EDUCATING THE FUTURE OF AGRICULTURE: A FOCUS GROUP ANALYSIS
OF THE PROGRAMMING NEEDS AND PREFERENCES OF MONTANA
YOUNG AND BEGINNING FARMERS AND RANCHERS

by

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TABLE OF CONTENTS

1. INTRODUCTION	1
Background and Setting	1
Research Question	6
Purpose of the Study	7
Objectives of the Study	7
Limitations of Study	8
Assumptions.....	8
Definition of Terms.....	9
2. REVIEW OF THE LITERATURE	13
Introduction.....	13
Profile of Young and Beginning Farmers and Ranchers	13
Programming and Needs Assessments for Adult Learners.....	18
Skills and Competencies Needed by Farmers and Ranchers	23
Farmer Education.....	26
YBFR Educational Needs and Programming	30
Maslow's Hierarchy of Needs	34
Summary	39
3. METHODOLOGY	41
Research Design.....	41
Grounded Theory	44
Objectives of the Study	45
Institutional Review Board	46
Screening Process and Participant Selection	47
Instrumentation/Questioning Route	48
Procedure	49
Data Collection	50
Data Analysis	51
Credibility, Transferability, Dependability, and Conformability	53
4. RESULTS OF EDUCATIONAL PROGRAMING NEEDS OF YOUNG AND BEGINNING FARMERS AND RANCHERS.....	56
Participant Summary.....	57
Skills, Competencies, and Needs of YBFR	59
Agriculture Business Management Skills.....	59
Legal Knowledge.....	64

TABLE OF CONTENTS-CONTINUED

Communication Skills.....	66
Production Technologies	70
Educational Programing Preferences Designed for YBFR.....	73
Need for a Networking Component.....	73
Mentorship Program	75
Expanding Experiences.....	77
Positive, Interactive Learning Environment	77
External Programing Factors.	87
Delivery Formats Preferred by YBFR	94
Focus Group One Summary.....	102
Focus Group Two Summary	104
Focus Group Three Summary	107
Grounded Theory	109
 5. DISCUSSION, RECOMMENDATIONS, AND IMPLICATIONS	 113
Key Findings Across Focus Groups	114
Educational Skills, Competencies, and Needs.....	114
Educational Programing Preferences.....	120
Educational Delivery Formats	124
Recommendations for Future Research.....	126
Implications for Educational Programmers	129
Recommendations for Industry Programmers	133
Summary	135
 REFERENCES CITED.....	 136
 APPENDICES	 145
APPENDIX A: Codes.....	146
APPENDIX B: Moderator Guide and Questioning Route	176
APPENDIX C: Participant Profile Page	182
APPENDIX D: Internal Review Board Approval	184
APPENDIX E: Informed Consent Form.....	186

LIST OF TABLES

Table	Page
1. Focus Group Participant Demographics	58

LIST OF FIGURES

Figure	Page
1. Montana Farm Bureau Federation Regional Districts	12
2. University of Wisconsin-Extension Program Logic Model.....	21
3. Maslow's Hierarchy of Needs	35
4. Data Analysis Process.....	56
5. Grounded Theory of Montana YBFR perceptions of Educational Delivery Formats and Program Success	112
6. Modified YBFR Logic Model	130

ABSTRACT

The average age of farmers and ranchers is steadily rising and each year there are fewer young and beginning farmers and ranchers (YBFR) to take the place of those on the cusp of retirement. Therefore, it is critical that YBFR have the skills and competencies needed to be successful. To develop these skills and competencies, educators and program planners must provide information and programs that address the needs of YBFR. This study sought to explain the interaction between the educational drivers, needs, and preferences YBFR in Montana, in order to develop educational programing recommendations.

A purposeful sample was taken from the attendees of the Montana Young Ag Leadership Conference. Focus groups discussions were utilized to gather data on the educational needs, programing preferences, and preferred delivery formats of these YBFR. Constant comparison analysis was used to analyze the data; open, axial, and selective codes were generated and a grounded theory was formed.

YBFR identified four major educational needs; agriculture business management skills, legal knowledge, communication skills, and skills associated with production technologies. The participants attended educational programs to improve themselves and their agricultural businesses, be different than past generations, and have the opportunity to network. Barriers such as distance and lack of awareness prevented them from attending educational events. The YBFR considered educational programs successful if they provided networking opportunities, a variety of relevant content, and a positive, interactive learning environment. YBFR utilized several different delivery formats ranging from email to conferences. Social media was viewed as important for the promotion of educational programs. Longer duration educational events featuring a large amount and variety of information were preferred by YBFR.

Agriculture educators and programmers need to take into account the educational needs and preferences of YBFR when planning educational events. An effort needs to be made to decrease the barriers and increase the positive elements associated with educational programs. The educational needs described by the YBFR must to be addressed in environments that foster interaction and networking. Agriculture organizations and agencies need to collaborate to create comprehensive, impactful educational programs that focus on developing the skills and knowledge of YBFR.

CHAPTER 1

INTRODUCTION

Background and Setting

Agriculture is an ever changing industry; the agriculture of today looks very different than the agriculture of thirty years ago. The percentage of the United States population directly involved in agriculture has continued to decrease since the 1900s. In 1900, 41% of nation's workforce was involved in production agriculture; in 2002, only 1.9% was involved in production agriculture (Dimitri, Effland, Conklin, 2005).

The farmers and ranchers in the field are also changing. Farmers in the United States on average are getting older and the young producers are becoming fewer and fewer (USDA, 2007a). These facts can be disconcerting for many people both in agriculture and those outside of the industry. According to the USDA (2007a), in 1978, the average age of agriculture producers in the United States was reported as 50.3 years. Since that time, the average age of American farmers has continued to rise; the 2007 agriculture census reported an average age of 57.1 years (USDA, 2007a). The 2007 census also reported that the age group of producers 65 years and older was growing at the fastest rate and there was a significant negative change in the number of farmers under the age of 45 years (USDA, 2007a). The increased average age of the American farmer combined with the small number of young and beginning farmers in the United States have brought attention to young and beginning farmers and ranchers (YBFR) development. Government organizations, such as the Farm Service Agency and

Cooperative Extension, as well as nongovernment organizations, such as American Farm Bureau, have written initiatives to address the needs of YBFR (Niewolny & Lillard, 2010; Ahearn & Newton, 2009).

Research has shown that YBFR have greater barriers to entering and sustaining in the agricultural industry than older, established producers. Ahearn and Newton (2009) reported the largest barriers as “high startup costs and a lack of available land for purchase or rent” (p. iii). Beginning agriculture producers have less experience and capital to face known agriculture challenges, such as high land values and elevated production costs. These factors increase the difficulty of breaking into production agriculture (Mishra, Wilson, & Williams, 2009).

Different barriers and experience levels result in YBFR seeking educational programs to meet their specific educational needs and interests. Hall, Knight, Coble, Baquet, and Patrick (2003) indicated that younger farmers and ranchers in multiple facets of the agriculture industry attend more hours at educational programs and are interested in learning different information than older producers. The researchers also found that those producers in the YBFR age group were significantly more likely to attend programs on topics of future options and contracts and animal health than older producer groups (Hall, Coble, Baquet, & Patrick, 2003). Later research by Patrick, Peiter, Knight, Coble, and Baquet (2007) concluded that hog producers also demonstrated these differences. YBFR in the hog industry logged more hours at programs in all topic areas than older producers. Authors in both studies recommended that educational programs focused on the specific needs of YBFR would both increase attendance and effectiveness of outreach

programs (Patrick, Peiter, Knight, Coble, and Baquet, 2007; Hall, Knight, Coble, Baquet, and Patrick, 2003).

Age is not only a factor of how often farmers and ranchers attend programs; age also causes YBFR to have a different set of interests and priorities than older agriculture producers. Adhikari, Mishra, and Chintawar (2009) point out in their research that older farmers are less likely to embrace genetically modified (GM) crops and other newer technologies, while younger producers are more willing to try new GM crops. A study completed in 1998 indicated that YBFR are interested in learning more on the topics of book keeping, commodity markets, soil fertility, and pest management (Trede & Whitaker, 1998). A follow-up study by Trede and Whitaker (2000) reported that YBFR place strong emphasis on continuing education through education and outreach programs. They also found that YBFR preferred a face-to-face learning environment that incorporates hands-on learning and a variety of topics. The researchers also recommended that further research be conducted that explores the educational needs of YBFR in order to develop educational programs that best suit their interests (Trede & Witaker, 2000).

To best discover the needs of YBFR, a look must first be taken into the study of adult learning and education. Knowles (1984) used the word “andragogy” to describe the “art and science of helping adults learn” (p. 52). Knowles outlined six assumptions that need to be considered when planning programs and educational events for adults. In these six assumptions, he addressed the fact that adults need to understand how the information they are learning directly impacts them and that they will place highest value

on education that can directly help them or their situation. Topics and information presented to adults must also be appropriate for their current stage of life and must be taught to their level (Knowles, 1984). In a separate book, Knowles (1980) also relayed the importance of teaching using an adult's previous life experiences to enhance learning. Knowles pointed out that adulthood is very much like childhood in the fact that individuals are not in one constant developmental state but rather develop and change throughout adulthood. Young adults, 18-30 years old, are in a different developmental stage than adults who are considered middle age, between the ages of 30 and 55, and those over 55 years of age are classified into the developmental stage of later maturity. These developmental differences span over all areas of an individual's life and therefore, affect learning in all areas. Young adults seek different educational material in their work roles and personal roles than middle age adults and adults in late maturity (Knowles, 1980).

Merriam, Caffarella, and Baumgartner (2007) sourced many other adult learning theories and models in their book, *Learning in adulthood: A comprehensive guide*. Many of these models and theories collaborated Knowles' assumptions of adult learning and development. Havighurst, in 1972, identified the need for adult education to fit the developmental stage of life of the adult. The life events and tasks of finding a mate, having and raising children, starting a new career, finding a social group, and finding a place in society were identified as significant during early adulthood; the period of life between the ages of eighteen and thirty. Havighurst stated that "teachable moments" occur when the educational topic aligns with the life stage of the individual (p. 5). Early

adulthood was considered by Havighurst to be “of all the periods of life, early adulthood is the fullest of teachable moments” (p. 72).

Erikson (1963) argued that adults develop through stages and life experiences. These developmental stages are not tied to age but are achieved by the accumulation of life experiences and decisions. Based on these life decisions, Erikson divided the developmental stages of adults into eight categories. Each category aligns with a different developmental state and therefore, different life decisions dictate different educational needs (Erikson, 1963).

Levinson, Darrow, Klein, Levinson, and McKee (1978) proposed that adults develop through a series of stable and transitional phases throughout life. In Levinson’s Age-Graded Model, these stages of stability and transition coincide with adult age ranges. Adults transition into adulthood between the ages of seventeen and twenty-two. This transition is then followed by a period of establishing knowledge and stability from the ages of twenty-two to twenty-eight. This stage was defined as young adulthood. Many life changes and decisions occur during this period; career changes, marriage, and a change in communication with parents were identified as life changes during young adulthood. Levinson et al. (1978) referred to the “twenties and thirties” as “perhaps the most abundant and most stressful decades in the life cycle” (p. 337). During young adulthood, individuals have different needs than at other times in their life. Between the ages of 40-45, adults again enter a period of transition. This transition leads adults out of young adulthood and into the next stage of stability between the ages of 45- 60, labeled middle adulthood (Levinson et al., 1978 & Levinson & Levinson, 1996).

Agriculture is no exception to these adult learning principles; YBFR are at a different developmental stage in both their work lives and personal lives than older farmers and ranchers. YBFR are entering into a new career and establishing themselves within the agricultural industry. These characteristics place YBFR into Knowles, Havighurst, and Levinson's young adult categories. As research has shown, as adults age and develop, their educational needs fluctuate and change. YBFR are adults under the age of 35 and are beginning a new agriculture occupation; as young adults, researchers have acknowledged that the group has different education needs than the later in life, older demographic (Knowles 1980; Havighurst, 1972; Erikson, 1963; Levinson & Levinson, 1996; Levinson et al., 1978). As established previously, YBFR also face different barriers than older, established farmers and ranchers. These differences in combination with adult learning and development principles result in the YBFR group having different needs than the average older, established agricultural producer.

Research Question

With the average age of farmers in the United States and Montana constantly rising, and the percentage of YBFR decreasing, it is critical that educational programs are put into place to support the needs of YBFR. It is pivotal that when the older generation of farmers and ranchers retire, there is a new, younger generation of knowledgeable agriculture producers to maintain the agriculture productivity of the nation. Agriculture educators and program planners must ensure that YBFR have access to the educational material that they view as important and valuable. YBFR who are currently involved in

agriculture must have the knowledge and technologies to be successful in production agriculture. The research question addressed in this study was the challenge of designing an educational program to meet the needs and preferences of YBFR: What drives YBFR to seek and attend education programs? What are the perceived educational needs, program design preferences, and preferred information delivery formats of YBFR in Montana?

Purpose of the Study

The purpose of this study was to develop a grounded theory to identify and explain the interaction between educational drivers, educational needs, and programming preferences of YBFR in Montana, in order to develop educational programming recommendations.

Objectives of the Study

The specific objectives of the study were:

1. Assess the educational skills, competencies, and needs of young and beginning farmers and ranchers in Montana.
2. Assess the educational programming preferences designed for young and beginning farmers and ranchers in Montana.
3. Identify the information delivery formats preferred by the young and beginning farmers and ranchers in Montana.

Limitations of Study

The study utilized focus groups to collect qualitative data from participants. All participants were attendees of 2012 Young Ag Leaders Conference (YALC). YALC strives to provide an educational opportunity to interested young people, in the agriculture industry (YALC Planning Committee, 2012). The participants were selected from a list of pre-registered attendees who indicated upon registration that they were currently involved in production agriculture. Limitations of this were that only participants of this conference were included in the focus groups. The study was limited by the knowledge of the YBFR who attended the YALC and participated in the focus groups. The results and implications of this study only directly apply to YBFR in Montana.

Assumptions

All participants completed a short questionnaire and participated in focus group discussions at the conference. It was assumed that participants answered the questions in the questionnaire and focus group honestly and accurately. It was also assumed that the participants understood their needs for additional education. According to Knowles (1984), adult learners learn most effectively when they can identify their educational needs. Past life experiences shape the learning of adults and provide them with the framework to self-identify educational needs. "The more concretely individuals can identify their aspirations and assess their present level of competencies in relating to them - the more exactly they can define their educational needs - the more intensely will they

be motivated to learn” (Knowles, 1980, p. 88). Knowles (1980) also wrote that it is up to adult educators to use various techniques, such as group discussions, to assist adult learners in identifying their educational needs (Knowles, 1980). Focus groups were chosen to allow the adult learners who participated in the study to explore their educational needs and preferences. Krueger and Casey (2000) wrote that focus groups create an environment “that encourages participants to share perceptions and points of view” (p. 4) and self-identify their educational needs. By voicing their opinions and listening to other opinions, participants and researchers involved in the focus group gain a clearer, more concise understanding of educational needs and preferences (Krueger & Casey, 2000).

Definition of Terms

To structure the content and further define the purpose of this study, the following terms were given specific definitions:

1. Young and Beginning Farmers and Ranchers (YBFR): “Beginning farmers and ranchers are identified as those who have operated a farm or ranch for 10 years or less” (Ahearn & Newton, 2009, p. 1). Young Farmers and Ranchers are 18-35 years (Montana Farm Bureau, 2012a). Therefore, YBFR are defined as farmers and ranchers who are age 18-35 and have been operating a farm or ranch for 10 years or less.

2. Older, established farmers and ranchers: For the purposes of this research are defined as those who do not qualify as an YBFR based on the definition above; therefore, older than 35 and have been operating a farm or ranch for more than 10 years.
3. Young Ag Leadership Conference (YALC): YALC is an annual educational conference for young people, ages 18-35, involved in agriculture presented by eight agriculture organizations in Montana (YALC Planning Committee, 2012).
4. Andragogy: The science of teaching adult learners keeping in mind how they learn and their educational needs (Knowles, 1980).
5. Educational need: The difference between what the learner wants to know and what they actually know currently (Knowles, 1980).
6. Delivery format: “Refers to how education and training activities are structured and organized” (Caffarella, 2002, p. 287). Examples include but are not limited to: “individual learning, small-group (face to face) learning, large-group (face to face) learning, distance learning, and community learning” (Caffarella, 2002, p. 287).
7. Management skills: The expertise and abilities needed to run an agriculture business and achieve success as an YBFR (Nuthall, 2010).
8. Competencies: “Characteristics required to achieve a given ideal model of performance... required to become ‘good’” (Knowles, 1980, p. 47).
9. Purposeful sample: “Sampling focuses on selecting information-rich cases whose study will illuminate the questions under study” (Patton, 2002, p. 230). Vaughn, Schumm, and Sinagub (1996) relate purposeful sampling directly to focus groups as, “Procedure by which researchers select a subject or subjects based on predetermined

criteria about the extent to which the selected subjects could contribute to the research study” (p. 58).

10. Western region of Montana: As defined by the Montana Farm Bureau Federation (2012b) as districts 1, 2, 8, & 9. See Figure 1 below for district locations. Montana Farm Bureau Federation districts were used to define regions to increase representation from each area of the state and for convenience purposes as Montana Farm Bureau Federation was the main sponsor of the 2012 YALC where the research was conducted. According to the Montana Department of Agriculture and U.S. Department of Agriculture (2012), land use in this region is split between pasture and crop.
11. Central region of Montana: As defined by the Montana Farm Bureau Federation (2012b) as districts 3, 4, & 10. According to the Montana Department of Agriculture and U.S. Department of Agriculture (2012), land use in this area is predominantly pasture land.
12. Eastern region of Montana: As defined by the Montana Farm Bureau Federation (2012b) as districts 5, 6, & 7. According to the Montana Department of Agriculture and U.S. Department of Agriculture (2012), land use in this area is predominantly pasture land.

Figure 1. Montana Farm Bureau Federation Regional Districts (Montana Farm Bureau, 2012b)

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

This chapter presents the literature pertaining to Young and Beginning Farmer and Rancher education and program planning. The chapter includes (1) Profile of Young and Beginning Farmers and Ranchers; (2) Programming and Needs Assessments for Adult Learners; (3) Skills and Competencies Needed by Farmers and Ranchers; (4) Farmer Education; (5) YBFR Educational Needs and Programming; (6) Maslow's Hierarchy of Needs; and (7) Summary.

Profile of Young and Beginning Farmers and Ranchers

Agriculture has gone through many transformations in the last century. The National Agriculture Statistics Service reported that in 2000, 1.9 % of the labor force was employed in agriculture; this is shockingly lower than the 41 % who worked in agriculture in 1900 (USDA, 2007a). The United States Department of Labor's *Occupational Outlook Handbook* (2012) estimated that between 2010 and 2020, there will be a -8% change in employment of farmers, ranchers, and agricultural managers. This is a large decrease when compared to the 14% employment increase projected overall other industries (United States Department of Labor, 2012). In comparison to all other occupational groups, farming, fishing, and forestry occupations are the only employment groups that are projected to have a negative change in the next decade.

