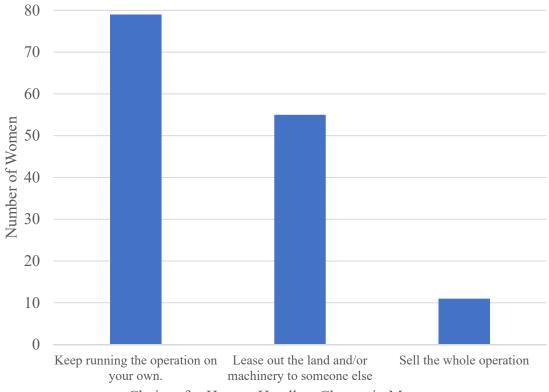
challenge. Other responses were being busy with another job, caring for children, or living too far away to be involved. Women not being as involved in decisions because of gender is still a stigma that some deal with today when dealing with farm members; however, this was only reported by 2% of respondents.

Figure 3.11 What is the biggest obstacle for that Kansas women in agriculture being more involved on the operation?



There were 145 responses to the question of what women in Kansas agriculture would do if their spouse died or was unable participate in management by choosing one of the three selections: keep running the operation on your own; lease out the land and/or machinery to someone else; sell the whole operation. Seventy-nine of the survey respondents indicated they would keep running the operation accounting for of 54% of the responses. Considering that we have learned many of these women work off the farm currently, the result of many choosing to run the farms was surprising. While 38% would lease out the land and/or machinery to someone else to do the farming. Only 11 individuals or 8% of those who responded to the question would choose to sell the whole operation.

Figure 3.12 What would women in Kansas agriculture do if their spouse died or was unable to participate in management?



Choices for How to Handle a Change in Management

3.5 Kansas in Women Agriculture Educational Presences

As we have learned Kansas women in agriculture are a group of women who value education and want to learn. This led to wanting to know more about what they wanted to

learn. By knowing what areas most interested them programming can be designed that is most relevant to their interest.

Table 3.4 Programming of the Most Interest to Women in Kansas Agriculture

Program Type	Responses
Keeping Records	74
Estate Planning	74
QuickBooks	71
FSA Programs	71
Grain Marketing	68
Tax Laws	68
Tax Prep	66
Financial Management Skills (Budgets, Income Statements, Cash Flow)	61
Livestock Marketing	56
Available Technology Products (apps for phone or software for computer)	53
Animal Care	51
Farm Stress Management	40
Agriculture Laws	40
Microsoft Programs (Excel, Word, & PowerPoint)	37
Animal Handling	36
Agriculture Policy	35
Mechanical Skills	30
Building Relationships	26
Global Agriculture Economics	26
Contract Negotiation Skills	23
Other	4

Participants were given a list of twenty options to choose from. They were able to pick as many listed options as they felt were relevant and an "Other" box was also available for any programs that maybe desired but were not available to select. While four respondents selected "other" there was only one suggestion left. The suggestion left was for a class or program on establishing markets for produce and specialty crops. In a world of agriculture that has been changed because of Covid-19 some marketing of products has changed and information on the subject could be relevant. Also, women may be more

interested in niche type products and learning how to market those to the interested consumers.

There were one thousand ten different options selected by participants. The top two selected options were record keeping and estate planning. When looking at the results from Figure 3.9 above its easy to see that book keeping is a task that many women are responsible for. Estate planning has been an important topic in agriculture for years and continues to be one. Especially with growing concerns over tax laws and an aging farmer population.

QuickBooks being one of the next two highest selections of programs women are interested in makes sense as many of these women are working on keeping records.

Keeping accurate and useful records helps with decision making and planning on the farm.

Tools such as QuickBooks can help women with the work they are doing already. Learning best methods or how to operate QuickBooks though could be intimidating and many would prefer to learn the ins and outs of the program at a class.

QuickBooks and FSA Programs both received seventy-one responses. Learning the intricacies and availability of programs that are offered to the United States of America to farmers seems to be something that many would like to learn more about.

Grain marketing is one of the two next highest categories on the list. The field of grain marketing is a challenge with the global nature, speed of information, and the lasting effect prices can have on the bottom line of a farm. The perfect competition of the industry means that most farms are going to be price takers of where the market is at. Women maybe better positioned to sell the grain than male counterparts but often have not been involved in the grain marketing for the farm. As with anything that someone takes care of and raises there

can become an emotional attachment which creates this feeling of needing to get the highest price for the grain. An individual not raising the crop but involved in the farm can look at the situation objectively from break evens and needed cash flows to be able to make a better and/or timelier decision compared to someone waiting for the highest price.

Tax law and tax prep are the next two categories. Tax law did have two more responses than tax prep but both categories were highly selected categories. Knowing how to best do taxes and making sure they as producers do not make costly mistakes can be beneficial for farms and/or ranches in Kansas.

Financial management had 61 responses from the group. The group that was surveyed is one that had just participated in a four-week program on the subject. While the class taught many concepts, it seems there may still be a need for more programs like this to cover content again or have more in-depth explanations and examples.

Livestock marketing was the next most popular category. Learning how to understand markets can involve contracts, seasonality of markets, and trends that happen in certain geographical areas. Additionally, there are some markets that could be considered more niche such as custom processed livestock, as well as marketing for animals like sheep and goats.

Whether it's using a Google Sheet, an app to keep track of livestock birthdates, a place to check grain prices, or an app that allows a farmer to check on equipment maintenance there are many apps or websites to help farmers. Knowing about all the apps and their functionality can be a challenge to stay current on. Often learning about these apps and how to use them can help simplify lives and increase efficiency.

Every category had a response in it from farm stress management to contract negotiation skills. There is an interest to learn from those who responded to the survey.

The previous question helped us learn more about what Kansas women in agriculture wanted to learn. The setting of those programs though and how they are taught can make an impact on people's willingness to attend. Looking at Figure 3.13 women would definitely attend hands on events. Many people know they learn best by doing so by offering classes that present them the best way for them to learn make them more willing and likely to attend.

Classroom setting was the next most popular option. While respondents had the ability to select online or recorded series there is value in being in the classroom. At home or in the office there may be others as distractions but in the classroom there is the ability to have immediate dialogue or to ask questions. This feedback can often help clarify understandings so that the knowledge can be absorbed and used effectively.

There was a question on the survey if they "Would Definitely Attend" if it were only women and 31% of respondents answered they would. Many of these class types could be offered as women only events but it is interesting to see that women maybe more comfortable learning when only their gender is present.

Results for virtually, recorded series, and on other women's farms all received similar responses of whether an individual would choose to attend for sure.

It interesting to see that online presentation within class networking and presentation received the lowest amount of would definitely attend responses. This described the format for the four-week farm financial format. It's interesting to see that only 26% of participants would attend after just having been through that format.

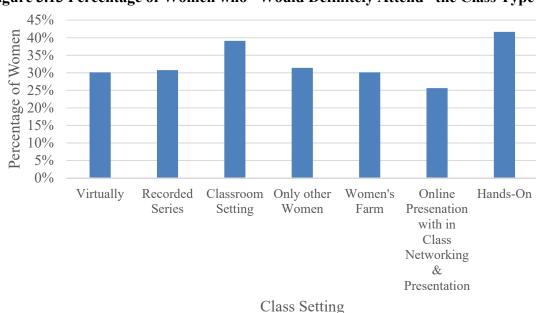


Figure 3.13 Percentage of Women who "Would Definitely Attend" the Class Type

Figure 3.14 shows all the different learning styles and the number of people who would prefer to attend that class type. On the "Would Consider Attending" option it's interesting to see the range of answers is only eighteen from the highest to the lowest. The two highest categories are "With Only other Women" and "Online Presentation with in Class Networking and Presentation." The response to being with only other women option seems to be more of an indication that women would feel more comfortable being with just other women. While "Online Presentation with in Class Networking and Presentation" class type of learning was the least popular option to what people would for sure attend, one hundred one participants felt this was an option they would consider attending making it one of the most popular options. The option that got the most responses of what women would not attend is recorded series. While recorded series allow flexibility when someone views them, they do not offer interaction with either classmates or the instructor. The type

of classes had only six participants marked they would not attend were hands-on or events with only other women.