Farmers, ranchers, and agriculture managers are “projected to experience an employment decline of 96,100 between 2010 and 2020” (Lockard & Wolf, 2012, p. 90). These facts alone make many uneasy about the future of agriculture in the United States. This uneasiness is compounded by the fact that the average age of the American farmer, as reported by the USDA (2007a), was 57.1 years old. The farmer age group undergoing the most rapid growth is the group of farmers above 65 years old. Of that group, there are 289,147 farmers over the age of 75 and nearing retirement. On the other end of the spectrum, there are only 54,147 young adults listed in the less than 25 age group category (USDA, 2007a). While the American workforce as a whole is increasing in age, the average age of farmers and ranchers is much higher than the rest of the labor force. The median age of the labor force was 39.3 years in 2000 and 41.7 years in 2010 (Toossi, 2012).

In 2007, the number of farmers in the young farmer category (under 45 years) decreased 14% between 2002 and 2007 (USDA, 2007a). The USDA reported that there were a little over 732,000 farmers under the age 45 in the United States. Of these young farmers, only 38% listed farming as their primary occupation and 81% reported that they worked at least part-time off the farm (USDA, 2007a). In comparison, the younger categories of America’s labor force changed very little in the past decade. Between 2000 and 2010, the labor force of the United States between the ages of 20-24 increased by .5%, the group 25-34 increased by .3%, and the labor force group between the ages of 35-44 decreased by 1.2% (Toossi, 2012).

Montana is no exception to this increase in age of farmers and ranchers; the average age of Montana farmers and ranchers is 55.7 years, among the subdivided group of principal farm operators the average age jumps up to 57.8 years, 6.7%, n=3,094 of farmers and ranchers in Montana are under 35 years old, and 25.2%, n=11,584 are over 65 years old (USDA, 2007b). According to the 2012 Montana Agricultural Statistics, agriculture is Montana's number one industry with the crop production value of \$2.1 billion and a livestock production value of \$1.4 billion in 2011. Receipts from agriculture in Montana outdistance the number two industry, gas and oil, by almost 1.5 billion dollars (Montana Department of Agriculture & U.S. Department of Agriculture, 2012). Agriculture is vital to the state's economy; without young farmers and ranchers to work within this industry, the state stands to lose its number one industry.

The success of agriculture in Montana is not only important for the state's economy, but also to the national economy and national supply of agricultural products. The following statistics were reported by the Montana Department of Agriculture and USDA (2012). Montana ranks number two in the nation in the amount of land in farms and ranchers. The state also ranks second in barley production, third in all wheat production, third in alfalfa hay production, eighth in all sheep and lamb production, and eleventh in all cattle and calves production. Montana ranks number one in the production of lentils and produces over 57% of the United States lentil crop, along with 47% of the nation's edible dry peas, and 40% of all winter peas. In terms of production numbers, Montana agriculture out produces the majority of all other states across many agriculture commodities, including those mentioned above and many others (Montana Department of

Agriculture & USDA, 2012). Without the agriculture commodities produced by Montana farmers and ranchers, the nation's supply of agricultural products, food supply, and economy would suffer greatly. As previously stated, agriculture in the United States and Montana is dominated by older producers, many within retirement age. In coming years, in order to keep agriculture the thriving industry it is today, young and beginning farmers and ranchers need to get involved in agriculture and have the tools to succeed.

Beginning farmers and ranchers are also an important part of American agriculture. The majority of beginning farmers and ranchers are younger than established farmers and ranchers, and account for 25% of agriculture producers in the USA (Ahearn & Newton, 2009). The United States Department of Agriculture, Economic Research Service (2013) reported roughly 22% of family farmers in the United States as beginning farmers. According to the USDA (2007b), in Montana, the average years of experience operating a farm among farmers and ranchers younger than 25 was four years. The average number of years of experience operating a farm was seven years for Montana farmers and ranchers between the ages of 25 and 34 (USDA, 2007b).

Young and beginning farmers and ranchers (YBFR) are found in every area of agriculture production and have a presence in every commodity produced in the USA. Leading commodities among beginning agriculture producers were reported as poultry, dairy, cattle, and cash grains (Ahearn & Newton, 2009). Young farmers and ranchers produced slightly different commodities. Grain and cattle still were also classified as top commodities produced by young producers, but poultry and dairy farmers were not as

prevalent among young farmers and ranchers as they were in the beginning farmer and rancher group (USDA, 2007a).

YBFR face many barriers to entering agriculture and these barriers have contributed to the demographic decline. Ahearn & Newton (2009) considered startup costs to be the main factor that prevents individuals from entering the agriculture industry. Startup costs include lack of land availability, high land costs, and low commodity prices (Ahearn & Newton, 2009). The National Young Farmers' Coalition found that money to use as capital, lack of available land, health care, and credit challenges as the largest barriers to success (Lusher et al., 2011).

The demographics and barriers discussed above have sparked awareness in areas such as adult education and outreach, legislation, and agriculture organizations to meet the needs of YBFR. Early beginner farmer programs date back to the 1990's; however, in recent years, more emphasis has been placed on meeting the needs of YBFR by both governmental and nongovernmental organizations. Governmental organizations, such as the USDA Farm Service Agency (FSA) and Farm Credit System (FCS), have portions of allocated moneys reserved for the purpose of supporting beginning farmers and ranchers (Ahearn & Newton, 2009). According to a 2010 USDA report, the FSA reported \$1.1 billion in direct loan obligations to beginning farmers and ranchers; "that represents more than half of the FSA's total loans and obligations for the fiscal year 2010" (Ahearn, 2012, p. 10).

Niewolny and Lillard (2010) outlined initiatives of various organizations that support education and outreach for YBFR. These initiatives for YBFR education ranged

from building networks among individuals to topic specific programs. In 2009, through the Beginning Farmer and Rancher Development Program, the United States Department of Agriculture (USDA) granted money to organizations and people with the mission of increasing education and outreach to meet the needs of beginning farmers and ranchers (Niewolny & Lillard, 2010). Through competitive grants, the USDA has distributed \$53.5 million to fund educational programs for beginning farmers and ranchers (Ahearn, 2012).

Programming and Needs Assessments for Adult Learners

To best understand how to design educational programs for adults, educators need to understand the principles behind how adults learn. Knowles (1984) used the word andragogy to describe the way that adults learn and how they should be taught to best fit the unique way they learn. From his term andragogy, the following six principles of adult education were established:

1. Learner's need to know. Adults need to see the importance of what they are learning and understand how it applies to their needs. Topics addressed in educational programs must directly relate to the adult learners the program is attempting to reach.
2. Learner's self-concept. Learners need to feel that they are in control of their own decisions and that they have the ability to act independently. It is important that the instructor or programmer values the life experiences of adults.

3. Learner's prior experience. All adults have prior experiences in many facets of life and education. Facilitators need to be aware of how these experiences can impact the educational process, both positively and negatively. Adults appreciate building upon past experiences with new information.
4. Readiness to learn. Adults desire different information at different stages of their lives. They learn best when the educational information coincides with the stage of life they are currently in and when they can see the immediate value of the educational experience.
5. Orientation to learning. When attending educational programs, adults attend with the intent of being able to solve problems with the information presented. Adult learning is orientated around finding solutions to problems in their lives.
6. Learner's motivation. Motivation for adults is both external and internal. Internal motivators, i.e. self-satisfaction or feelings of success, are often more prominent and stronger motivation factors than external motivators, i.e. money or job placement.

The principles of adult education play a large role in the planning of programs and educational events for adult learners. When planning adult programs, the need for the information must be taken into account in order to meet the principles of andragogy. "A cardinal principle of andragogy... is that a mechanism must be provided for involving all the parties concerned in the educational enterprise in its planning" (Knowles, 1980, p. 123). Caffarella (2002) noted that including current educational program attendees in the planning of future programs encourages program acceptance and the program is more

likely to be viewed as a success. Program attendees who are involved in the planning process influence the larger community's view of the program and in turn, encourage non-participants to attend future educational programs (Caffarella, 2002). Therefore, it is important to include the attendees of YBFR programs in the research and planning of future educational programs.

Program development is the complete process of planning, implementing, and evaluating an educational event. Planning involves identifying the needs of the learners and setting goals for the program. Implementation and design involves building the content and organization of the program, from the resources needed to teaching methods to be used. The program planning is concluded by the creation and utilization of an evaluation tool to evaluate the program and see if the goals and needs of the group were met (Seevers, Graham, & Conklin, 2007).

Logic models are used by program planners to visually represent the process of developing the program and connect the objectives to the desired outcomes. Logic models are a tool used to illustrate the process of planning, implementing, and evaluating a program (Seevers et al., 2007). One commonly used logic model was developed by the University of Wisconsin-Extension and is illustrated in Figure 2.

This logic model allows for programmers to easily visualize the connection between the needs, implementation strategies, and the evaluation (Seevers et al., 2007). Taylor-Powell and Henert (2008) explain that a logic model visually represents the flow of the program planning process. It takes program planners from the situation and needs assessment through the outcomes of the program. The three main parts of a logic model

are inputs, outputs, and outcomes of the program. External factors and assumptions also need to be taken into account. Inputs are the resources put into the program. External factors are events or perceptions outside of the program that affect the program.

Assumptions are issues that the planner assumes to be true when planning the program, such as, a programmer might assume that participants know their educational needs and have the skills to express their needs. Outputs are the activities resulting from the inputs and the audience that receives the information. Outcomes represent the future impact of the program and explain how this program works toward meeting the needs established at the beginning of the program planning process (Taylor-Powell & Henert, 2008).

Figure 2. University of Wisconsin-Extension Program Logic Model (Taylor-Powell & Henert, 2008).

Before a logic model can be developed for a program, a needs assessment is often completed by the program planner to identify the needs of a particular population. Carter and Beaulieu (1992) referred to a needs assessment as a, “ process by which an assessment of the current situation in the community is undertaken, value-based judgments regarding the preferred or desired situation are reached, and some determination of the priority status of local needs is made” (p. 1).

There are several methods to collecting data for a needs assessment. The nominal group process is a method by which information is gathered from a small group of people and summarized to reach a consensus (Seevers et al., 2007). Carter and Beaulieu (1992) outline the following steps for the nominal group process: People should be separated into groups of 6 to 20 people.

1. A question referring to the needs of the group is asked and each member writes down their personal idea on a piece of paper.
2. All ideas are then written on a board in front of the class and each participant explains his/her idea.
3. A group-wide discussion is then held to discuss each idea listed on the board.
4. All participants individually prioritize the needs listed on the board.
5. All the priorities of the participants are tallied and a consensus is reached.
6. The final priorities are discussed again by the group.

Van De-Van and Delbecq (1974) developed the nominal group technique and tested the accuracy of the technique against the accuracy of other reliable needs assessment techniques. They found that the nominal group process yielded quality information and

that participants were very satisfied with results of the process. The researchers recommended the use of the nominal group process when small groups can be gathered in one physical location. Recent research has corroborated what Van De-Van and Delbecq found indicating that the nominal group technique is a reliable method for gathering group opinions, needs, and preferences (Graefe & Armstrong, 2011; Harvey & Holmes, 2012).

Skills and Competencies Needed by Farmers and Ranchers

Knowles (1980) wrote that to best identify educational needs adult educators need to be aware of the competencies needed to achieve success within the industry. Competencies were described as, “characteristics...required to achieve a given ideal model of performance... the learner has some vision of the “good” supervisor, the “good” public speaker” (Knowles, 1980, p. 46). Adult learners identify competencies and the need for education arises from the discrepancy of adult’s current level of knowledge and the level of competency they see as adequate. It is important to understand these competencies as they are viewed by researchers, society, and the individual adult learners to design a comprehensive program that incorporates the educational needs and preferences of adult learners (Knowles, 1980). As suggested for adult learners, an understanding of competencies needed by farmers and ranchers is important to identifying educational needs of the demographic. In order to be successful in an industry with large entry barriers and constant challenges, farmers and ranchers need to develop skills and competencies to be successful.

Understanding the decision-making processes and competencies of farmers has been researched for many years. Gasson (1973) provided a framework for studying the goals and values of farmers. In this study, the researcher categorized the goals and values of farmers into four categories: “Instrumental” meaning they farmed for the business and income; “Social” which means they farmed for relationships and social recognition; “Expressive” in which they farmed for personal achievement; and “Intrinsic” they farmed for internal pleasure (Gasson, 1973, p. 527). Gasson found that when farmers were asked to define a successful farmer, farmers with a smaller farm size placed more emphasis on intrinsic values, while larger farmers placed emphasis on business skills and instrumental values (Gasson, 1973).

Walter (1997) found that farmers have a particular vision of what characterizes success. According to this research, a successful farmer is a responsible steward of the land, analytical and keeps accurate records, conserves money and land for future generations, and receives joy from farming while still recognizing it as a business. The author observed that the responses varied between younger farmers and older farmers; suggesting that YBFR may have different views on what defines a farmer as successful (Walter, 1997).

Muhammad, Tegegne, and Ekanem (2004) studied the difference in responses of successful small farmers and less-successful small farmers pertaining to their values, needs, and perceptions of success. “Both groups of farmers responded that hard work, timing, and attention to detail” were key factors in their success (Muhammad, Tegegne, & Ekanem, 2004, p. 8). In the study, more successful farmers emphasized the importance

of record keeping and labor management. Both groups of farmers placed importance on debt management. The study also found that successful farmers desired more education on marketing strategies to build marketing skills and the less successful farmers desired educational programs on record keeping skills (Muhammad et al., 2004). Bone, Henry, Hunt, & Sefton (2003) also found that farmers in the top 20% financially valued business skills and family communications. Recordkeeping and marketing were also important skills for successful farmers. The successful farmers were more confident in their abilities as a farmer and manager; they also sought out new technologies, social interactions, and were more proactive and progressive in their decision making (Bone et al., 2003).

Nuthall (2010) further defined the skills needed to be a successful farmer and identified 11 competencies possessed by prosperous farmers. Several of these competencies focus on the business side of farming. These competencies are risk management, anticipation, planning, implementation, solutions, and analysis. Observation, negotiation, learning from experience, people skills, and an understanding of technology were also listed as skills and competencies that successful farmers possess. These critical skills and competencies provide farmers with ability to adapt to change in the current situation and formulate plans for future agriculture endeavors (Nuthall, 2010). Nuthall (2010) recommended that the competencies of successful farmers and ranchers be added to the content taught at educational programs to improve management and success of farmers and ranchers.

Farmer Education

Identifying the needs of farmers and ranchers is essential to the success of educational programs. Researchers across many disciplines within agriculture, from agriculture economics to risk management analysis, to agricultural education and agronomy, have researched farmer and rancher educational needs and preferences. Adults participate in educational programs to achieve outcomes that relate to their current situation and to solve problems in their lives (Knowles, 1984). Research published in 1993 showed that farmers and ranchers who attended farm management workshops perceived skills relating to financial planning and evaluation, tax management, predicting the future of input costs, outlook of agriculture, and soil fertility as their highest ranking needs for education (Carter & Batte, 1993). Ten years later, Joerger (2003) indicated that farmers in a business management program attended in order to learn the skills to decrease costs and increase profit, maintain accurate farm records, understand farm analysis reports, and develop management tools, such as cash flow and income statements. Through a focus group study of farmers across 12 states, educational needs of employee management, marketing, estate planning, and financial skills were identified (Eberspacher & Jose, 2005). A more recent study of Michigan farmers showed that farmers viewed their needs to be greatest in the categories of “business, bookkeeping, and marketing skills; sustainable farming practices; management and care of livestock and animals; and chemicals and fertilizer” (Suvedi, Jeong, & Coombs, 2010, p. 6).

Fetsch, Bastian, Kaan, and Koontz (2001) compared the risk management education needs of farmers in Colorado to farmers in Wyoming. Producers, in both

states, ranked education pertaining to tax management and legal strategies, estate planning, and family relationships as their greatest needs. The authors point out that these needs were quite different from the traditional risk management educational needs such as markets and financing. Therefore, educators should keep in mind that as educational needs of farmers change, the curriculum and program topics should also change.

When planning programs for all ages and experience levels of farmers and ranchers, educators need to take into account how farmers learn and the educational styles viewed as most effective. Just as Knowles (1984) described the importance of past experiences when educating adult learners, research has shown that farmers also have mental models that not only attribute to how they run their farming operation, but also how they view education. Eckert and Bell (2005) found that values and experiences influence how farmers view agriculture. The way a farmer thinks about agriculture, his/her mental model, impacts and directs the information seeking process and the actions taken on the farm. The researchers recommend that educators must take into account that each farmer is unique and that his or her mental model dictates the needs and should be taken into account when planning educational programs. In a later paper, Eckert & Bell (2006) expand on the implications of farmers' mental models. They argue that education builds on the existing mental model increasing one's overall knowledge and understanding. Mental models can also be altered by an event that causes the farmer to re-evaluate his/her mental model. This change results in a modification of the learning model possessed by the farmer. The researchers recommend that educators provide

opportunities of experimental and problem-solving education to appeal to the majority of farmers. They also urged educators to use the existing knowledge and skills of farmers as a building block for programs and focus on not just handing out information, but also provide opportunities for farmers to discover the answers themselves. Programs that included these types of activities were more successful at using farmers' mental models and led to a more worthwhile educational experience (Eckert & Bell, 2006).

Other research has identified that farmers respond best to educational material when it directly impacts their operation. Involving farmers in the planning process is one way to get farmers to "buy into" the program (Chapman & ZoBell, 2008, p. 5). Franz et al. (2010a) reported that farmers like to participate in the program planning process and find programs most valuable when the information deals directly with their needs and employs a problem-solving format. Farmers seek out educational programs that are most likely to result in an increased understanding of new technologies, provide them with tools or information that will save both time and money, or programs that provide an opportunity to socialize with experts and other farmers. Farmers prefer an educational experience to encompass one or more of these attributes (Franz et al., 2010a). This research applies the principles described by Knowles (1984) to the education and development of farmers and ranchers. Through involvement in the program planning process, farmers and ranchers maintain a sense of control over themselves and their education, which was described by Knowles as the importance of self-concept. This involvement in the program planning process also ensures that farmers and ranchers find

the information valuable and applicable to solving problems; two other principles discussed by Knowles.

According to Joerger (2003), participants involved in a farm business management program in Minnesota ranked individual instruction, question/answer discussions, guest speakers, and demonstrations as the most effective teaching styles for farmer education. Participants also valued telephone conversations with an instructor, newsletters, and workshop handouts. Farmers in this study indicated that they attended programs that directly fit their needs and workshops that they could envision a benefit from attending (Joeger, 2003). The producers involved in Eberspeacher and Jose's (2005) focus group study preferred community based workshops that were efficiently presented with unbiased information, trusted speakers, and scheduled during the slower farming seasons. The group also discussed the importance of hands-on learning as an effective form of education (Eberspacher & Jose, 2005). Another study of farmer's perceptions of agriculture programs indicated that they place highest value on hands-on, demonstration, farm visits, and field day learning activities (Franz et al., 2010b). Kilpatrick and Johns (2003) indicated that farmers prefer to learn from other farmers and through networking with other farmers and experts.

Sligo and Massey's (2007) research showed that farmers rely on other farmers and ranchers, as well as printed sources such as newspapers and trade publications for information. Additional research found that beginning farmers rely heavily on family and the Cooperative Extension Service for educational information (Trede & Whitaker, 1998). Howell and Habron (2004) found that agricultural landowners preferred to

receive information through written sources and face-to-face workshops. Their research showed that internet communication channels were not preferred by the farmers/ranchers in this study. However, the analysis showed that younger agriculture landowners had significantly more favorable views of internet communications (Howell & Habron, 2004). A study of older Iowa farmers, average age of 54, found that they preferred multiple formats of educational information communications, but found radio to be the most common and face-to-face consultations as the most useful. They preferred the radio for daily and current information. Face-to-face consultations and demonstrations were preferred to solve problems and deemed reliable. The producers involved in this research had a variety of opinions of Internet communications and education information transmission. Usage of the internet varied from daily usage to total avoidance (Licht & Martin, 2006).

YBFR Educational Needs and Programming

Knowles (1980) discussed that adult learners find information most valuable when it relates to their problems and situation. These problems and situations change as the individual ages and acquires more life experiences (Knowles, 1980). Just as the educational needs of farmers have varied over the past twenty years and as Knowles suggested, the needs of farmers also vary based on the age and experience of the farmer group. Throughout the years, several researchers have identified with the importance of programming to meet the needs of YBFR. In 1987, Martin found young farmers identified the topics of animal health and disease, crop pest and disease, machinery

calibration, and financial planning as critical educational needs (Martin, 1987). Dollisso and Martin (1999) found that young farmers were motivated to attend educational programs by the “ambition to succeed” and a “desire to learn” (p. 42). Young farmers also attended programs where the content was useful and addressed an immediate need. They preferred educational information on increasing profitability, new technologies, and other new, relevant topics (Dollisso & Martin, 1999).

Trede and Whitaker (2000) reported that YBFR in Iowa indicated “record-keeping and management systems analysis, financial and credit planning, and farm markets and marketing strategies” (p. 42) as the most important needs of education among the group. Other topics such as estate planning and dealing with family issues were also ranked high. In another study, Nelson and Trede (2004) indicated the top three most important identified topics for YBFR education were “financial management, record, budgets, and analysis; farm markets, marketing strategies, and pricing; and whole farm planning, long-term decision making, and strategic planning” (Nelson & Trede, 2004, p. 5).

Dollisso and Martin (1999) advised future program planners to involve young farmers in the program planning process to more successfully identify educational needs and motivations of the demographic. Trede and Whitaker (1998) recommended that educators should focus on providing programs to YBFR that address the “business of farming” rather than just the production practices of agriculture.

Trede and Whitaker (2000) concluded that beginning farmers also prefer to learn through experimental and hands-on learning. Beginning farmers perceived problem-

based learning activities to be helpful when used as educational tools. A recent focus group study of Florida Farm Bureau Young Farmers and Ranchers found that the participants frequently used the internet and cell phones as communication channels (Telg & Barnes, 2012). The researchers found that these young farmers and ranchers also used email and social media. While many in the focus groups used social media, there was a concern about the security of social media and it was discussed that social media should not be the sole communication platform utilized to reach young farmers and ranchers. The authors recommended, “Social media used by the organization should supplement existing communication channels... social media is not a fad, but a communication channel that needs to be evaluated and more comprehensively utilized by the organization” (Telg & Barnes, 2012, pg. 63).

One example of a program aimed at meeting the needs of young agriculture producers is *Building Farmers in the West*, a young agriculture program through the Cooperative Extension Service in Washington, Colorado, Idaho, New Mexico, Nevada/Utah, and Oregon, that focuses around business plans and risk management for beginning producers (Washington State University Extension, 2011). According to the Washington State University Extension Western Center for Risk Management Education publication (2011), the program was well received and successful. At the conclusion of the program, 48% of participants had started a business plan, 87% increased their network of farming colleagues, and 90% would recommend the program to other farmers (Washington State University Extension, 2011). Although this seven-state program focuses mainly on the local food movement, the results indicate that programs focusing

on the needs of young agriculture producers are effective ways to increase young producers' knowledge and information network.

Several state specific educational programs and groups for YBFR have also been developed. Iowa State Extension established the Beginning Farmer Center in 1994 to develop educational programs for beginning farmers and ranchers. The center also develops research to assess the educational needs of beginning farmers and ranchers. Since its creation, this organization has developed programs to partner beginning farmers with retiring farmers and planned educational events to meet the needs of beginning farmers in Iowa (Iowa State University Extension and Outreach, 2013).

Another organization that features a young farmer and rancher program is the American Farm Bureau Federation (AFBF). AFBF is a non-governmental organization that focuses on providing a voice for farmers and ranchers and assisting agriculture communities across the country and at the state level through state Farm Bureau Federations (American Farm Bureau Federation, 2012). One unique program within the AFBF is the Young Farmers and Ranchers program, which was established to provide a voice and source of education to young farmers and ranchers. This group focuses on individuals who are involved in agriculture and between the ages of 18 and 35 (American Farm Bureau Federation, 2012). As part of the Young Farm and Rancher Program, the Montana Farm Bureau Federation leads the planning and implementation of the Young Ag Leadership Conference (YALC) in Montana each year in conjunction with seven other agriculture organizations: MT 4-H Foundation, MT Cattlemen's Association, MT Farmers Union, MT Grain Growers Association, MT FFA Foundation, MSU-College of

Agriculture, and MT Stockgrowers Association. YALC is a three day conference open to any young agriculturists (ages 18-35). Each year, the focus of YALC changes based on the interest of the attendees and is organized by a peer group of representatives from each of the sponsoring organizations (Montana Farm Bureau, 2012a). The 2012 YALC held in Great Falls, MT was organized with workshops on “marketing and finance issues, emerging technologies, and leadership development” (YALC Planning Committee, 2012, p. 1). YALC is one example of an educational program focused toward YBFR in Montana with the goals to promote education and networking between YBFR in the state.

Maslow’s Hierarchy of Needs

Maslow (1954) developed a hierarchy of need to describe what people need to achieve satisfaction. Maslow’s Hierarchy of Needs was chosen as the conceptual framework for this study. Maslow’s Hierarchy of Needs was utilized to critically analyze the results and in the synthesis of the conclusions and recommendations of the study. An understanding of YBFR’s needs as they pertain to Maslow’s Hierarchy of Need will assist researchers and educators when designing programs to fit this group. Concepts of adult learning, program planning, and needs assessments were also used to analyze the data collected from this research.

The five aspects Maslow’s Hierarchy of Needs are illustrated in Figure 3. Maslow also suggested that the actual needs at each level of the hierarchy may extend past the examples provided in his research. For this research, the basic hierarchy was

utilized in combination with the literature review of adult learners, farmers, and YBFR educational needs to outline programming recommendations for YBFR.

Figure 3. Maslow's Hierarchy of Needs

The lowest level established by Maslow (1954) is the physiological level. These needs include the basic human survival needs, such as food and breathing. If these basic needs are not met, the individual cares about nothing else and only seeks to satisfy those physiological needs. Knowles (1980) discussed that adult learners need to have their basic physiological needs met in the learning environment. Adults need to have the necessities to survive in order to learn effectively (Knowles, 1980). According to the United States Department of Labor's *Occupational Handbook*, to survive in the farming profession farmers and ranchers need basic analytical, critical-thinking, interpersonal, and machine-operating skills (United States Department of Labor, 2012). Muhammad et al.

(2004) found that to be successful, farmers must work hard, have an understanding of timing in agriculture practices, seeding, harvesting, adding fertilizer, and so on, the time to complete tasks, and be detail oriented (Muhammad et al., 2004). These skills were included in the basic needs of YBFR's because they are essential for success and to progress to the higher levels in the hierarchy to master more complex skills.

When a person's physiological needs are met, they move up the hierarchy and begin seeking safety. The safety level includes needs such as protection from physical harm and freedom to express opinions; safety also includes freedom from stress, financial safety, and job security (Maslow, 1954). In addition to the traditional views of safety as outlined by Maslow, YBFR safety needs may also include financial safety of the farm, feeling of safety in discussions with family members, and the feeling of safety and confidence to learn new skills. Adult learners need to feel safe to express their opinions and actively learn in their environment (Knowles, 1980). Many researchers identified debit management, financial management, recordkeeping, estate planning, and communication skills as critical skills to the success (Nuthall 2010; Carter & Batte, 1993; Walter, 1997; Muhammad et al., 2004; and Bone et al., 2003). These are all skills that focus on making the farm a success and provide financial and career safety for YBFR.

At the next level of Maslow's Hierarchy of Needs, love and belonging, individuals seek relationships and connections with other people. Good relationships with family, social acceptance, and networking were identified by multiple researchers as important needs of YBFR (Trede & Whitaker, 2000; Franz et al., 2010; Fetsch et al., 2001; Gasson, 1973).

Once an individual has reached satisfaction of love and belonging, they move up the hierarchy and begin to seek esteem. Individuals view esteem as confidence and a sense of independence. There is also a level of perceived respect that is needed at the esteem level of the hierarchy. Individuals at this level want to be seen as successful and respected by others (Maslow, 1954). Complex and futuristic skills, such as future pricing of commodities, legal strategies, tax planning, understanding new technologies, and strategic marketing, were identified as important management competencies and educational needs of YBFR (Carter & Batte, 1993; Fetsch et al., 2001; Bone et al., 2003; Nuthall, 2010; & Nelson & Trede, 2004). These needs were included in the fourth level of the hierarchy because they increase the value of the business and the esteem of the individual. Gasson (1973) found that farmers find success in farming through recognition (Gasson, 1973); this need for recognition fit into the esteem level of Maslow's Hierarchy.

The highest level of Maslow's Hierarchy of Needs is self-actualization. Maslow (1954) describes this level of need as, "Musicians must make music, artists must paint, poets must write if they are to be ultimately at peace with themselves. What humans *can* be, they *must* be" (p. 22). Achieving satisfaction at the self-actualization level means that a person has reached his/her potential. The needs at this level include seeking problem-solving skills and skills to help the community/world on some greater level (Maslow, 1954). Adult learners, such as YBFR, seek education that assists them with solving problems and strive for this level of understanding. Self-satisfaction and success were also motivators of adult learners (Knowles, 1980). Gasson (1973) found that farmers

strive to achieve success through business success, personal achievement, and internal pleasure (Gasson, 1973). When the farmer has reached the self-actualization level of the hierarchy, those needs discussed by Gasson (1973) are met. Farmers at this level also have achieved the morality needs discussed by several other researchers; conserving land and knowledge for future generation, handing operation over to next generation, sustainable farming; and experience joy from farming (Walter, 1997; Suvendi et al., 2010).

Maslow (1954) explained that individuals fluctuate up and down on this hierarchy depending on their needs, the period of their life, and their personal security at that time. Variation and fluctuation of need changes on a daily basis and in all aspects of life (Maslow, 1954). People are also not always at just one level of the hierarchy in all areas of their lives. While a person could be quite secure at home and seeking esteem, they might need to be supported through the security threshold when learning a new career skill. It is important that educators take into account the level at which individuals fall in the hierarchy in order to create a stimulating and safe learning environment for adult learners. Individuals within the group may identify at a lower level of the hierarchy than the rest of the group; under these circumstances individual programming may be required to bring those individuals up to the level of the rest of the group (Maslow, 1954).

Birkenholz (1999) stated that Maslow's Hierarchy of Needs "may be especially applicable during adult transitions" (p. 24). These transitions could include life changes such as switching jobs, marriage, and moving into a new home. In this research study, Maslow's Hierarchy of Needs was applied to the life change of starting a farm or

beginning work on an established farm as an YBFR. Birkenholz (1999) also encouraged adult education programmers to be aware of what level the adult learners are presently at in order to reach them at their lowest needs level. By designing programs to meet the specific hierarchy level of the learners, educators encourage participation of the adult learners and provide them with opportunities to move up Maslow's Hierarchy of Needs.

Summary

In summary, a review of the literature illustrated that there is a need in the United States for more YBFR. As the age of the average farmer increases, YBFR need to be available, willing, and capable of replacing the aging farmers' place upon retirement. Research and educational efforts need to support existing young farmers and provide them with the skills to be successful in the future. The need for research addressing the needs of YBFR is crucial. The literature also established that YBFR have different needs, barriers, and attitudes toward education. Education programs need to take into account adult learning principles, programing steps, and learner needs when planning educational programs and workshops for YBFR. YBFR face large barriers to entering and maintaining a level of success within production agriculture. Research supports that YBFR have not only different barriers to entry into the industry but also face different challenges seeking educational opportunities (Luster et al, 2011; Ahearn & Newton, 2009; Mishra et al, 2009; Hall et al, 2003; Patrick et al, 2007). Not only do YBFR face different educational barriers they also have different educational needs, interests, and attitudes toward education than other farmers and ranchers (Trede & Whitaker, 2000;

Dollisso & Martin, 1999; Nelson & Trede, 2004; Telg & Barnes; Hall et al, 2003; Patrick et al, 2007; Adhikari et al, 2009). To develop educational programs and truly assist this group, research must be conducted to understand these differences in interest and need and recommendations need to be developed based on research findings. In light of these differences and the general lack of educational research on the educational preferences and needs of YBFR, the demand for further research is apparent. It is crucial to the future of agriculture that YBFR succeed and are profitable so that they stay in agriculture to replace the older generations of farmers. Therefore, researchers and educational programmers must address the perceptions of education and the educational needs of YBFR and build programs accordingly.

CHAPTER 3

METHODOLOGY

Research Design

The researcher chose a qualitative research design for this study. Merriam (2002) described three important aspects of qualitative research. Qualitative “researchers strive to understand the meaning people have constructed about their world and their experiences” (p. 4). Secondly, within the qualitative research realm, “the researcher is the primary instrument for data collection and analysis” (Merriam, 2002, p. 5). Qualitative research is also “inductive”; using the data collected, the researcher forms theories and concepts (Merriam, 2002, p. 5). The last aspect of qualitative research discussed by Merriam (2002) was that “qualitative inquiry is richly descriptive” (p. 5). To enhance the descriptiveness of qualitative research, quotes of participants are considered pieces of data and utilized to enhance the story told (Merriam, 2002). Qualitative research focuses on analyzing all aspects of a phenomenon as it naturally occurs in human society. The data is collected from people’s experiences and perceptions and used to understand the phenomenon (Denzin & Lincoln, 1998). This study was designed qualitatively to best assess the perceptions and opinions of the participants.

Focus groups were used to gather the qualitative data for this study. Morgan (1998) referred to focus groups as “group interviews” (p. 1). A small group of eight to ten participants are gathered together in a room with a moderator to discuss issues and perceptions. The moderator leads the group through a series of discussion questions and

the group discusses their opinions and perceptions to each of the questions. According to Krueger and Casey (2000), at least three focus groups must be conducted to increase the accuracy of the information gathered. The qualitative data gathered from these groups is then summarized, compared, and contrasted within the group and between groups. This highlights common themes between all the focus groups and leads to a more complex and robust data analysis (Krueger and Casey, 2000).

Morgan (1998) stated that focus groups give participants an opportunity to interact and share opinions. Often times, this group interaction can benefit the research by providing an accumulation of perceptions rather than just a one-way answer that is received by conducting interviews. A researcher uses focus groups when he/she wants to “listen and learn from participants” (p. 10). When participants share information with the group, it gives them the opportunity to engage in feedback with others; this promotes discussion and deeper thought into the issue being presented to the group.

Focus groups have a wide variety of uses ranging from academic research, to market research, to needs assessments (Krueger & Casey, 2000). Morgan (1997) states that there are several guidelines for using focus groups in academic, qualitative research. Guidelines for focus groups include: use a group of “(a) homogeneous strangers as participants, (b) rely on a relatively structured interview with high moderator involvement, (c) have 6-10 participants per group, and (d) have a total of three to five groups per project” (p. 34). Krueger & Casey (2000) noted that another essential component of a successful focus group is the use of a “skillful moderator” (p. 97). Moderators of focus groups are essential to the focus group process and having an

unbiased, skilled, and experienced moderator enhances the quality of the focus groups (Krueger, 1998).

Qualitative researchers and education professionals in the field of agriculture have used focus groups in several different ways. The Northeast New Farm Network (2001) used focus groups to gather information on the needs of new farmers in the New England area. The researchers found that focus groups were an excellent way to gauge the needs of new farmers in specific areas of the region and gave them the tools to develop programs specific to that area. Gustafson (2006) used focus groups to engage and gather needs information from farmers in a risk management education setting. Gustafson found the method to be quite successful at increasing both farmer motivation and feeling of ownership in the program. Trauger, Sachs, Barbercheck, Kiernan, Brasier, and Findeis (2008) used focus groups to gather women farmers' perceptions of gender identity in agriculture. The researchers used focus groups as a way to both engage the participants in the research and a way to draw out complex discussion on issues such as perceived barriers and needs for education.

Focus groups for this research were conducted at the 2012 Young Ag Leaders Conference (YALC). YALC strives to provide an educational opportunity for interested young people in the agriculture industry. The participants were selected from a list of pre-registered attendees who indicated upon registration that they were currently involved in production agriculture. Participants of the focus groups were in agreement with Morgan's (1997) guidelines for focus groups: all were YBFR; participants were not in business partnerships with one another; and, participants had no direct bias towards the

needs and competencies of each other. Therefore, the participants were considered homogeneous strangers; although they were members of the same conference and possible acquaintances, they had no direct ties to each other that would influence their responses during the focus groups. Each focus group was homogeneous with 6-10 participants from a specified region. The state was divided into regions based on the regions used for representation by the Montana Farm Bureau. Providing each region with a separate focus group increased the homogeneous nature of each focus group and provided equal representation from all regions of the state. Three distinct focus groups also aimed to increase the variety of responses and increase the comparative quality of the data collected. Three, hour long focus groups, one per region, were held at three specific times during the three-day YALC.

Grounded Theory

The qualitative data collected from the focus groups was analyzed using a constant comparative coding process to construct a grounded theory. Grounded theory is defined as “a theory that was derived from data systematically gathered and analyzed through the research process.” (Strauss & Corbin, 1998, p. 12) A grounded theory is developed through the analysis and organization of the data collected (Leedy & Ormrod, 2010). Rather than using a theory to explain data, Glaser and Strauss (1967) explain that “grounded theory is derived from data and then illustrated by character examples of data” (p. 5). The grounded theory is developed throughout the entire collection, analysis, and coding process. Grounded theory is formed by drawing themes out of the data and

relating those themes back to the raw data, simplifying, and then relating the codes back to the complexity of the phenomena the theory is seeking to explain (Charmaz, 2006).