Figure 3.14 Results for all Class Types and the Number of Response of Who Would Attend

Type of Class	Virtually	Recorded Series	Classroom Setting	With Only other Women	On other Woman's Farm	Online Presentation with in Class Networking & Presentation	Hands-On
Would Definitely Attend	4	7 48	61	49	47	40	65
Would Consider Attending	9:	3 87	83	101	92	101	85
Wouldn't Attend	10	5 21	12	6	17	15	6

CHAPTER IV: ANALYSIS OF EDUCATIONAL PROGRAM PREFERENCES 4.1 Comparisons of Selections of Four Most Selected Categories

The data provided by the survey allow for analysis of the characteristics of Kansas women and how those characteristics are correlated with different educational preferences. The first characteristic examined was education level of survey participants. The results of a cross-tabulation between education and preference for educational program is shown in table 4.1. The preference for keeping records was distributed among educational attainment categories as follows: less than high school (0%), high school graduate (13.5%), some college (13.5%), professional degree (1.4%), 2-year degree (10.8%), 4-year degree (45.9%), Master's degree (9.5%), and doctorate (5.4%). These distributions do not change much for the remaining three programs selected.

Table 4.1 Percentage of Women interested in Four Most Selected Type of Programs based on Education Level

	Four Highest Selected Program Categories			
Levels of Education	Keeping	Estate	QuickBooks	FSA
Levels of Education	Records	Planning		Programs
Less than High School	0.0%	0.0%	0.0%	0.0%
High school graduate or GED	13.5%	9.5%	12.7%	14.1%
Some college	13.5%	17.6%	19.7%	14.1%
Professional Degree/Tech Degree	1.4%	2.7%	2.8%	2.8%
2 year degree	10.8%	10.8%	7.0%	12.7%
4 year degree	45.9%	44.6%	43.7%	40.8%
Master's Degree	9.5%	8.1%	8.5%	11.3%
Doctorate	5.4%	6.8%	5.6%	4.2%

Another cross-tabulation considered in this analysis is the preferences for different programs based on main occupation of the participants. In Table 4.2 for those involved in farming/ranching, a greater percentage selected FSA Programs than other categories. For those involved in agribusiness their highest percentage was Estate Planning. Those

participants of the survey whose main job is off the farm are most interested in learning about QuickBooks.

Table 4.2 Percentage of Women interested in Four Most Selected Type of Programs based on Main Occupation

	Four Highest Selected Categories			
D.: O	Keeping	Estate	QuickBooks	FSA
Primary Occupation	Records	Planning		Programs
Farming/Ranching	28.4%	32.4%	33.8%	35.2%
AgBusiness	20.3%	17.6%	12.7%	15.5%
Non-Ag/Other	51.3%	50.0%	53.5%	49.3%

When looking at just the participants who marked farming/ranching as their main occupation the categories they were most interested in were tax law, available technology, and grain marketing. When designing future educational programs for women in agriculture, the preferences of those whose primary occupation is farming or ranching much be considered relative to those who work off the farm. There are significant differences between the two types of women when asked about their educational preferences.

Survey participants were asked if they were compensated for the work they did on the farm. The responses they could select were yes, partially, no, or do not live on a farm/ranch. Table 4.3 shows the percentages of women who were interested in each program. Women who marked "Yes" they were compensated for the work they did are most interested in learning about FSA Programs. Those that are "Partially" compensated for the work they do are most interested in keeping records. Women who marked "No" to being compensated are both most wanting to learn about record keeping and QuickBooks. Again, educators developing programs will want to consider differences in women and

their role on the farm/ranch when deciding how best to provide information for new knowledge.

Table 4.3 Percentage of Women interested in Four Most Selected Type of Programs based on Compensation

•	Four Highest Selected Categories			
Compensation for Work on the	Keeping	Estate	QuickBooks	FSA
Farm/Ranch	Records	Planning	~	Programs
Yes	21.6%	25.7%	28.2%	31.0%
Partially	28.4%	24.3%	21.1%	21.1%
No	45.9%	43.2%	46.5%	40.8%
Do not live on a farm/ranch.	4.1%	6.8%	4.2%	7.0%

4.2 Most Selected Types of Program Based of Main Occupation

Kansas women in agriculture fill many different roles. Some work mainly on the farm/ranch while some women may have other jobs and help support the farm when they are not at work. When looking at the data for the types of programs women are interested in there are some differences in the types of programs that were highest selected by those whose main income is from the farm/ranch or if they have a job off the farm. Table 4.4 shows us those women whose main occupation is farming or ranching and what they are most interested in learning about. Table 4.5 show us those women whose main occupation is not farming or ranching and what they are most interested in learning about.