As Strauss and Corbin (1998) explained, “Grounded theories, because they are drawn from data, are likely to offer insight, enhance understanding, and provide a meaningful guide to action.” (p. 12). The grounded theory was developed using the constant comparative method described by Glaser and Strauss in 1967. The constant comparative method utilizes coding to break the data into sections and categories. Charmaz (2006) defined coding as “categorizing segments of data with a short name that simultaneously summarizes and accounts for each piece of data” (p. 43). As described by Glaser and Strauss (1967), open, axial, and selective codes were used to organize and analyze the data. The open, axial, and selective coding as well as constant comparative analysis of the data are described in greater detail within the data analysis section of this research paper. The grounded theory in this research sought to explain YBRF’s perceptions of a successful educational program and address the objectives of the study.

Objectives of the Study

The specific objectives of the study were to:

1. Assess the educational skills, competencies, and needs of young and beginning farmers and ranchers in Montana.
2. Assess the educational programming preferences designed for young and beginning farmers and ranchers in Montana.

3. Identify the delivery formats preferred by the young and beginning farmers and ranchers in Montana.

Institutional Review Board

The Institutional Review Board (IRB) for Montana State University evaluates all research proposals that utilize human subjects to ensure that the research is ethical and that the benefits of the research outweigh any harm that could be caused to the individuals participating in the study.

To insure voluntary participation in the focus groups an informed consent form was given to each participant before the focus groups began. This consent form included information about the focus group proceedings, a review of the recording process, and an overview of the incentives provided (Appendix E). The moderator also reviewed these elements with the group prior to the focus group. The consent form described that each focus group session was to be transcribed, audio recorded, and video recorded. The consent form explained that only the researcher would have access to the recordings, all the names of the participants would be changed, and all identifying characteristics would be removed by the researcher. One \$25 dollar gift card was randomly drawn at each focus group as an incentive to participate in the focus group. Smaller door prizes such as hats, coffee mugs, and key chains were also given away as incentives during the focus groups; this was all explained in the consent form. The informed consent form, questionnaire, and the research application were approved by the IRB on September, 24, 2012 (Appendix D).

Screening Process and Participant Selection

The focus group discussions were conducted at the 2012 YALC in Great Falls, MT. A total of thirty people, ten per focus group, were recruited to participate in the study. Twenty-four actually participated in the focus groups. The first focus group was held on Friday, October 5, 2012 and consisted of nine participants. The second focus group was held on Saturday, October 6, 2012 and consisted of six participants, and third focus group, comprised of nine participants, was held on Sunday, October 7, 2012.

Participants were contacted and recruited during the week September 24, 2012-September 28, 2012. Focus group participants were selected from a pool of YALC attendees who upon registration for the conference marked a box on their form indicating that they were currently involved in production agriculture. From this group of attendees, purposeful sample was taken. Individuals in a purposeful sample are identified and selected for a specific reason by the researcher (Leedy & Ormrod, 2010). Patton further described purposeful sampling as “select information-rich cases strategically and purposefully” (Patton, 2002, p. 243). All conference participants who identified themselves as currently involved in production agriculture were placed into a spreadsheet. A key administrator of the YALC conference with insight and knowledge of the conference attendees was utilized to identify from this list participants who met the following research criteria: they were currently involved in production agriculture, either under thirty-five years of age or had been farming or ranching for less than ten years, were from diverse geographical regions, would provide valuable contributions to the focus group discussion, and represented diverse forms of Montana agriculture production.

From this list of participants, ten people were confirmed from each region of Montana: West, Central, and East. The regions were split into three focus groups to add homogeneity to each focus group and ensure equal representation from all regions of the state. A total of thirty participants were recruited. Each participant received a phone call explaining the study and asking for their participation in the focus group. Upon agreement, a profile page and official invitation attach in Appendix C were sent in the email to each participant. The profile page asked a series of demographic questions and two questions relating to educational programing needs to get them thinking about the topic ahead of time. Each member also received a phone call one day prior to the conference as a reminder. A \$25 dollar gift card was given randomly to one focus group member in each group in addition to small door prizes, coffee mugs, hats, key chains, and flash drives, donated by Montana business and organizations.

Instrumentation/Questioning Route

The instrument was developed and peer-reviewed by members of the College of Agriculture faculty to increase the validity and quality of the questions prior to the focus groups. A pilot test of the questions was also performed using the Montana State University Collegiate Young Farmers and Ranchers. According to Krueger and Casey (2000), a pilot test should gather the group's opinions of the questions and use that feedback to improve the instrument. A profile page was also sent to each participant prior to the conference. This page was also peer-reviewed and tested on the pilot group. The pilot group viewed each question and the profile page and based on

recommendations from the group, changes were made to the protocol in the form of clarifying two questions within the instrument. These modifications improved the overall clarity and effectiveness of the questions and the instrument.

Procedure

The focus groups took place during three separate days at the YALC in Great Falls, Montana. The first focus group was held Friday, October 5, 2012. Ten participants were recruited to participate in the first focus group from the western region of the state; nine individuals attended and participated. The second focus group was held on Saturday, October 6, 2012. Ten individuals from the eastern region were recruited to participate in this focus group; six individuals actually attended and participated. The third and final focus group was held on October 7, 2012. The third focus group consisted of nine of the ten participants recruited from the central region. Each focus group was one hour long and the moderator followed the questions developed by the researcher and promoted discussion from everyone in the group. Each focus group began by the researcher explaining the purpose of the focus group. The moderator then gave instructions to the focus group. The first question was asked to make people feel comfortable within the group. The second question utilized a nominal group technique to get the group thinking individually about the educational topics the group perceived as important for an YBFR program. This question also served to increase participation, level of comfort, and critical thinking within the group. Carter and Beaulieu (1992) explained that, “the nominal group process is intended to maximize creative participation

of group members” (p. 5). After the results were gathered from the nominal group technique, other questions were discussed. Topics aimed at gathering the perceptions of the group about what makes an educational program successful and how they would like to see a program organized. Each focus group was concluded with a brief summary by the researcher. As instructed by Krueger (1998), to increase validity, the moderator gathered consensus among the participants in the group by asking if they agreed with the summary, its accuracy, and if they had anything else to add. The participants were then thanked for their participation and given the incentives.

Data Collection

As recommended by Krueger and Casey (2000), data was collected during the focus group with audio, video, and field notes. The researcher took field notes during the discussion to keep track of the discussion and ensure the themes of each focus group were recorded. Field notes included a brief outline of the answers given to the questions, as well as documented when individuals were not participating. A summary of these notes was presented by the researcher to each focus group at the conclusion of the focus group and the participants were asked if they agreed with the summary and a consensus on the summary was reached. Another assistant moderator also took detailed written field notes including individual statements, attitudes, and body language. These field notes recorded the answers to the questions in detail and expressions of the group while discussing each question to increase validity and dependability. This second set of notes was added to the researcher’s field notes after each focus group session. The audio and video were used to

insure accuracy of the data collection process and used later for data analysis and review.

All focus groups were transcribed and coded by the researcher.

Data Analysis

After each focus group, the moderator and the two assistant moderators met for a debriefing led by the researcher. During this debriefing, the main points and themes reached during the focus group were discussed and recorded. The researcher collected the notes from each focus group and then compared and contrasted results and notes collected from other focus groups.

The qualitative data was further analyzed by the researcher using the constant comparative technique developed by Glaser and Strauss (1967). This technique allows for researchers to develop common themes and a consensus with a large volume of qualitative data (Glaser & Strauss, 1967). Holton (2007) described “the purpose of constant comparison is to see if the data support and continue to support emerging categories” (p. 277). Charmaz (2006) defined coding in qualitative research as, “categorizing segments of data with a short name that simultaneously summarized and accounts for each piece of data” (p. 43). According to Strauss (1987), open coding is the initial step of organizing the data collected. Strauss and Crobin (1998) elaborated that through the open coding process concepts or categories are formed from the data that represent the themes depicted in the analysis. After the open coding is completed, axial coding is utilized to compare the large categories to subcategories developed from the data (Strauss & Corbin, 1998). Charmaz (2006) described the process of axial coding as

comparing categories to each other and to subcategories. Axial coding “reassembles the data fractured during initial coding to give coherence to the emerging analysis” (Charmaz, 2006, p. 60). The final coding procedure within the constant comparative analysis is selective coding. Selective coding “integrates and refines the theory” (Strauss & Corbin, 1998, p. 143). According to Strauss (1987), selective coding relates all the themes, categories, and subcategories to a central idea or concept.

The researcher used open, axial, selective codes, and the constant comparative technique described by many researchers to categorize, sort, and compare the data, while developing themes. Ultimately, a grounded theory emerged from the focus group findings (Strauss and Corbin, 1998; Charmaz, 2006, Glaser and Strauss, 1967; Lincoln & Guba, 1985). Each focus group transcript was coded for themes during the open coding process. Then, the themes were placed into categories and given axial codes. As new themes or open codes emerged, they were compared against the existing categories or axial codes created by the researcher and either put into one of the existing categories or a new axial code was made to represent the new theme. The axial codes pieced the data back together that had been separated during the open coding process. These categories were then organized into larger, central concepts and given a selective code. The selective codes further organized the data into more refined categories that were formed during the open and axial coding processes.

Each focus group transcript was individually analyzed through the constant comparative technique. Then, as instructed by several focus group researchers, the data across all focus groups were compared (Morgan, 1988, Krueger & Casey, 2000, Vaughn,

Schumm, & Sinagub, 1996). Across all focus groups, codes, categories, and themes were developed. These themes were then compared and contrasted within the group and between the other focus groups.

From the central concepts formed by selective coding of the individual focus groups and across all focus groups, a grounded theory was developed to describe the educational needs and phenomena associated with education of YBFR. The theory was then applied to the concepts and principles of program planning to develop programming recommendations for educators of YBFR programs.

Credibility, Transferability, Dependability, and Conformability

Validity refers to how accurately the data collected and analyzed represents the current situation and the opinions and perceptions of the participants (Silverman, 1993). Credibility is often used in qualitative research to describe the internal validity of the study. Lincoln & Guba (1985) refer to the credibility of a study as the accuracy of the data collection, analysis, and how well the results represent the actual perceptions of the participants. They also prescribe several methods to increase credibility in a qualitative study. Krueger (1998) also recommended several techniques to increase the validity of focus group studies. This study focused on providing credibility through using multiple methods outlined by Lincoln and Guba (1985) and Krueger (1998). The study utilized multiple techniques to collect the data during the focus groups (i.e. video, audio, and field notes). The researcher also utilized multiple people to record data at the focus group sessions for comparison after each focus group. At the conclusion of each focus group,

the moderator asked for focus group consensus and feedback to insure that what was discussed during the session was representative of the group's perceptions and opinions. Throughout the research process, the study was reviewed by faculty researchers to ensure accuracy and reliability of the analysis process. Prior to the focus groups, the methodology, questions, data analysis, as well as the overall study, was examined for clarity and credibility. Finally, the questions used in the focus group settings were tested on a pilot group of Collegiate Young Farmers and Ranchers prior to the data collection. The pilot group evaluated the questions as recommend by Krueger (1998) to enhance the accuracy and clarity of the instrument and questions.

External validity is referred to as transferability in qualitative research. Transferability is defined as the ability for the data and findings to be applied to other situations and contexts (Guba and Lincoln, 1989). As outlined by Merriam (2002), to increase transferability of a qualitative study, the researcher must provide the information so that others can apply the results in different contexts. Detailed notes were taken by the researcher to increase the transferability of the research. Vaughn et al. (1996) acknowledged that with focus group studies, "although generalizability may not be the goal, it is still possible to attain by conducting multiple focus groups that converge on the same findings" (60). However, Krueger (1998) suggested that within focus group research, it ultimately up to future users of the research to compare the situation and data to different contexts. Krueger (1998) recommended that, "Those who seek to use the results look over the study; examine the procedures, methods, and analysis strategies; and then decide the degree to which the study might be applied to their situation" (p. 70). To

provide for transferability, detailed instructions on the methodology and protocol for replication of the study were recorded (Appendix B).

Dependability is a measure of how well the results represent the data collected and is a measure of reliability in qualitative research (Merriam, 2002). In this study, dependability was achieved by utilizing an audit trail. The audit trail is a process by which the researcher saves all field notes, recordings, and original analysis. The audit trail also included original data, original data analysis, codes, categories, and all themes. As outlined by Lincoln and Guba (1985), another researcher present at the focus groups served as an auditor and reviewed the codes, categories, and grounded theory developed throughout the research process. This auditor assessed each section of the data analysis to ensure that the coded results accurately represented the data collected from the focus groups.

The last measure of trustworthiness, as established by Lincoln and Guba (1985), is confirmability, which refers to a clear explanation of research procedures that can be replicated by others. Confirmability was achieved in the study by providing an audit trail which contained all the raw data, original transcripts, notes on the reduction process, and notes of the outcomes of the data analysis process. Detailed instructions of materials and methods used in preparation and to collect the data were also provided for future researchers.

CHAPTER 4

RESULTS OF EDUCATIONAL PROGRAMING NEEDS OF YOUNG AND
BEGINNING FARMERS AND RANCHERS

In this chapter, the results addressing the research objectives (1) Assess the educational skills, competencies, and needs of YBFR in Montana, (2) Assess the educational programing preferences designed for YBFR in Montana, and (3) Identify the educational delivery formats preferred by YBFR in Montana were discussed. Figure 4 illustrates the data analysis process.

Figure 4. Data Analysis Process.

The transcript from each focus group was analyzed and codes were developed. The open codes were taken directly from the transcripts and organized into axial codes. From the final axial codes, selective codes were constructed. The selective codes were organized into the main themes of the focus groups and applied to the objectives of the study. These selective codes were then utilized in combination with the axial and open codes to create a grounded theory.

Participant Summary

To gain a better understanding of the dynamics of the focus groups in this research study, the participant profiles from each focus group were summarized. Gender, age, years farming, and position on farm are listed in Figure 1 below. Participants were involved in many aspects of production agriculture. Cattle and small grain producers were represented in each focus group. Other more specialized and niche markets of agriculture were also represented; a bison producer, pulse crop producer, sheep producer, and registered seed-stock producer took part in the focus group study. The education level of the participants ranged from high school graduates to bachelor degrees and one participant with a masters degree. Educational degrees primarily focused around agribusiness, animal science, and agricultural operation technologies. Focus group one consisted of nine participants from the western region of Montana. The second focus group consisted of six participants from the central region of Montana. The third and final focus group consisted of nine participants from the eastern region of Montana.

All participants in the study were either under the age of 35 or had been farming/ranching for less than 10 years. At least one participant in each focus group worked another job away from the farm. These careers were all connected to agriculture in some aspect and included Farm Bureau, Farm Service Agency, North West Farm Credit, feed companies, and western manufacturing companies. Many of the participants were involved in family owned and operated operations. Blair and her husband (not a participant) served as managers for a ranching operation with an absentee owner. Derek

was working his way into an agriculture operation through the mentorship of an older, nonrelated agriculture producer.

All members of the focus groups were attendees of the 2012 Young Ag Leadership Conference and voluntarily participated in the focus groups. To protect the identities of the participants, all names were changed and identifying characteristics were removed from the transcripts.

Table 1 Focus Group Participant Demographics

Name	Gender	Age	Yrs. on operation	Position on agriculture operation
Focus Group 1 Western Region				
Jerry	M	31	1	Owner
Samantha	F	24	N/A	N/A
John	M	25	3	Manger/owner
Richard	M	31	5	N/A
Aidan	M	26	3	Part owner/ ranch hand
Harry	M	39	9	Owner/Operator
Charlotte	F	40	9	N/A
Steve	M	29	10	Owner/Operator
Miranda	F	27	N/A	Co-Owner
Focus Group 2 Central Region				
Blair	F	27	5	Ranch Hand – absentee owner property
Lilly	F	23	5	Non-management position on family ranch
Charles	M	34	7	Manager, shareholder
Nate	M	29	8	Ranch hand
Jenny	F	28	8	Ranch hand/secretary
Dan	M	22	N/A	Co-owner

Table 1. Continued

Focus Group 3 Eastern Region				
George	M	22	2	Manager
Derek	M	22	N/A	N/A
Alex	M	21	N/A	Ranch hand
Christina	F	28	0	N/A
Owen	M	32	6	Worker
Mark	M	21	N/A	Son, worker
Bart	M	28	4	Co-owner with family
Louis	M	23	10	President & manager
Lexie	F	27	N/A	Laborer, working into partnership

Skills, Competencies, and Needs of YBFR

The selective codes found that attribute to the skills, competencies, and needs identified in the focus groups were agriculture business management skills, legal knowledge, communication skills, and production technologies. The codes are in a detailed outline found in Appendix A. Each of the selective categories is described below.

Agriculture Business Management Skills

The category of agriculture business management skills consisted of four axial codes that were consistent across all the focus groups: record keeping skills, financial skills, business management skills, and marketing skills. Focus group two also placed strong emphasis on employee management skills, although this code was not found in the other focus groups.

Record Keeping Skills. Each focus group mentioned the need for record keeping skills, including accounting type skills. Emphasis was placed on accounting and record keeping skills needed to help manage expenses, incomes, and decision making on the farm and ranch. In the first focus group, Jerry supported this by saying,

The reality of it is most people who come into farming don't just walk off the street; they already know how to do the work. It's all the side stuff that you don't really realize happens when you're growing up on the farm and the record keeping to keep track of this... where does this go... is this tax deductible... all that stuff that dad sits in the house and does.

All the focus groups felt that they have more expenses, assets, risks, taxes, and other record keeping items to keep track of than previous generations and that they need the skills to do so. These skills included agriculture accounting, enterprise accounting, tax planning, and a basic understanding of record keeping and related programs.

The third focus group expressed the desire for more information on how to make a financial management and risk management plan for their operations. Bart stated, "Helping you figure out on a per acre, per head basis however you do it." George agreed, "We are trying to get into more enterprise accounting... to try and look out further to see what's going to pay and what's not." The other participants echoed these comments and agreed that they need to have the skill set to calculate what decisions are going to be profitable for their business.

Financial Skills. All focus groups placed a strong emphasis on the need for financial skills and the importance of financial management education. The groups focused on understanding loans, having a good relationship with the bank, and understanding financial analysis including profit and loss. In the first focus group, John

expressed that an understanding of finances is critical and a hard concept to completely understand, “Finance is a major part of decision making and if you don’t understand it, it’s quite challenging.” In the third focus group, Owen expressed that more knowledge of finances would help him become a better manager overall, “Really understanding the financial end...would be nice because you are also trying to get the work done and trying to juggle both things, it would be nice for it to come a little more natural.”