Women who work on the farm/ranch (Table 4.4) as their main occupation are most interested in learning about tax laws, grain marketing, and available technology products. When the results for all women were combined (Table 3.4) record keeping was one of the highest categories. Looking at the data in Table 4.4 though there are different needs for those women on the farm/ranch as a main occupation. Depending on what type of audience K-State Research and Extension is wanting to reach certain types of programs may interest different women.

Table 4.4 Kansas Women in Agriculture whose Main Occupation is Farming/Ranching

Program Type	Responses
Tax Laws	27
Grain Marketing	26
Available Technology Products (apps for phone or software for computer)	26
FSA Programs	25
Agriculture Laws	25
Estate Planning	24
QuickBooks	24
Tax Prep	24
Keeping Records	21
Livestock Marketing	20
Agriculture Policy	19
Animal Care	18
Financial Management Skills (Budgets, Income Statements, Cash Flow)	17
Farm Stress Management	15
Microsoft Programs (Excel, Word, & PowerPoint)	15
Global Agriculture Economics	13
Contract Negotiation Skills	13
Animal Handling	12
Mechanical Skills	12
Building Relationships	7
Other	2

Women whose main occupation is not working on the farm/ranch are most interested in learning about keeping records, estate planning, and QuickBooks. The results for the top categories match those that are in Table 3.4. The interest of this group of women is more focused on record keeping than those whose main occupation is farm/ranch. When creating programs for this group of women the skills they are most interested in learning about is different than those whose main occupation is farming/ranching.

Table 4.5 Kansas Women in Agriculture whose Main Occupation is Not Farming/Ranching

Program Type	Responses
Keeping Records	51
Estate Planning	50
QuickBooks	48
FSA Programs	47
Financial Management Skills (Budgets, Income Statements, Cash Flow)	45
Grain Marketing	42
Tax Prep	42
Tax Laws	41
Livestock Marketing	36
Animal Care	33
Available Technology Products (apps for phone or software for computer)	28
Farm Stress Management	25
Animal Handling	24
Microsoft Programs (Excel, Word, & PowerPoint)	22
Building Relationships	19
Mechanical Skills	18
Agriculture Policy	16
Agriculture Laws	15
Global Agriculture Economics	13
Contract Negotiation Skills	10
Other	2

Women in Kansas agriculture come from different education levels, occupations, and may or may not be compensated for the work they do. When designing programs those different factors can affect what programs they are most interested or skills they are most interested in learning more about. Knowing this information of what programs are most wanted for the groups main occupation can help know who the most likely audience can be expected.

CHAPTER V: CONCLUSION

This study is motivated by the need to know more about Kansas women in agriculture. After exploring different literature sources, it has become clear that in general women in agriculture in the United States of America have been studied very little in regards to what they want to learn and how they want to learn.

Raw data from the survey was able to be compared to USDA data. By looking at percentages compared to what the USDA data had reported for Kansas women we can see the sample for this survey was representative of those women in Kansas. Learning about their ages, experience, race, types of operations, and what they were involved in showed us more about who these women are. That led to being able to learn what they are responsible for on the farm, what decisions they make, and what obstacles they still face today as women in agriculture.

One main focus of the study was learning more about what women wanted to learn and how they would prefer to learn about it. Women were given twenty different options to choose from and could select as many classes as they felt were of interest to them.

Knowing what most women feel they need to learn about helps to give an idea of what type classes might be the most highly sought after if offered. Not only is it knowing what they want to learn but how they want to learn the information. In a world moving to a post Covid-19 time period lots of ways of learning have changed as more online platforms are being used. Despite having all these ways to learn the most popular choices for Kansas women in agriculture were having programs in a classroom setting and hands-on. Learning what women most want to learn and how they want to learn can help focus on programs that are of the highest interest to women.

Women in Kansas agriculture are an educated group of women. As we see an increase in their recognition from the change in definition of what a producer is on a Kansas farm, it is time to provide them with the tools they need. Whether these tools are classes about taxes, finances, animal care, or how to better build landlord relationships we have information now to lay a foundation of what these women want to know. Having studied more about these women its now more than guessing and thinking we know what they need and want. This basic information allows us now to create programs to begin to build greater women in Kansas agriculture.

WORKS CITED

- Babercheck, Mary, Kathryn Brasier, Nancy Ellen Kiernan, Carolyn Sachs, Amy Trauger, Jill Findels, Ann Stone, and Linda Moist. 2009. "Meeting the Extension Needs of Women Farmers: A Perspective from Pennsylvania." *Journal of Extension* 1-11.
- Farm Bureau. n.d. *Women's Leadership: Empowering Women to Become Powerful Advocates for Agriculture*. Accessed January 21, 2021. https://www.fb.org/programs/womens-leadership-program/.
- Korb, Penni. n.d. Women Farmers in Transition. 2004 Family Farm Report, Economic Research Service/USDA.
- 2020. *My Personal Action Plan*. Excel, Manhattan: K-State Research and Extension. Peter, Mary Lou. 2019. *K-State Research and Extension News*. November 18. Accessed January 16, 2021. https://www.ksre.k-state.edu/news/stories/2019/11/farm-finanical-skills-for-women-in-agriculture.html.
- United States Census Bureau. n.d. *Quick Facts Kansas*. Accessed March 6, 2021. https://www.census.gov/quickfacts/fact/dashboard/KS/EDU685219.
- USDA. 2019. "Publications." *USDA NASS.* April. Accessed January 16, 2021. https://www.nass.usda.gov/Publications/Highlights/2019/2017Census_Farm_Producers.pdf.
- USDA, National Agricultrual Statistics Service. 2017c. "Table 57. Female Producers Selected Farm Characteristics: 2017."
- USDA, National Agricultural Statistics Service. 2017a. "Table 46. Male Producers: 2017."
- USDA, National Agricultural Statistics Service. 2017b. "Table 47. Female Producers: 2017."
- USDA, National Agricultural Statistics Service. 2017d. "Table 58. Female Producers Selected Producer Charactistics: 2017."
- USDA, National Agriculture Statistics Service. 2017. Appendix B. General Explanation adn Census of Agriculture Report Form.

APPENDIX A

Kansas Women in Agriculture Survey

Start of Block: Default Question Block				
Q1 Please indicate your gender.				
\bigcirc	Female			
\bigcirc	Male			
\bigcirc	Prefer not to answer			
Q2 Is Kansas your primary residence?				
\circ	Yes			
\bigcirc	No			

Q3 what is the highest level of school you have completed or highest degree you have received?			
\bigcirc	Less than High School		
\bigcirc	High school graduate or GED		
\bigcirc	Some college		
\bigcirc	Professional Degree/Tech Degree		
\bigcirc	2 year degree		
\bigcirc	4 year degree		
\bigcirc	Master's Degree		
\bigcirc	Doctorate		
Q4 Whi	ch age range do you fit into?		
\bigcirc	19 & under		
\bigcirc	20 - 29		
\bigcirc	30 - 39		
\bigcirc	40 - 49		
\bigcirc	50 - 59		
\bigcirc	60 - 69		
\bigcirc	70 & Up		
\bigcirc	Prefer not to answer		

)5	What year	did your involvement in agriculture begin?
	\bigcirc	1940 or before
	\bigcirc	1941
	\bigcirc	1942
	0	1943
	\bigcirc	1944
	\bigcirc	1945
	0	1946
	\bigcirc	1947
	\bigcirc	1948
	\bigcirc	1949
	\bigcirc	1950
	\bigcirc	1951
	\bigcirc	1952
	\bigcirc	1953
	\bigcirc	1954
	\bigcirc	1955
	\bigcirc	1956
	\bigcirc	1957
	\bigcirc	1958

	1979
\cup	19/9

()	1999
	1777

\bigcirc	2019		
\bigcirc	2020		
Q6 Race - Op	otional		
\bigcirc	American Indian		
\circ	Asian		
\circ	Black or African American		
\circ	Hispanic		
\circ	Native Hawaiian		
\circ	Native Alaskan		
\circ	White		
\circ	Other		
Q7 Are you a Veteran?			
\bigcirc	Yes		
\bigcirc	No		

Q8	Q8 What is your connection or role related to agriculture? (Mark all that apply)		
		Own or share ownership in a farm/ranch	
		Operate a farm/ranch as the primary operator	
		Operate a farm/ranch, but not as the primary operator	
		Employed by a farm/ranch, full or part time	
		Employed by an agricultural business (not farm/ranch)	
		Support the agriculture industry in other ways	
		Pursuing an agriculturally related degree	
		Other	
Q9	What is yo	our primary occupation? (more than 50% of your work hours)	
	\bigcirc	Farming/Ranching	
	\bigcirc	Agricultural Business	
	\bigcirc	Retired	
	\bigcirc	Student	
	\bigcirc	Non-Agriculture Job (Please indicate job below.)	
	0	Other	
	\bigcirc	Unemployed	