The exact level of financial skills varied within and among the focus groups. The first and third focus groups expressed the overall need for greater understanding of finance beginning with basic skills, such as understanding financial statements, balance sheets and income statements. These groups also expressed the need for education on establishing and keeping credit and equity. Miranda, from the first focus group, who also works for a bank that manages farmer and rancher loans, said that she sees a need for education of basic financial skills. Young farmers and ranchers, even those with college education, “can’t fill out a balance sheet, can’t fill out a cash flow plan, have no idea how to market, no plan, nothing in place.”

The second focus group also placed heavy emphasis on financial skills; although they focused on more complex financial skills such as mitigating risks and investment management. However, they too noted on the importance of a solid understanding of the basics. As Charles pointed out, it’s about “going through the finances more than once a year.”

Business Management Skills. A common phrase repeated throughout the focus groups was “running the farm like a business.” Defined by the participants, “running the

farm like a business” meant developing a farm plan, managing liabilities, prioritizing, budgeting, and understanding business management techniques. The third group expressed consensus that agriculture is “not just a lifestyle”, it’s a business and that “you’re there to make money.” Lilly expressed the need for education on business structure in order to protect their ranch from employee grievances and liability lawsuits.

Blair stated:

Farmers and ranchers need to realize that even on their family places the employee is not coming after the family; he is coming after the company...it’s not a personal attack, it’s an attack any other corporate executive would have to put up with... that is why these businesses are structured the way that they are.

The group agreed that education for farmers and ranchers must address management skills such as business structure, employment law, and management training techniques.

The third focus group discussed business management skills and “running the ranch like a business” from a slightly different perspective. This group talked about the importance of looking at the financial management of the agriculture operation and using it to plan for the future. Mark impressed upon the group the importance of looking to past generations for guidance when building business plans. “You have to understand where your operation has come from, where it has been, know where it is now, and where you want to take it... it didn’t get to where it is today by somebody mismanaging it.”

Business management skills were not discussed in great detail in the first focus group. “Developing a farm plan”, payroll, budgeting, and prioritizing were only briefly mentioned in the first focus group.

Marketing Skills. Knowledge of marketing plans and opportunities was discussed across all three focus groups. In the second focus group, Lexie discussed not only being interested in large commodity markets but also niche markets; “You have higher input costs but there are some benefits to it.” In the first focus group, Jenny expressed that the concept of marketing has changed from the previous generation to this generation and that, “Dad didn’t talk about marketing... advertising costs or this sort of thing.” Building marketing opportunities, marketing plans, understanding markets, such as commodity and future markets, and exploring new markets were all educational needs identified by the focus groups.

Employee Management. The second focus group placed heavy emphasis on employee management skills. They emphasized that employees are “hard to deal with.” Trying to find “competent employees” and “indoctrinating somebody who didn’t come from agriculture” into the profession where both major obstacles faced on their operations. Lilly expressed the importance of managing employees as a business, not as members of the family.

You can have the best people in the world working for you, but they are never going to put as much heart...time and effort into the place if they don’t own it. If they don’t see the benefits, if they don’t feel like they are reaping what they sow here.

Blair agreed that employee management and employment law must be factored into the management of every agriculture enterprise, including whether employees are “hourly or salary employees.” She also stressed the importance of a “management training”

program so managers can be aware of the difference between working with family members and non-related employees.

When you're a family ranch, everyone is used to working however long it takes to get it done... your employees are not thinking that way. If you have managers who have never been an employee... it can be tough for them to one, be sensitive and two, sympathize and adjust.

Legal Knowledge

The category legal knowledge was discussed within the first two focus groups as the axial codes: knowledge of laws, government regulations, and farm transition. The third focus group overall contained less discussion on the topics of farm transition and government regulations. The second focus group placed strong emphasis on the importance of the axial code political awareness.

Knowledge of Laws & Government Programs & Regulations. Across the focus groups, the common emergent themes concentrated on tax laws, contract laws, property rights, water rights, government regulations, and environmental regulations. Emphasis was placed on the importance of understanding contracts and contract law. In the first focus group, Jerry stressed the importance of contracts and having a thorough understanding of the legal aspect of leasing property. He expressed to the group that he was currently in a legal dispute with his landlord, "He promised me the moon and like an idiot, I jumped at it because I wanted to farm. And he's old; he's seasoned... just because its family or a friend...you still need to know what you need in a contract."

In the second focus group, Nate said he comes to conferences, such as the Young Ag Leadership Conference, to learn about the "rules they come up with, with labor laws

and all that environmental stuff.” The need for information on topics of new laws and environmental regulations that may affect agriculture production was echoed throughout. Every focus group listed water and property rights as topics of interest. Overall, the third focus group was less interested as a whole in the legal and governmental aspects of production agriculture; only “federal regulation changes and updates” was recorded as a need during the nominal group activity.

The importance of understanding government assistance programs and “not being late for government programs” was discussed in all focus groups. Additionally, several participants from each group indicated on their profile pages that they would like more assistance from government programs for purchasing land and equipment.

Farm Transition. A common topic identified by the majority of people in all three focus groups was estate planning and farm transition information. In the first focus group, multiple participants identified farm transition and estate planning as education needs during the nominal group activity. John described a workshop that he viewed as successful on farm transition and estate planning. “He had some pretty terrible stories of the way farm transitions had went wrong...kind of horror stories that really make you go wow maybe we should actually talk about this with mom or dad.”

In the second and third focus groups multiple participants included farm transition and estate planning as educational needs during the nominal group technique. Bart wrote on his profile page that there is a need for information relating to assisting the “older generation with transitioning the farm as to not burden the younger generation.”

Political Awareness. The second focus group discussed the importance of being aware of the “political aspects” that affect production agriculture. Participants also mentioned that as members of the agricultural community, it is important to “keep track of current legislative issues” and to be “engaged in political issues surrounding agriculture.” Nate stated that one reason he attends conferences, such as Young Ag Leadership Conference, is to “see what’s going on with politics because there is a lot of stuff that could make or break an operation.” Blair also mentioned that she attends conferences with other young agriculture producers to “gauge the political temperature of the politics in your industry.”

Communication Skills

Communication skills were divided into two axial codes, internal communication and external communication. In every focus group, the importance of communication skills was discussed in detail and heavily emphasized.

Internal Communication. Internal communication with “family”, “landowners”, and “people that you work with” was discussed in each focus group. The participants identified they need the skills to be able to talk to older generations about the past, present, and future of the family agriculture operation. Participants viewed communication as very important for the maintenance and further development of the operation.

During the nominal group technique, multiple participants in the first focus group identified that they needed education to build better communication skills with family

and communication skills with business partners. Samantha expressed that communication is one of the most important competencies for young and beginning farmers and ranchers (YBFR). When asked to describe people skills further, she answered, “Being tactical about how you want things done, to communicate well.”

In the second focus group, Jenny cited communication problems as “where I see all of our major problems...the two generations can’t talk to each other...they can’t communicate what they need very well.” Charles echoed that communication is often the main problem on family agriculture operations,

It’s usually a communication issue, whether or not the prior generation can communicate the skills to the next generation. And also it is whether or not the generation that is coming up can communicate new ideas to the prior generation so that the older generation is willing to except them.

Every participant in this group agreed that communication skills were an important competency for YBFR. Lilly stated, “I would echo the communication with your family to the moon and back, everyone struggles with that.” The importance of communication skills when managing employees was a critical skill supported by all participants.

Communication with older generations was also discussed at length in the third focus group. Communication skills were commonly discussed in conjunction with generational differences. Lexie expressed that, “Communication skills are really key because you’re taking over for someone.” When discussing differences between generations, Owen said that communication is very important when bringing up new ideas,

I still work with my folks and you got to compromise, you would like to step out; but you have to keep them happy and they are stuck in the way

that things were. So, there are lots of battles with families; sometimes you just got to turn the other cheek.

The entire focus group agreed verbally with Owen's previous statement. Communication skills were mentioned as important not only during the nominal group activity, but on multiple profile pages in all focus groups.

External Communication. External communication was discussed in all three focus groups. Overall, the heaviest emphasis was placed on external communication in the second focus group. External communication included communication with consumers, buyers, people outside the agricultural industry, and persons advocating for agriculture.

John passionately expressed in the first focus group that advocating for agriculture was an important topic that needed to be addressed in YBFR programing.

We're the ones who are going to be in the focus, in the spotlight as the next generation of farmers and ranchers...in DC...in two minutes or less you had better be able to describe who you are, what you do, and be positive about it; and it was hard, it was challenging.

Samantha agreed and added,

It doesn't even have to be in DC... it can be anywhere... even people within ag. Our ag up here is very different from down south... like you said; you just need to know what you do in a very short speech...be able to explain what you do up here.

The first group also mentioned the importance of "establishing a banking relationship" and "communicating with consumers."

The second focus group discussed at great detail the importance of not only advocating for agriculture, but the importance of gaining skills to become leaders. Both

Dan and Charles expressed a need to advocate agriculture to people outside of the industry. Dan said that he would like to have the skills to “find my voice...get other people motivated... get other people into it [agriculture]... find a way to persuade other people to take a second look at agriculture.” Charles spoke of a program that he developed on his ranch for college students, “They come out to the place and they calve with me for a week. It’s a hands-on experience... it’s a learning experience for me...learning how to transfer my life and business to the larger community.” Overall, the second group was the most passionate about being involved in advocacy groups and promoting agriculture to people outside of the industry.

The third focus group took a slightly different view of external communication. While Lexie mentioned the importance of “communicating with your buyer”, overall this group focused on the importance of agricultural education and involving the younger generation in agriculture. They discussed the importance of involving not only family members but also other young people who are not related in agriculture. Bart impressed upon the group the importance of agricultural education, “The more kids we can get into agricultural education in high school, the better chance we have of keeping them in the industry when they go to college.” Owen strongly agreed with the importance of bringing people into agriculture, “It would be nice to tie in new blood too... our rural towns right now, are really shrinking up... it would be nice to re-fuel rural American there; it is getting pretty shrunk up.” The majority of the group agreed with Owen and Bart on the importance of involving and engaging people in agriculture in rural communities to help revitalize the communities and agriculture in the area.

Production Technologies

Across all three focus groups, there was an interest in learning about new technologies and staying current in technological knowledge. Production technologies consisted of the axial codes, skills using technology and practical management skills. The third focus group also discussed the importance of having trade skills that related to agriculture to supplement the income from the farm or ranch. To represent this concept, a third axial code, trade skills to supplement income, was added for this focus group.

Skills Using Technology. The first focus group desired unbiased information on new technologies and operation techniques related to agriculture. Jerry admitted, “I fell for the chemical rep b.s. this year, the more money you spend, the better you are going to be... and then you talk to people who have [used the chemical and they say] don’t do it ... you can get it cheaper and [get] better coverage... wish I would have known that \$20,000 ago.”

Working with technology and being aware of new technologies was a common theme in the second focus group as well. Dan mentioned that he “wants to be able to work with technology and be part of ... feeding the world.”

The third focus group discussed at length the importance of staying on the edge of technology. They mentioned many examples of new technologies including, GMO crops, age and source verification tags, and new computer software programs. Bart stated, “Technology is driving agriculture now... it’s a whole different ballgame than ten years ago.” Participants of the group agreed with Bart and joined in the conversation of important technologies. Mark was more reluctant about new technologies and stressed

the importance of research, “I honestly believe that there is a fine line between chasing trends and actually trying stuff that is proven but it is new.” Overall, the group agreed that it was important for educational events to encompass new technologies in their topics so that YBFR can have the information to know if they are maintaining the cutting edge or if they are “chasing trends.”

Practical Management Skills. During the nominal group technique, each group mentioned at least once wanting to know more about health care for animal herds and crops, animal nutrition, and artificial insemination of cattle, and pregnancy testing of cattle. Crop pest identification and basic veterinary skills were also mentioned in one focus group. Christina mentioned the importance of animal nutrition, “It’s can you raise the feed ingredients and additives to increase gain and health? And I think that’s important for people to understand.” The majority agreed with Derek who mentioned that in the isolated countryside of eastern Montana, “It is worth so much to be able to know how to run stuff, mechanics, and welding so that you have the knowledge and skills to fix it yourself.” “Practical management skills” was a constant theme across all three focus groups.

Trade Skills to Supplement Income. The third focus group was unique in that they discussed in great detail the importance of having a trade that is able to supplement the income that comes from the farm/ranch. Lexie brought up that, “Most of us have probably figured out that..., especially if you’re going to take over the family business, you have to have a second job and income.” The majority of the group agreed that

having trade skills that tie into agriculture is not only a luxury but also a necessity in many situations. “You either have to truck on the side or work somewhere to subsidize while you’re getting into it,” said Bart. Alex mentioned that he was learning the trade of welding to “do on the side for when I go back home and start ranching with dad.” Owen stated, “The nice thing about agriculture is that you can tie so many things into it, be it a farm shop or trucking.” He also mentioned that as a parent, “You want to make sure that your kid has a job so that you can tie him in somehow [to the farm/ranch].”

Supplemental trade skills, such as welding and mechanical skills, were discussed as a definite educational need of the eastern region focus group participants.

Information Seeking Competency Improvement. Information seeking skills were only discussed in the first focus group; therefore the axial code of finding information was made specifically to represent the data from that focus group. Taking responsibility for actions, acknowledging that you need help, and knowing where to look to get that help were all aspects of finding information discussed in the first focus group. It was agreed that even if the young producer knows that they need help, the information is not always easy to find. Jerry was personally frustrated with trying to find information; while Miranda mentioned that young producers “don’t know to begin to ask for help. They just think this is how you do it.... Acknowledging that you need help, knowing where to go to get that help, and actually following through” were important skills.

Educational Programing Preferences Designed for YBFR

The selective categories for the educational programing preferences designed for YBFR were: the need for a networking component; mentorship program; positive, interactive learning environment; nature of program content; external programing factors; and educational barriers. A map of the codes for this section can be found in Appendix A; each of the selective codes have been described below.

Need for a Networking Component

The axial codes within this selective category are need for networking and connection with peers. Both expressed the value of personal interaction at educational programs.

Need for Networking. All groups viewed networking as a key component of successful educational programs. They enjoyed being able to talk to other producers and leaders in agriculture. Networking helped to keep them informed and gave them new ideas to try on their operation. In the first focus group, Harry appreciated being able to bounce new ideas off other farmers, “If you’re going to try a different crop, visit with somebody who has already done it, so everybody is not making the same mistakes.” Aidan mentioned that through networking at events, “You might meet someone who can help you down the road.” Overall, the participants agreed with Charlotte that, “It was important to hear other people’s points of view from the outside looking in.”

In the second focus group, Blair, Dan, Charles, and Lilly all made comments that supported their strong agreement for networking as a key component of educational

programs. Each had a slightly different view on why networking was important, but all stressed the importance of a networking piece. Blair made the point that networking is the way “that you find and secure jobs these days.” Dan attends events to “expand other people’s knowledge as well as his own” and to share ideas with different people. Lilly appreciated being able to make new friends whom she could possibly use as an informational resource in the future, “I can call them in ten years and be like, hey I have a question... What did you do?” Charles ranked “meeting people” as one of two reasons he attends educational events. Overall, the second focus group preferred events that allowed them to network with agriculture leaders, potential employees, and other agriculture producers.

The third group also valued networking elements in an educational program. They discussed that networking is beneficial because it “gets your name out there”, “keeps you informed”, “and allows them to work together” in a sense of “I tried this and it was really good”. Alex discussed how networking with other producers can serve as a form of education,

If you want to try something new, but you just get the facts from the company, and then you come to these deals and talk to people who have tried it and you see how it worked and that gives you confidence to try it for yourself.

Connection with Peers. Beyond just the need for general networking, both the first and third group expressed a specific need of networking with other YBFR. Both focus groups placed emphasis on meeting other young producers as a key element in

programs designed for their demographic. In the first focus group, John said that he likes to attend other educational events with young agricultural producers because,

It helps give me a positive attitude to see other young people doing stuff, because where I am at there is me and maybe one other young guy and we don't exactly get along... and then you come this and you see a lot of young faces and it's refreshing.

Charlotte agreed that programs for YBFR help with the feeling of isolation, "You see other young people are out there who do this too and it's not just us."

The third focus group placed strong emphasis on the importance of being able to interact with other young farmers and ranchers. Many of the comments from this focus group portrayed a feeling of isolation and emphasized the role of interacting with peers as a way to deal with that isolation. Lexie made the point that networking events "kind of help with the feelings of isolation, because a lot of times, especially when you're the only young person there you feel completely and totally alone and coming to this helps that." The vast majority of the participants agreed with this comment. Bart added that at the last county Farm Bureau meeting he attended, "I was one of the only young people at our county meeting... I looked around and it was like man Donny is the next youngest person in the room and he is 55." Overall, both groups discussed that they enjoyed educational events that let them interact and connect with other young agriculture producers.

Mentorship Program

This selective category was present in both the first and third focus groups. The second focus group discussed the need for expanded life experiences which related to this category and will be discussed. Across the first and third focus groups, the axial code of

“older producer mentorship” persisted. The axial code of “learning from neighbors” was also included in the “mentorship program” category for the third focus group.

Older Producer Mentorship. Miranda brought up the point in the first focus group that,

We should set up more producer mentoring type deals... in my county there's probably 3 to 4 people that I would love to sit down with and be like, tell me what you know... how did you get to where you are right now?... It would be nice to actually go to their place and have them show you around. And as a lot of these people who have such a wealth of knowledge are starting to get to retirement age and leaving communities, we are losing a lot of resources there.

The entire group agreed with this proposed idea. The third focus group also brought up the idea of a mentorship program. Bart discussed the one-on-one mentorship that Derek was involved in with a farmer from his area,

For him [Gordon the older producer] to take Derek and say come on let's work, I will show you how to run this thing, it's pretty cool... Gordon is one of the nicest gentlemen you will ever meet in your life and he is just trying to do the right thing. And he loves farming just like Derek and anyone else in this room, and you know, it's pretty awesome.

The entire group agreed that a mentorship program would be a great way to get other people involved in agriculture and a great educational tool.

Learning from Neighbors. This theme was only discussed in the third focus group. The participants mentioned that it was important to look to neighbors for learning opportunities. Bart mentioned the learning experience of “going to operations that you want to, that you see something you like in an operation... and get a little hands-on learning about how they do things.” Owen added that he learned many skills from one of

his neighbors, “Now I can do that stuff myself because of his mentoring and he likes to teach too so it made a big difference.”

Expanding Experiences

The concept of a mentoring program was only mentioned on one profile page and never mentioned during the actual discussion in the second focus group. However, the group did discuss the importance of seeking experiences outside of the ranch. They mentioned that “you can get stuck at your own place” and “that working outside of the ranch is a good way to broaden skills and experience.”

Positive, Interactive Learning Environment

Across the three focus groups, the following axial codes emerged: interactive, small group leaning, hands-on experiences, inspirational and positive learning experiences, agricultural tours, and interactive, knowledge speakers. Variations from these codes occurred within the groups and will be discussed in conjunction with these codes.

Interactive, Small Group Learning. The first and third focus groups preferred learning that was interactive and taught in small groups. The second focus group agreed that interactive learning was important; however, they preferred for learning to be hands-on and did not mention the small group component. The first group liked educational programs that contained personal interaction and an interactive component. Charlotte gave an example of a workshop that she enjoyed which involved, “never being in the same group... and role playing.” She liked that it was interactive, “I have to be

interactive or I am gone.” Miranda mentioned she enjoyed workshops were there was “one-on-one communication between the speaker and [the group].” Samantha added that she gets more involved if the format of the event is face to face.

During the third focus group, both George and Lexie mentioned they liked formats similar to a focus group, small and interactive. Lexie thought that face to face was important and so were “opportunities like right here, to feed off of one another, to come up with a question that maybe I wouldn’t have thought of someone else will.” All participants enjoyed being able to interact and learn from other producers and presenters in an interactive environment.

Hands-on Experiences. All groups agreed on the importance of hands-on educational experiences, but this concept was discussed in most detail in the third focus group. In the second focus group, Dan expressed his view that “there is no substitution for hands-on experience” and the importance of “working around the agricultural environment.” Charles discussed the importance of providing hands-on learning experiences to others such as bringing students out to his ranch to “calve with me for a week.” Many participants in the third focus group agreed that they preferred to learn through hands-on activities. Owen said, “You have to take me through the steps” and Lexie described herself as “more of a kinetic learner.” Mark also agreed that “I like hands-on learning very much... like Owen, after two paragraphs I am reading but I am thinking about other things.” Overall, hands-on learning was an important part of a successful educational program.

Inspiring and Positive Learning Experience. Both the first and third focus groups mentioned the need for inspiring and positive learning experiences. In the first group, Harry hoped to “get excited again” by attending educational programs. “You’re at home and it’s easy to get mundane and run down and it’s kind of nice to go get inspired again.” The entire group agreed with Harry. Miranda mentioned she enjoys experiences where they can “get off the farm” and “get away from the kids.” In the third focus group, Lexie echoed Harry’s previous statement,

You can kind of get into the day to day... monotony of it and then you come to this [YALC] and you get re-inspired to push and learn more and maybe look at a new way to do things or just feel better about the way you might be doing things at home.

Several other participants also mentioned that educational opportunities, such as YALC, serve as a way to motivate them into seeking more educational information to improve their operation. Lilly supported the above mentioned need for a positive environment by writing that the most successful education experience she can remember was one that was full of “passion, energy, hope, and excitement for agriculture.”

Agricultural Tours. Agricultural tours were mentioned in all three focus groups as effective educational techniques for YBFR. Several examples of successful educational programs in the first focus group included tours of agricultural facilities. In the second focus group, Charles felt passionately that field days and seed and chemical trials were important teaching techniques that needed to be utilized more today. Dan agreed with Charles when he said, “The most effective format for education is field days... they would basically summarize all the research they had been done in a whole

year into that short little time frame.” In the third focus group, both Bart’s and Derek’s most successful educational program included agricultural tours. Bart expressed that, “Going on those tours helps you understand that agriculture is bigger than northeast Montana, it’s bigger than Montana.”

Interactive, Knowledgeable Speaker. For the first and second focus groups, the selection of the speaker was an important aspect of a successful program. The first focus group enjoyed speakers that were inspiring and knowledgeable, positive, and had practical field knowledge. Harry said that if there is a “really good speaker, it seems like you pick up a lot more.” Samantha added that a good speaker is “someone who keeps your attention”; Jerry, Harry, and Aidan agreed. Miranda preferred speakers who were involved with their audience and “when they asked for discussion, they truly wanted it.” Miranda also found speakers that presented in a way so that “in your mind, you’re identifying as you’re going along” where most impactful. The second focus group preferred speakers that were not only knowledgeable, but respectable in their field. The presenters that they identified as excellent were successful people in the industry and high level professionals. Jenny preferred when the speaker was interactive with the group and “he didn’t just tell you how to do it, he didn’t just stand there and lecture, he did it... he proved how he did it.” Overall, the groups’ ideal speaker was interactive, inspiring, and had reputable, practical knowledge on the topic.

Nature of Program Content

Across the focus groups, four axial codes emerged under the selective category nature of program content: new information and innovations, variety of content, content relevant to situation and problems, and follow-up after program. The second focus group also included the code independent learning which will also be discussed in this section.

New Information and Innovations. The axial code of new information and innovations mentioned by all focus groups represented the desire to receive new information that can be used to improve their agricultural operations. Each group mentioned the desire to learn new things when attending educational programs.

The first focus group discussed that they attended educational events to increase efficiencies, learn new ideas, and gather different ideas. Charlotte mentioned that it was important to find new information and expand learning, “You know, doing new things and not following one person.” Jerry reiterated the fact that he attends educational events to gain “the knowledge” and “different ideas” from attending workshops. During the nominal group technique, alternative crops, different options on how to use new technologies, and learning new ideas and designs were mentioned as educational needs of the group.

In the second focus group, Lilly said she attends educational events with the hope of learning “something I didn’t know before.” Dan’s motivation for attending educational events was the “challenge”; the challenge of learning new information to help agriculture be sustainable in the future. Nate said that he attended educational events to “look for new ideas to improve what we are producing.” Charles also stated that the second reason

he comes to events, such as YALC, was to “educate me further to try to... maintain that relatively cutting edge.” This group focused on the need to learn new and different information to improve their business and expand their personal knowledge.

The third focus group addressed the demand for new information at educational programs. Mark mentioned that the need to learn and apply new information is not unique to this generation of farmers; past generations of farmers also had to seek and implement new technologies, “They didn’t stay in business by doing the same thing year after year after year.” Participants wanted access to research and new ideas that they could take back and implement on their farming/ranching operations. Alex suggested “that this education is going to help us in the long run, to take back and try new ideas.” Louis said that he attended events because he “wants the knowledge that is here” and George attended for the “new ideas”. The participants also stressed the importance of learning new technologies and information at events.

Variety of Content. Both the first and second groups discussed the importance of variety in the information presented at educational programs. The second focus group agreed with variety; however, they concentrated more on the variety in teaching formats.

The first focus group enjoyed learning many different opinions on a topic and having options to choose from at educational events. John mentioned the most successful educational program that he attended had “several workshops all the way from farm transition... to financial management workshops”. Jerry also mentioned that he liked educational events with a wide variety of topics. He found the “expanse of options and information” useful in gaining interest and attention; “If you’re going to hold something,

not everybody is going to want to go to cattle 101 or wheat 101. Have enough stuff there that people are going to want to go.” Richard preferred events that “dealt with a lot of problems and concerns.” Overall, the group agreed with how Jerry put it, “Have enough information to make it worthwhile... if it was just a finance thing I wouldn’t come.”

The third focus group shared a common viewpoint as the first group. They enjoyed programs that were not focused on one single thing and had many different topics related to agriculture taught in different seminars. Mark and Alex agreed with Bart’s comment,

One thing that is really nice about this conference is that you’re not focused on one single thing.... We have a broader opportunity to learn about cattle, to learn about pulse crops, to learn about finance, to learn about these things and we take bits and pieces from it and apply it.

George mentioned that his most successful educational program had a variety of content that applied to a past internship. He walked away with knowledge of “all the different products, crops, expenses, and just a lot of different things I end up using in everyday life.” Both groups agreed on the importance of a variety of information at educational programs.

The second focus group focused on the importance of utilizing multiple formats when presenting educational information; therefore, the axial code assigned to this focus group was “multiple formats and variety of content”. Jenny expressed that she preferred events where she could receive “a lot of really different ideas.” Charles stated that he preferred “multiple formats” and he found events particularly useful when they “sent you emails or readings like a month or two in advance and it lets you build up all your thoughts and ... then you come to your thing prepped and all ready to go.” The majority

of the group liked this idea of having information sent out to participants prior to the event. Dan preferred getting “multiple accounts of information” so that he could “decipher from them what he wanted” to form his own opinions. Overall, the second focus group mentioned that variety of content in programs was important and added that presenting in multiple formats also improves the educational experience.

Content Relevant to Situation and Problems. The first and third focus groups also placed emphasis not only on the variety of the content, but also that the nature of the content was relevant to their situation and helped them solve problems. Both groups preferred to learn about topics that they could actually take home and implement, in addition to presenters who had actual in the field experience and practical advice.

In the first focus group, Miranda described it as, “You kind of balance out how much filler fluff stuff there is and how much you are going actually going to be able to walk home with at the end of the time.” The group preferred when the information presented was intense, meaning it was not just a broad overview of the topic but the content was in-depth and was complex in nature. They also preferred when the presentation included specific examples of applications and implications. Richard mentioned that it was important for the content to provide tools to assist with solving problems he faced. He attended events that presented “ways to go about trying to improve your program, to help get yourself out of a situation that you’re in.” Steve also found educational programs that focused on the problems and needs of the audience the most helpful. He preferred speakers who were “presenting what you need and (information) that you haven’t already been exposed to.” Aidan mentioned he valued

Extension programs in his area because the programs were fit to meet the community's needs; "You know they're there to help you with this and that." Overall, the group preferred educational content and programs that were tailored to their needs, included applicable information, and were presented with specific examples of how to put that knowledge into practice.

The third focus group also preferred the content of educational programs to be applicable to their situation and needs. They desired subjects that had a real-life application and gave them problem-solving tools. Alex viewed welding as an important skill to learn because "it's a good trade with tons of options out there" and agreed that the real-life application of welding was what made it useful. Lexie preferred more local or regional events because "you can tailor it so much to your specific needs or needs of your area." The group stressed the importance of the subject being current and relevant to their situation with real-life application.

Independent Learning. The second focus group did not mention the importance of content relevant to their situation; however, this group did mention the importance of information that allowed for them to formulate their own opinions. The second focus group valued the opportunity to learn independently. They preferred the information be presented to them in a manner that allows for them to, as Dan put it, "Decipher from it what you want to". Lilly thought it was important to attend educational events to "get that education and to formulate your own thoughts and your own ideas." Dan also mentioned that he valued "self-guided knowledge" and having exposure to other sources of information such as the internet or books rather than "just sitting in the classroom and

getting a somewhat biased opinion from one professor.” The second focus group discussed the importance of educational events that gave them the information in a way that allowed them to make the decisions independently and outside of the program.

Follow-up After Program. The importance of having access to follow-up, contact information, and take-home information was emphasized in both the first and second focus groups. Both groups liked the option of being able to go through the information at a later date and have access to the presenter’s information for further questions. Miranda mentioned that she also valued when the speaker answered questions and clarified points after the presentation. “Follow-up interaction, like if the speaker comes back and is like, when you asked that question what did you mean? And follows up with individual participants, that really means a lot that they are willing to take the time with people after it.” When discussing webinars, the group had mixed feelings on the effectiveness of webinars, but the entire group agreed that they are more helpful if they are archived. Steve found achieving webinars especially helpful, “If you have the contact information for the people who presented it. At least you have an opportunity to ask it [your question] and they can get back to you at their convenience.” Jerry pointed out that archiving the information is also helpful after educational programs and events such as YALC, “You know you miss stuff here, forget it, or don’t think it was important... archive it so that I can go back and look and find it again.” The first group, as a whole, preferred to have contact information to follow up with speakers and archived educational information for reference later.

The second focus group also found follow-up and archived information beneficial. Blair stated that she preferred when presenters,

Send us home with a flash drive with some of the information... it would be really nice to go home with that so that when I do have time if I need to look up something, I have at least the talking points of what the speaker said.

She liked being able to “afterwards... look it up and double check your facts.” Charles mentioned that he finds it useful when the presenters “follow-up in like a month or something”; he likes having the option of if “you want to learn more, you can ask them later.” This group also had mixed feelings about webinars, mostly related to inadequate internet quality. Jenny mentioned that she found archived webinars more useful and accessible. The second group, like the first, stated that archived and follow up information and increased their understanding of the educational content.

External Programing Factors.

Each focus group discussed several factors that in their opinion effects programing for YBFR. Within the selective category of external programing factors, two axial codes persisted across all three focus groups: generational differences of opinion and desire to improve one’s self and operation. Focus group two also included the axial codes protect family and self.

Generational Differences of Opinion. Each focus group mentioned many times how they were different from previous generations. They had different opinions, different practices, different concerns, and ultimately, different educational needs than past generations.

The first focus group discussed a divide between the generations on the farm/ranch in terms of opinions. Jerry stated that when discussing ideas with previous generations their generation (YBFR) often do not want to listen to the previous generations, “I’m not going to do it your way, I am smarter, that’s just the reality of it and every generation has been like that.” Harry agreed with Jerry but added, “It also works the other way, when the kid brings up something, it’s automatically a bad idea a lot of the time to the older generation.” The group strongly agreed with Harry’s statement.

The second focus group expressed a desire to change and improve upon what previous generations have accomplished. They were more open to trying new ideas and finding better ways to accomplish tasks than previous generations. Charles said he has a sign in his house that reads, “Because that’s the way I have always done it, with a big circle and a slash through it” and he views that as a major point of contention between generations on the family ranch. Jenny mentioned that her dad and brothers are “very different, how they think and everything.” Blair agreed with Charles and mentioned that in agriculture, differences in opinions often go back to,

We have always been doing it this way, well, that doesn’t necessary apply to now because we have better processes and we have more to keep track of than maybe our parents or grandparents.

Dan mentioned that he thinks, “Older generations are just too forgiving” when it comes to things like employee management. Overall, the second focus group expressed that their generation had different ideas and opinions. Lilly brought up that having a different opinion than older generations can be used to improve the operation, “I have ideas and I

have an education that I can take back to my family so I can be like, see I have learned these things. And, I can do them and you can help me but we can make this place better.”

The third focus group discussed on more concrete ways that they feel they are different from previous generations. Lexie classified her generation as “a little more ok with change, it’s not that we have been doing it this way for one hundred years and we can’t do anything else.” The group strongly agreed with her comment. Louis added, “Ya, I would say we are a lot less loyal to certain companies... than our parents... we are looking to get the best deal. With them it was no, I like this guy and has been there for thirty years and that’s how they do business.” They discussed that not only is their generation always striving for improvement but as Bart said, “We are bigger risk takers... we aren’t as reluctant to go out and take that risk,... we are more so than past generations willing to spend money to make money.” Overall, the group categorized themselves as larger risk takers, more open to change, less loyal, and seeking more constant improvement than older farmers and ranchers.

Desire to Improve Self and Operation. Across all focus groups, the common axial code of desire to improve self and operation emerged. Each focus group discussed that the one major factor that prompted them to attend educational events was to build on their own knowledge base and improve their agricultural operation. Jerry, in the first focus group, explained that what motivates him to attend educational events is “the desire to become a better farmer.” Steve added he attends to “increase efficiencies.” In the second focus group, Lilly also expressed a desire to improve, “I want to make sure that I make that place a better ranch by being there.” She also mentioned that educational

programs, “Give us an opportunity to show to our families that hey we have invested interest.” Blair stated that YBFR are looking for ways to work “smarter not harder”.

Nate mentioned he attends educational programs to “improve what we are producing”.

The third focus group also mentioned the importance of seeking improvement.

Mark said as YBFR,

You keep some of the same foundation in your operation but also you do have to expand on it a little bit and put your spin on it... understanding how everything works currently and just making your little tweaks to it.

Across the focus groups, a desire to improve both themselves and their operations emerged from the data. As Christina, in the third focus group explained,

The younger generation is more open to change and I think that we also realize that education is how you are going to get just one more step forward in your business and continuing education is important in growing and learning and always being on top of the game and doing the best you can.

Protect Family and Self. The third focus group placed heavy emphasis on having the skills and abilities to protect the family ranch and themselves. They were concerned about being prepared for employee lawsuits and external threats to their agricultural operation. Charles, a third generation rancher, expressed,

They say the third generation is the one that makes or breaks a place as a pattern. The third generation will either make it and it will bloom or they will fail. And usually it is because the first generation built it up from scratch so the know what it was worth, the second generation ... they saw it come up so they knew what it was, the third generation had it handed to them to a degree, they didn't see the build-up to get there, so they are the ones who have to make it or break it.

Both Lilly and Blair discussed the importance of this generation understanding how to protect themselves from employee lawsuits and grievances. Nate also mentioned the

importance of staying current on political issues because, “There is a lot of stuff out there that could make or break your operation.” Jenny added later in the discussion that she has, “seen young and old go out of this business and... you can lose it pretty easily anymore.” Overall, the group discussed that one major reason they attend educational programs is to increase their knowledge, skills, and abilities to protect not only themselves but their family’s ranch.

Educational Barriers.

Across all three focus groups the selective code educational barriers emerged. This code was formed by two axial codes (1) time and distance barriers and (2) educational programing pitfalls. These axial codes were common across all three focus groups; although the description and wording varied slightly among the groups. The second focus group discussed other barriers beside time and distance; to describe this focus group’s responses the axial code barriers & time restrictions to education was assigned. The third focus group focused less about time barriers and more about opportunity barriers they faced and the two axial codes were combined into one single code for this group, opportunity barriers & educational programing pitfalls.

Time and Distance Barriers to Education. The first focus group discussed the importance of considering time and distance when planning an educational program. Samantha pointed out that “it depends on the time of year” when they can travel for educational events. Steve mentioned that the time at the event needs to be worth the driving time to the event, “[YALC] is only a two hour drive and we we’re able to plan for

it, but if you're going to 2 or 3 hour deal and driving two hours that pretty well kills your day." He also made a comment on the importance of the time of year, "During your season, you don't have a half a day or day generally to drop to get educated." A final barrier that was discussed by John was lack of awareness of educational programs, "They didn't always get a flyer up in [outlying rural communities]; there would be stuff going on that we would never know about". Overall, the barriers to education discussed by the first focus group were time and distance to educational events, time of year, and lack of awareness.

Barriers and Time Restrictions to Education. The second focus group also discussed several barriers to education that were different than those discussed by the first focus group. They preferred educational events that fit into their schedules and provided the least amount of time restrictions. Charles mentioned inefficiency of the information as a negative aspect of Facebook, "I spend more time wading through the stuff I don't want than I do reading what I want". Blair expressed that she "doesn't have a lot of time to be hitting up the conference scene." Pertaining to webinars, Blair also mentioned that not many YBFR "will be like oops 9:30 got to be done feeding cows so I can go inside and watch a webinar." Besides the time barriers to educational programs, the second focus group also had problems with lack of adequate internet connection speed to watch webinars. Charles stated that, "I don't have access to good enough internet to get on a webinar... basically; it's just not an option." Lilly faced similar challenges viewing webinars, "there is not enough power and band width to run them." The main barriers to education as discussed by the second focus group were lack of time

to attend programs, inefficiency of online content, and lack of quality internet to watch webinars.