Q10 Are you compensated for the work you do on the farm/ranch?			
\circ	Yes		
\circ	Partially		
\bigcirc	No		
\bigcirc	Do not live on a farm/ranch.		
Q11 How muc	ch of your total household income comes from farming/ranching?		
\bigcirc	0%		
\bigcirc	1% - 24%		
\bigcirc	25% - 49%		
\bigcirc	50% - 74%		
\bigcirc	75% - 99%		
\bigcirc	100%		
Q12 Would you like to be more involved in management decisions on the farm or ranch?			
\bigcirc	Yes		
\bigcirc	No		
Skip To: 013 If V	Not involved on a farm or ranch. *Nould you like to be more involved in management decisions on the farm or ranch? = Yes		

Displ	0133	Lain	7)	11004	010
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If Would yo	u like to be more involved in management decisions on the farm or ranch? = Yes
Q13 If you an in managemen	swered yes, then what is the biggest obstacle to you becoming more involved at decisions?
	Time
	Education
	Experience
	Gender
	Other Reason

Q14 Please select what type of farm/ranch you are involved in. (Mark all that apply)			
	Beef Cattle		
	Dairy Cattle		
	Horse		
	Goat		
	Sheep		
	Poultry		
	Swine		
	Crops		
	Hay		
	Gardening/Farmers Markets/CSA		
	Involved in Agribusiness		
	Other		

Q15 What decisions are you typically involved in for the operation? (Mark all that apply)			
	Day to Day Activities		
	Crop Decisions		
	Livestock Decisions		
	Equipment Purchases		
	Capital Asset Purchases (Land/Buildings)		
	Estate/Succession Planning		
	Record Keeping		
	Financial Management		
	Other		
	N/A		

Q16	What are your main responsibilities on the farm/ranch? (Mark all that apply)			
	Marketing Grain or Livestock			
	Landlord Relationships			
	Animal Care			
	Bookkeeping			
	Truck Driving			
	Machinery Operation			
	Other			
	N/A			
Q17	What is the size of your farm/ranch in crop acres?			
Q18	Q18 What is the size of your farm/ranch in pasture acres?			
Q19	How many head of livestock do you manage or own on your farm/ranch?			

220 What 1	is your average farm net income for the last 5 years?
\bigcirc	Less than \$10,000
\bigcirc	\$10,000 - \$49,999
\bigcirc	\$50,000 - \$99,999
\bigcirc	\$100,000 - \$199,999
\bigcirc	\$200,000 - \$299,999
\bigcirc	\$300,000 - \$399,999
\circ	\$400,000 - \$499,999
\bigcirc	\$500,000 - \$999,999
\bigcirc	\$1,000,000 or more
\bigcirc	Prefer not to answer
	r spouse were to become unable to participate in management of the farming or beration due to an accident or death would you be most likely to:
\bigcirc	Keep running the operation on your own.
\bigcirc	Lease out the land and/or machinery to someone else
\bigcirc	Sell the whole operation
\circ	Not involved in a farm or ranch.

ormation would you like to learn more about to make your job on the farm or asier? (Mark all that apply)
Grain Marketing
Livestock Marketing
Building Relationships
Keeping Records
QuickBooks
Financial Management Skills (Budgets, Income Statements, Cash Flow)
Tax Prep
Tax Laws
Global Agriculture Economics
FSA Programs
Microsoft Programs (Excel, Word, & PowerPoint)
Farm Stress Management
Animal Handling
Animal Care
Mechanical Skills
Agriculture Laws
Agriculture Policy
Estate Planning

Contract	Contract Negotiation Skills					
Available Technology Products (apps for phone or software for computer)						
Other	Other					
Q28 What format for learning would you be most likely to participate in? Wouldn't attend. Would consider Would definitely attending.						
Virtually	0	\circ	0			
Recorded Series	0	\circ	\circ			
Interactive In Person Classroom Setting	0	\circ	\circ			
With Only other Women	0	\circ	\circ			
On other Women's Farms	0	\circ	\circ			
Online Presentation but in group setting to allow networking & interaction.	0		0			
Hands-On	0	\circ	\circ			
End of Block: Default Question Block						