Educational Programing Pitfalls. All three focus groups discussed negative aspects of educational programs as barriers to their education and as factors that affect their overall impression of program success. These pitfalls included not having the opportunity to discuss the content with the speaker, no interaction with peers, not keeping their interest throughout, and inefficiencies of the information source. In the first focus group, multiple participants identified programing pitfalls. These included inadequate, boring speakers; as Harry stated, “Listening to a monotone speaker just doesn’t seem like you get a whole lot out of it.” Miranda also impressed the importance of having speaker with practical, relevant knowledge, “versus a professor who has just sat in their little glass cube all their lives and they just preach on the topic.” This group also disliked deliver formats where they could not interact with each other and the speaker.

The second focus group, also mentioned several programing pitfalls they have observed. Dan discussed that he doesn’t enjoy speakers or information that presents a “biased and narrow minded opinion.” As discussed previously, this group also focused on the fact that they do not have access to high quality internet and therefore, do not have the means to watch webinars. Lilly also mentioned that she “hates staring at computer screens.” Charles brought up the point that information needs to be efficient and he prefers educational events that respect his valuable time. Although, he expressed, at most events it seems like “I hang around a day to glean an hour’s worth of information.”

Opportunity Barriers & Educational Programing Pitfalls. The third focus group contained the axial code of opportunity barriers and educational programing pitfalls. This code was given to the group because the only barrier explicitly discussed by the group was the lack of educational opportunity in their area. Programing pitfalls discussed by this group dealt with making the information interesting and interactive. Mark expressed that it was important to keep him focused and interested in the material, “If I am not really interested in it, I am kind of like Owen, after two paragraphs I am reading but I am thinking about other things.” This group was also concerned with the trustworthiness of educational information on social media sites. The entire group agreed with Lexie when she stated, “The caution with that is who is watching it. I mean that’s where we have problems.” They utilized other internet sources for information but expressed that the information needed to be practical, relevant, and current.

Delivery Formats Preferred by YBFR

Across the focus groups, the following selective categories emerged: day to day information sources, social media for program promotion, and extended producer educational events.

Day to Day Information Sources.

All focus groups discussed delivery formats they preferred for day to day information. Electronic sources of information, perceptions of email use, print sources of information, and people and organization information sources were the axial codes formed to represent the discussions across the focus groups.

Electronic Sources of Information. All focus groups discussed the importance of electronic sources of information. These sources included internet websites, video link, and webinars.

The first focus group used the internet to search for information and preferred newsletters that came in the form of email. Miranda discussed that she found emails with links to more information helpful,

Send out a brief newsletter with hyperlinks to stuff that's more in-depth but at a quick glance, you can read a whole bunch of stuff...an overview... later down the road you can be like, oh yeah there was that article and then you go back and read the whole thing.

The group agreed that they preferred emailed newsletters to printed newsletters. The group had mixed feelings on webinars. Miranda disliked webinars because they lacked “personal interaction with the speaker.” John found webinars useful, “It’s going to be different case by case... but I enjoyed it... I was comfortable; I was home sitting at my computer... I was in my element on a snowy day because I didn’t have to leave.” As discussed earlier in the section, the group agreed that archiving webinars increased their utility as a delivery format.

The second focus group did not discuss the use of electronic sources to much extent. Several participants mentioned that they use the internet and YouTube as sources of information. The group focused on the use of email and social media. As discussed previously, this group found a major barrier to webinars was lack of adequate internet connection speed. Lilly mentioned that she “hates watching webinars... I hate starting at the computer screen... I like to be there in person.” Although, Jenny liked webinars if they were archived so she could watch them in her down time.

Electronic sources of information were highly utilized by the participants in the third focus group. They liked that the information was fast and current. Bart stated that he preferred to receive information electronically because, “It’s instant, you don’t have to wait for it...you don’t have to wait for the ag magazine to come out.” Louis agreed, “If you’re looking for what’s going on today, what’s new with stuff, hop online and go out and get on the ag website”. Lexie said, “For day to day information, I check the websites like these guys.” The majority of the group agreed that they use electronic information to stay current on agricultural information and education. The group wrote on their profile pages that they utilize the following websites in particular for educational information: Extension, North West Farm Credit Service, USDA and general agriculture related websites.

Perceptions of Email Use. Several members of each group preferred newsletters in the form of brief emails. In the first focus group, it was mentioned that emailed newsletters with hyperlinks to websites were a successful format for day to day information. The second focus group discussed the importance of browsing emails as a delivery format. Blair discussed that she preferred emails “for the constant kind of changes.” She also said she discussed the emails with her husband; the emails serve to “open up the greater discussion.” The third focus group also discussed that they preferred this type of information to print sources most of time because it is instant and they do not have to wait to receive the information in the mail.

Video Clips of Information. This axial code was only discussed in the third focus group, although the first and second groups did mention YouTube as an electronic resource. In the third focus group, the participants placed importance on being able to watch online educational videos as a day-to-day information source. They have used these videos to figure out how to operate and fix equipment on the farm/ranch. They also liked to use videos as promotional information before they buy a new piece of equipment. Alex mentioned that he is a hands-on learner and often uses online videos to teach himself new skills. Owen also “uses that YouTube a lot... the other day I was trying to figure out how to use a volt meter to test a well... so I went on to the YouTube to try and figure all that out.” Alex also stated that he and his father like to “watch different videos on it [new piece of agriculture equipment], to do research before he goes out and buys something.” Bart and Lexie agreed that there was a lot of agriculture on YouTube and a resource they use frequently.

Print Sources of Information. Each focus group mentioned using print sources such as magazines and books as a source of information. Specific examples were listed on their profile pages and their perceptions of the utility of print sources were discussed.

The first and second focus groups did not discuss the value of print sources in much detail. Several did list printed resources as sources they have used in the past on their profile information page. The sources listed during the first focus group were editorials, newsletters, books, and magazines. John, a member of the first focus group, stated that “I still like the printed materials, books, papers, and anything.” Every member of the group agreed with John through nonverbal signals when the moderator asked for

clarification on agreement. In the second focus group, printed materials, beef magazines, and the Western Ag Reporter were listed as common resources used on the participants' profile pages.

The third focus group placed greater emphasis on the importance of having printed materials as educational resources. Printed resources listed by this group were the Merck Veterinary Manual, Prairie Star, Ag Week, and Beef Magazine. George mentioned that "I still like a book of some kind for sitting on the tractor just reading or something... maybe like a magazine." Bart and Louis agreed with similar statements; they like books they can hold and flip through. Lexie thought she learned more from reading a hardcopy instead of a computer screen, "To me, reading a piece of paper I usually get a little more out of that." Mark stated later that "literature is priceless... you always know where it is at... it's just, you know, always handy." The group agreed that they all have various printed items on their operations that they consider very useful.

People and Organizational Information Sources. Throughout the focus groups, the participants discussed various forms of educational delivery. Each focus group discussed websites, emails, videos, webinars, and social media delivery formats. Individuals within each focus group mentioned on their profile page the people and organizations that they use most often to get the information delivered through the various channels. In the first focus group, the following organizations were recorded as common sources of information: Extension, Farm Service Agency, National Bison Association, Farm Credit, and other local producers. In the second focus group, the following information sources were listed: Montana Farm Bureau, National Young

Farmers and Ranchers (Farm Bureau), Collegiate Stockgrowers, American Simmental Association, MSU Extension, MSU College of Agriculture, Fort Keogh Research Station, and industry suppliers. The third focus group listed: North Dakota State University database, MSU research farms, MSU and NDSU Extension, Farm Bureau, Northwest Farm Credit Service, and Young Farmers and Ranchers (Farm Bureau). Overall, YBFR utilized multiple people and numerous organizations as sources of educational information.

Social Media for Program Promotion.

Social media for program promotion was the selective code for the across group analysis. It was also the selective code for the first focus group and third focus group. The second focus group produced a slightly different selective category.

Perceptions & Use of Social Media. Across all focus groups, social media was highly utilized by participants as a way to stay current on educational events and information. However, participants stated that they did not necessarily like getting educational information from social media websites. Mainly, they used social media websites as a starting point when looking for educational events and news trends.

The first focus group agreed that the use of social media outlets such as Facebook is “huge” in the marketing of programs. John said, “Honestly I think that Facebook is a heck of a tool.” When asked to clarify, he said, “I follow all sorts of stuff and that’s how I know what’s going on.” Charlotte recommend advertising educational programs on Facebook, “Put an ad on there... have people click like for this type of thing... have a

young producer page.” Samantha agreed, “To your younger generation I think it’s [using Facebook as a marketing tool] huge.” Several members of the group expressed that they found out about the Young Ag Leadership Conference by seeing it as an event on Facebook.

The third focus group agreed with Bart’s statement, “We have to embrace it [social media].” The group also agreed verbally with Lexie’s comment that it is important keep in mind “who is watching it, I mean that’s where we have problems.” They however did not like to receive educational information through social media websites. Lexie stated that, “I think it’s a great way to find out about educational opportunities.” Louis added that he thinks is a great tool for “marketing yes, education not so much.” The majority of the group agreed nonverbally with these comments. Louis also stated that,

I am going to see something on Facebook and be like ok I will look at that; maybe open up the website it links to or something and kind of read up on it... kind of start off with social media.

Bart added, “It entices you more than anything.” The group preferred using social media as a means of discovering educational events and as a way to get a quick burst of new information as a starting point for further research on agricultural topics and issues.

Social Media Use for Reaching Younger Generation.

The second focus group’s discussion of social media was coded as “social media use for reaching the younger generation.” This code was different from the others because as a group, the second group discussion focused more on their views of social media and its usefulness rather than its exact use as a promotional tool. The axial code

for this selective category was “perceptions of social media”. Dan expressed that in his view, “Social media is huge... and it’s not just Facebook... I don’t do the Twitter thing but lots of people do.” Blair cautioned that “Facebook and social media in general is really powerful, it can also be really dangerous.” Lilly agreed with Blair that people need to use caution when using social media. Blair continued to say that “Twitter is an amazing beat to beat business to business tool, if you’re not using it to market your business, you should.” The group agreed that social media tools were a great way to reach out to the younger people, but could also be harmful if not used with caution.

Extended Producer Educational Events.

The selective category of extended producer education events contains the axial code of conference formatted events across all the focus groups. The axial code, conference formatted events, was also used to represent the discussion of the second and third focus groups. The first focus group was represented by a slightly different axial code, longer duration events.

Conference Formatted Events. Both the second and third focus groups listed conferences and seminars as sources of information on their profile pages. In the second group, Lilly mentioned that she preferred to receive educational information through “this conference” and preferred conference type settings in general. Several participants agreed that conference attendance was a commonly used educational resource.

The third focus group mentioned both in their profile pages and in the discussion that they too utilize conferences and seminars as a source of information. Bart, Owen,

Alex, Louis, Derek, and George all reported that their best educational experience was a longer duration, conference style event. They liked events that were one and half days to a weeklong in format. On the profile pages, many of the participants listed conferences, seminars, trade shows, and conventions as educational events they attend for current information.

Longer Duration Events. This axial code was used to represent the discussion of the first focus group. The first focus group, like participants in the third focus group, discussed successful educational events that spanned multiple days and lasted up to a week. When asked by the moderator to vote if they preferred an event over a one to two hour workshop, all participants voted for a longer event. Miranda suggested, “Have one big event that you can get a lot of information in and then do a couple quick ones throughout the year.” Jerry recommended, to increase attendance and the success of educational programs for YBFR, program planners should make sure programs,

Have enough information to make it worthwhile, you know instead of doing a one day thing, make it a three day deal. You know people can get away from the farm or kids and do whatever and have some fun and learn something.

Focus Group One Summary

The first focus group included 9 YBFR from the western region of Montana. The participants were primarily involved in wheat, hay, and cattle operations. One member of the group also raised and finished bison. The average age of participants was 30 years old, which is the oldest average age of all three focus groups.

In the first focus group, the YBFR focused on the need for financial and communication skills. They expressed the need for an understanding of basic financial management skills and planning. This aligns with Maslow's (1954) second hierarchy level. The YBFR in the first focus group sought educational material that would provide safety within their agriculture operation. The first focus group also discussed the need for communication skills to better communicate with family and the need for networking opportunities; this aligns with Maslow's third level of the needs hierarchy, love and belonging. Several individuals within the group expressed different levels of need. One producer focused on the basic needs associated with finding the information; this is associated with the lowest level of the hierarchy, physiological needs. Without the ability to find information, the higher levels of the hierarchy cannot be reached. Another YBFR focused on the need to advocate for agriculture, this is associated with a higher need. To advocate for agriculture, the farmer has to share experiences with the community and feel the need to enhance the community's understanding of agriculture which can be associated with the esteem level of Maslow's Hierarchy of Needs. While most individuals in this group discussed the needs at the lower three levels identified by Maslow, variety did exist within the group.

Within this focus group, several unique codes were developed. The first focus group discussed the unique code of finding information. They discussed how often they did not know where to find educational information in order to be successful. The group mentioned that first, the YBFR must acknowledge that they need help and then second, they need to know where to look for the correct information. Participants also expressed

the importance of getting off the farm to attend educational events. This departure from the farm allowed them to get away from the kids and concentrate on learning the educational material. The participants also discussed the value of positive, inspiring environments. They liked educational events that inspired them to be better farmers and ranchers. They preferred events with a positive atmosphere that gave them hope and allowed them to have fun while learning new educational information.

Pitfalls identified by this group were mainly focused around the learning environment and speaker selection. Monotone speakers, no discussion, no practical experience, irrelevant information, and no group involvement were all discussed as programing pitfalls. The first focus group enjoyed attending educational events as long as the time and distance barriers were minimized.

Focus Group Two Summary

The second focus group consisted of six individuals with the average age of 27 years. All members of the group were involved in raising cattle on their operations. Blair was unique in the fact that she and her husband were ranch mangers of a property owned by an absentee owner. Charles also raised sheep and small grains in addition to cattle. The major themes discussed by this focus group were the need for communication skills and the skills to “run the ranch like a business.” The participants also mentioned the importance of educational events including speakers that were not only knowledgeable, but respected within the subject area. This group also discussed the importance of

networking at educational programs. Although, this networking focused more around political importance and less on the need to share information with their peers.

The second focus group emphasized the importance of employee management as an educational need of YBFR. This subject was not mentioned in any of the other focus groups and was a unique code to this group. Participants discussed frustration in finding competent employees and then training those employees to work in the agriculture environment. They also discussed the importance of having a business structure to manage employees and protect against lawsuits.

The participants were also more aware of their political surroundings than the other groups. They discussed in great detail the importance of being aware of industry politics. Members also expressed the need to be able to represent agriculture to a larger community and spread a positive message. They were interested in developing skills to become leaders in the industry and gain a voice in politics. Political areas of interest to this group were legislative issues, politics of the industry, and meeting with political leaders.

The members of this focus group related to Maslow's third and fourth levels of the hierarchy (Maslow, 1954). The participants were focused on networking opportunities, political issues, and business strategy. Networking could also be aligned with the love and belonging level established by Maslow. However, in comparison to other focus groups, this group focused on networking and communication skills pertaining to external communication and advocacy for agriculture. Members of this group also focused on teaching others about agriculture and finding their voice.

Birkenholz (1999) related “public speaking”, “assertiveness training”, and “personal improvement seminars” to Maslow’s self-esteem level (p. 25).

Two unique concepts in this group were discussed at length the importance of youth leaving the farm and experiencing the world outside of the farm. This discussion was coded as “expanded experiences”. The participants of the second focus group also highlighted independent learning. They valued the opportunity to form their own opinions and ideas. They preferred multiple accounts of the information to formulate their own thoughts. A common theme was not just believing the speaker, but challenging those ideas with individual research.

The external programing factors were also different from the other two groups. This group placed heavy emphasis on the need to protect the family ranch. Throughout the discussion, the participants kept coming back to the idea that there was a need to protect the family estate from employees and people outside the industry. The group did not focus on losing the operation from mismanagement, but rather focused on external factors such as legislation and employees harming their family and the family’s ranch.

A barrier that was only discussed in this focus group was the “lack of adequate internet connections.” This barrier prevented them from watching webinars in general. This group also discussed several unique educational programing pitfalls. They were concerned about their time and preferred information that was presented efficiently. The importance of non-biased, open minded information and speakers at programs were also important factors.

Focus Group Three Summary

The third focus group was, on average, the youngest focus group in the study with the average age of 24 years old. Nine YBFR participated in this focus group, seven males and two females. The majority of participants in this focus group raised cattle. Several also raised grain and pulse crops. This group stressed the importance of understanding the financial side of farming and ranching and building basic financial skills. The group discussed at length the importance of mentorship opportunities and youth focused agricultural education. In addition, this group agreed on the importance of learning from neighbors. They utilized neighbors to learn new management skills, which related closely to the mentorship idea discussed in other focus groups. In terms of educational environments, participants preferred educational topics that were directly relevant to their needs and problems. They also placed emphasis on the networking component of educational programs. The majority alluded to the fact that they were one of only a few young producers in their area and even county. They found it important and valuable to have the opportunity to network and discuss ideas with peers.

The participants were interested in learning trade skills that could supplement ranch income, such as welding or driving truck. They discussed that while in the process of transitioning into the operation, having a trade skill or a second job to supplement income was beneficial and often necessary. This was a discussion unique to this focus group.

When the needs of the third focus group are applied to Maslow's Hierarchy of Needs (1954), the second and third levels of the hierarchy are identified as the need levels

of these YBFR. Participants emphasized the need for financial and trade skills to support their financial safety and their livelihood; this relates to Maslow's second level, safety. These YBFR continue to seek financial safety and security before seeking other educational needs. This group mentioned that they also seek communication and networking skills implying that the YBFR in this group are attempting to reach the third level of Maslow's Hierarchy of Needs, love and belonging. As Maslow suggested, the needs of YBFR fluctuate between levels of the hierarchy suggesting that YBFR can be at the safety level in agriculture business management and production technology needs and at the third level in communication and networking needs.

Within this group, participants enjoyed events where they were re-inspired to continue improving their agricultural operations. They placed high priority on events where they gained positive new ideas and a more positive view of their own personal progress. The barriers and educational programming pitfalls discussed by this group varied from the other groups in several incidences. One pitfall that was explicitly discussed in this focus group was educational programs that did not hold their interests. Information needed to be presented in an interactive and interesting fashion to hold their interest. The YBFR in this focus group were concerned with the lack of educational opportunities for YBFR in their areas. They often utilized internet sources of information such as video clips, social media, and emails to stay current in their knowledge and connected with people outside of their area. Other focus groups briefly mentioned the use of online video clips; however, the third focus group placed heavy emphasis on the importance of these videos to learn new skills and to research new technologies.

Grounded Theory

A grounded theory was derived from the data analysis to explain YBFR perceptions of preferred educational delivery formats and program success. A conceptual model of the grounded theory was included below. Figure 4 diagrams the process and factors that influence YBFR's perceptions of educational needs and programs. The diagram illustrates the motivators that influence the information seeking process of YBFR, the barriers that impact delivery formats, delivery formats preferred by YBFR, the positive and negative drivers of educational program success, how these relate to program perception, and how this process impacts YBFR's desire for future education.

Several motivators influence the educational information seeking habits of YBFR. These motivators are a belief and desire to expand on generational differences, the desire to improve self and operation, a quest for new, innovative ideas, the need to protect their family and the farm/ranch, and an opportunity for networking. Educational information seeking motivators trigger the information seeking process. Based on these motivators, YBFR begin seeking educational information. When choosing an information delivery format, YBFR must overcome several barriers. These primary barriers either deny access to delivery formats and/or make specific information delivery formats less desirable to YBFR. The distance to the educational event, the time required to attend or receive the educational information, access to the information, availability of the information source, awareness of the delivery format, the seasonal timing of the educational program, and the opportunity to leave the ranch are all considered barriers of delivery format selection. Other characteristics that inhibited the use of preferred delivery

formats were the YBFR's view of the trustworthiness of the source, the efficiency of the information and delivery format, and ease of use of the delivery format is to use.

Once these barriers are surpassed, the preferred educational delivery format is chosen. Preferred educational delivery formats of YBFR are email, electronic sources such as websites, webinars, video, print, people, social media, and conferences. The overall preference and perception of these delivery formats is directed by the information seeking motivators and primary barriers.

Once the delivery format is chosen, several factors influence the YBFR's perception of that delivery format. These factors are considered drivers of educational program success. The motivators are split into two categories: positive drivers and negative drivers. YBFR view an educational program successful if the program content meets their educational needs, is relevant to their problems and situation, and includes new innovations and ideas. They also prefer a variety of content to be presented and an opportunity for networking within the program. A successful educational program gives YBFR the opportunity to network with peers and also provides mentorship opportunities. The last positive driver of program success is the desired learning environment. This learning environment includes knowledgeable, inspiring speakers, an interactive setting, and a positive atmosphere. YBFR also view hands-on activities and educational tours as positive drivers of educational program success.

Negative drivers of educational program success counteract the positive drivers of program success. Negative drivers include information that is impractical, inaccurate, and/or irrelevant to YBFR needs or situation. Environments where there is no discussion,

no interaction, time is used inefficiency, and/or trust is not established are also considered negative drivers of program success.

Each YBFR forms a mental composite of positive drivers and negative drivers of program success for each educational program they attend or delivery format utilized. This composite of the drivers mentioned above forms the YBFR's overarching perception of the educational program. This perception then in turn impacts the desire for future education. A positive perception of the program will result in using this program again and the continued seeking of information. A negative perception of the program will cause the YBFR to be less motivated to seek additional information or cause them to search elsewhere. The desire for future education influences the educational information seeking motivators bringing the perceptions of educational delivery formats and program success full circle and the process begins again.

Chapter Summary

This chapter discussed the results addressing the research objectives (1) Assess the educational skills, competencies, and needs of YBFR in Montana, (2) Assess the educational programming preferences designed for YBFR in Montana, and (3) Identify the educational delivery formats preferred by YBFR in Montana. From the analysis, a grounded theory of Montana YBFR perceptions of educational delivery formats and programs success was created.

Figure 5. Grounded Theory of Montana YBFR Perceptions of Educational Delivery Formats and Program Success.

CHAPTER 5

DISCUSSION, RECOMMENDATIONS, AND IMPLICATIONS

This qualitative study aimed to describe and assess the educational drivers, needs, and preferences of YBFR in Montana in order to develop educational programming recommendations. Focus groups were designed and conducted to probe further into this topic and assess the educational skills, competencies, and needs and the educational programming preferences of YBFR in Montana. As well as, identify the information delivery formats preferred by this demographic. A grounded theory was constructed to represent the perceptions of Montana YBFR relating to educational delivery formats and program success.

Focus group participants were chosen by purposeful sampling. The participants were self-identified as “currently in production agriculture” when they registered for the YALC. All 24 participants were attendees of the YALC and voluntarily participated in this study. Each participant took part in a focus group discussion that sought to gain a more in-depth understanding of the educational needs, preferences, and delivery formats preferred by the participants. Each focus group was specific to an identified region in Montana to provide homogeneity within the group and allowed for comparisons between the groups.

Analysis results from 124 pages of transcribed data were presented in Chapter 4. From these transcribed pages, open codes were developed using the participants’ words to develop “in vivo” codes, which represented topics within the data. These open codes

were then sorted into axial codes to represent common categories within the data. Then, the axial codes were organized into selective codes representing themes that addressed the three objectives of the study (Strauss and Corbin, 1998).

The selective codes that represented the educational needs of YBFR across all focus groups were agriculture business management skills, legal knowledge, communication skills, and skills relating to production technologies. Across all focus groups findings supported that YBFR prefer programs that contain a networking component, mentorship experience, positive, interactive learning environment, and desired content. Participants also preferred programs into minimized educational barriers and were organized considering the external factors affecting YBFR. The selective codes of day to day information sources, social media for program promotion, and preference for extended producer educational events were developed to represent the findings supporting YBFR preferred delivery formats. Differences were present between the focus groups and were discussed under each group summary in the previous chapter. This chapter presents the key findings across all focus groups, recommendations for future research, and implications and recommendations for educational programmers.

Key Findings Across Focus Groups

Educational Skills, Competencies, and Needs

Agriculture business management skills, legal knowledge, communication skills, and skills relating to production technologies were identified by the YBFR as the critical skills and competencies associated with their educational needs. This applied to

Knowles (1984) philosophy that the skills and competencies identified by adult learners closely relate to the educational needs of the learners. The YBFR in this study also identified these subjects as educational needs and explained that more education on these skills and competencies is needed. Maslow (1954) constructed a hierarchy of needs to conceptually represent the human desire to strive for higher levels of satisfaction by overcoming the current state of need. Maslow's Hierarchy of Needs provides program planners and adult educators with an indication of the participant's level of need and has been widely utilized to develop need based educational programs (Birkenholz, 1999). The educational needs of the YBFR in this study were applied to Maslow's Hierarchy of Needs to provide more robust conclusions and implications. Overall, needs of the YBFR ranged from Maslow's second level of the hierarchy, safety, to the fourth level of the hierarchy, esteem. No evidence was presented, within this focus group study, that the YBFR participants reached Maslow's highest level, self-actualization. This aligns with the YBFR stage of life as described by Havighurst (1972) and Levinson et al. (1978). The associated life tasks of establishing a family, occupation, and mentor relationships, identifying a social group and developing a connection to civic accountability were identified at this level.

The educational need discussed at the greatest length and in the greatest detail by the YBFR was the need for more education relating to agriculture business management skills. Specific subjects frequently mentioned within this broad category were record keeping skills, financial skills, business management skills, and marketing skills. The YBFR acknowledged that they needed further education on how to record accounting

information, effectively manage risk, and as Bart stated, “figure out on a per acre, per head basis how you do it.” These findings align with Trede and Whitaker’s (2000) and Nelson and Trede’s (2004) studies that found that young farmers in Iowa required more educational information on record keeping, financial management skills, and financial planning.

The YBFR admitted that understanding financial management was ultimately a very important competency, but one that was very hard to completely understand. They expressed an interest in educational programs focusing on the financial topics ranging from basic financial skills, such as organizing financial statements, to more complex skills, such as risk and investment management. YBFR identified the key competencies of risk management, financial planning, and situation analysis, discussed by Nuthall (2010), as skills possessed by successful farmers. Eberspacher & Jose (2005) confirmed these findings that older producers identify financial management as an educational need.

“Running the farm like a business” was a common buzz word within all focus groups. The YBFR identified many educational needs that fell under the umbrella of “running the farm like a business.” These educational needs ranged from managing liabilities to developing farm business plans. Mark defined developing the business as, “Understand[ing] where your operation has come from, where it has been, know[ing] where it is now, and where you want to take it.” These findings support prior research that older and particularly younger farmers find business strategies an important educational need (Suvedi, Jeong, & Coombs, 2010; Nelson and Trede, 2004).

The YBFR also expressed an educational need for a greater understanding of marketing that leads to a development of marketing skills. The specific area of interest within marketing focused around finding new marketing opportunities for their products; whether that be expanding within the larger commodity markets or finding smaller niche markets. Hall, Coble, Baquet, & Patrick (2003) also found that YBFR were progressive thinkers in terms of marketing and preferred educational topics that focused around future options and marketing contracts more so than older producers.

Maslow (1954) explained that an individual's and a group's level of need fluctuates depending on the topic and role that specific need plays in the individual's or group's life. The findings of this research support this aspect of Maslow's theory. Overall, YBFR identified the need for agriculture business management skills in terms of a necessity to keep them safe and secure financially. The majority of the comments focused around business and financial skills that were above the physiological needs level, but did not demonstrate the complexity necessary to equate them with the upper levels of Maslow's Hierarchy. Primarily, the participants desired information to help them maintain financial stability. According to Maslow, once this need is met, then the YBFR can begin seeking more complex skills and civic responsibility.

The second major category of educational need discussed by the YBFR was the category of legal knowledge. The educational need for legal knowledge was twofold. First, a more comprehensive understanding of government laws, regulations, restrictions on water and property rights, contracts, and programs was identified as critical to success. Secondly, the YBFR discussed a need for developing legal knowledge of farm transition

and succession plans. These findings are consistent with past research that identified legal knowledge in the form of estate planning and farm succession as an educational need for both younger and older farmers (Fetsch, Bastian, Kaan, and Koontz, 2001; Eberspacher & Jose, 2005; Trede and Whitaker, 2000). The need for legal knowledge also relates to Maslow's (1954) second level, safety. The YBFR's need for legal knowledge stemmed from their insecurities with their future and the need to feel safe within their family's farm plan.

All focus groups noted the need for improved communication skills. YBFR expressed the desire to enhance their ability to communicate with family members, other people within their farm or ranch, and to develop the skills to communicate to a broader audience such as loan officers and the even the general public. As Lexie said, "Communication skills are really key because you're taking over for someone." These findings echo what Trede and Whitaker (2000) found in Iowa; YBFR need the skills to tactfully express their concerns and options with family members and the ability to remedy existing family communication problems. As the majority of internal communication problems and needs deal with the interaction between the farming generations, it is important to note that not only do YBFR find a need for improved communication, but also older producers express a need for improved communication with family members as well (Fetsch et al., 2001; Eberspacher & Jose, 2005).

Nuthall (2010) noted people and communication skills as critical competencies needed for farmers and ranchers to succeed. The YBFR in this study supported Nuthall's research conclusions. John expressed that, "We're the ones who are going to be in the

focus, in the spotlight as the next generation of farmers and ranchers.” Many other YBFR agreed that building public communication and advocacy skills were important for the future. Charles mentioned that he finds it interesting and important to learn “how to transfer my life and business to the larger community.” Overall, the groups noted the importance of developing skills to help them explain agriculture to people outside of agriculture and ultimately advocate for the industry.

The need for communication skills relates to multiple levels of Maslow’s Hierarchy of Needs (1954). The need for better communication strategies with family and other internal members of the operation indicates that the YBFR are at the third level of the hierarchy, love and belonging. YBFR seek the security and comfort of others in their lives and hope to improve upon these relationships. Those YBFR who were content with their family communication and overall showed, through the discussion, that they were comfortable with their love and belonging needs were the participants who explicitly discussed advocating for agriculture and teaching others about the business. These participants expressed needs that aligned with Maslow’s fourth level of need, self-esteem. At this level, people seek to develop skills relating to public leadership, service, and finding respect from others (Maslow, 1954). This was demonstrated by the YBFR discussion of the educational need to develop communication skills for teaching the public and improving advocacy skills.

The last major category discussed by the YBFR in this study was the need for improved practical management skills. YBFR sought information on new technologies to improve the efficiency of their operation and keep them on the “cutting edge”. Practical

management skills ranged from crop health to animal nutrition to animal reproduction technologies. The interest in new technologies was consistent with previous research which found that young farmers are more interested and more accepting of new technologies (Adhikari, Mishra, and Chintawar, 2009). The practical technologies of interest to YBFR also represented the need for safety in Maslow's Hierarchy of Needs. Technologies improved efficiencies and were of interest because of their potential to further insure the farm was competitive, prosperous, and therefore sustainable.

Educational Programing Preferences

When planning educational programs for adult learners, it is important to take into account how the adults want to learn, what they want to learn, and within what environment adults want to learn (Knowles, 1984). Therefore, the programing preferences of the YBFR were described in detail in Chapter 4. It is also important to relate these findings to literature review and program planning ideals to expand the utility of this research.

Gasson (1973) reasoned that farmers have specific life goals and seek education and information in an attempt to satisfy these goals. Knowles (1984) wrote that adults are predominantly driven by internal motivators and less by external motivators. The YBFR in this study supported those principles; YBFR explained that they seek educational information to satisfy a desire to improve themselves and their agriculture operation as well as a desire to be different than previous generations. Lilly voiced that she attends educational events because "I want to make that place a better ranch by being

there.” Dollisso and Martin (1999) also found that young farmers attend educational workshops due to the ambition to learn and ultimately the desire to be successful.

YBFR in this research outlined three key components to a successful educational program. The participants viewed networking, content, and the learning environment as three factors that make a program successful. Networking opportunities were viewed as significant indicators of a successful program. Programs that prevented networking were less impactful than those that incorporated a networking component into the educational event. Charlotte believed networking renewed her positive attitude and encouraged personal growth because “You see other young people out there who do this too and it’s not just us.” Franz et al. (2010) and Kilpatrick and Johns (2012) likewise reported that farmers in general prefer educational events that incorporated learning through social interaction with other farmers.

The YBFR in the focus groups also discussed the importance of having the opportunity to network and learn from older producers through the development of mentor relationships. Miranda viewed the retiring farmer and rancher age group as a “wealth of knowledge” and “resources that the community is losing.” Levinson et al. (1978) explained, “The mentor relationship is one of the most complex and developmentally important, a man can have in early adulthood” (p. 97). He continues to describe a mentor as a person who is older, not a parental figure to the young adult, and assists the young adult as an “advisor” and helps the young person “facilitate the realization of the Dream” (p. 98).

The second programming preference the YBFR identified was a positive, interactive learning environment. Participants appreciated learning environments that incorporated small group learning that was hands-on. An effective speaker was considered a person that encouraged group interaction and discussion, had practical experience and advice, and utilized demonstration techniques to as Jenny stated, “Prove how he did it.” These findings parallel opinions of older, experienced farmers and ranchers; many studies have found that farmers in general prefer hands-on learning, involvement of a qualified speakers, and the use demonstrations and tours compared to other learning environments (Joerger, 2003; Eberspacher & Jose, 2005; Franz et al., 2010; Eckert & Bell, 2006).

Thirdly, YBFR considered the nature of the program content and the variety of topics presented as critical determinates of program success. They preferred new information that was relevant to their situation and associated problems. Nate expressed that he attends educational events to “look for new ideas to improve what we are producing.” Steve stated that he preferred when the information was “what you need and haven’t been already exposed to.” Content that relates to the needs described in the previous section and ultimately provides new information to increase operational efficiencies was viewed beneficial by the groups. These findings were consistent with the educational preferences among all farmers regardless of age or experience (Joerger, 2003; Dollisso & Martin, 1999; Patrick et al., 2007; Hall et al., 2003). YBFR also appreciated take-home and speaker contact information. They used the information to review the content and follow-up with the speaker for more in-depth information.

The YBFR also discussed factors that they considered as barriers and pitfalls of educational programming success. Barriers associated with educational programs revolved around the excessive time and distance required to attend the program and a general lack of program awareness. YBFR expressed that they preferred events that gave them the opportunity to leave the farm and focus on learning; however, these events needed to align with a slow farming season and be worth the distance. As Steve mentioned, “[A] two to three hour deal and driving two hours [to get there] pretty well kills your day.” Multiple day events allowed for the YBFR to make plans to attend and the scope of these events made the time commitment worthwhile. They recommend the use of social media sites, flyers, and word of mouth to advertise these and other programs.

Overall the groups discussed many educational programming pitfalls. They found it frustrating when the information was impractical, irrelevant to their problems and needs, and inaccurate. As previous research has demonstrated and these results support, YBFR dislike environments that do not allow for discussion, interaction, and are only lecture based (Trede & Witaker, 2002; Joerger, 2003; Eberspacher & Jose, 2005; Franz et al., 2010). Information and presenters that were untrustworthy and inefficient were also viewed as negative; this supports results from past research that showed farmers want information that is presented by trusted, unbiased speakers (Eberspacher & Jose, 2005). Eckert and Bell (2005) explained that negative experiences at educational events may impact the farmer’s mental model and ultimately drive him/her away from using that information source in the future. Therefore, it is important for program planners to

realize the barriers and pitfalls associated with YBFR educational programs and delivery formats, in order to make educational events positive, beneficial learning experiences.

Educational Delivery Formats

The last item discussed by each focus group was the concept of their preferred delivery methods. In past research, this area of research has demonstrated the largest difference between older, traditional farmers and YBFR. Past research has recognized that YBFR tend to be more accepting of new technologies. Although some commonalities exist, research has found that young producers prefer different delivery formats than older producers (Telg & Barnes, 2012; Howell & Habron, 2004; Licht & Martin, 2006).

The YBFR in this study expressed that the preferred delivery format is dependent on the type of information sought and the desired depth of that information. For day to day information sources, the YBFR utilized electronic sources such as organizational websites, search engines, and video sites. They also utilized email, print sources, personal communication, and organization communication. Emailed newsletters that contained hyperlinks to more information were viewed as efficient for a steady stream of information. Telg and Barnes (2012) also found that Florida young farmers and ranchers utilized internet, email, and social media technologies as key information sources.

Even with the heavy and constant use of email and internet sources, YBFR still found print sources such as books and magazines useful. Several previous studies of older producers have found that newsletters and written sources were information sources preferred by farmers (Sligo & Massey, 2007; Howell & Harbon, 2004). Personal and

organizational communication with agencies and associations, such as Extension, Farm Service Agency, and many others, were considered important sources of information by all participants. The Extension Service was also identified by YBFR in Trede and Whitaker's (1998) study as a trusted information provider.

Social media was discussed in every focus group. Overall, the YBFR viewed social media as important for the promotion of educational programs but were wary about the transmission of educational information through social media platforms. They expressed a need and desire to embrace social media and use it as a medium to stay connected. This was congruent with the results found by Telg and Barnes (2012); young producers in their study also expressed concern with the trustworthiness and accuracy of social media information but agreed social media is a great marketing tool for promotion.

The results in this study extended beyond just the commonly discovered understanding that young farmers and farmers in general prefer face-to-face educational programs (Trede & Whitaker, 2002; Hall et al., 2003; Patrick et al., 2007). In terms of actual educational program format, YBFR in this study overwhelmingly preferred not only face-to-face interactions but the more specific conference-formatted events. All focus groups agreed that extended producer education events provided them with the best educational opportunity. Longer duration events gave them a chance to leave the farm and concentrate solely on their educational needs and also provided them with networking opportunities.

Recommendations for Future Research

Although farmer education has been the focus of multiple research studies, research specific to the educational needs and preferences of YBFR must continue to expand. Much of the existing research is dated and does not take into account new communication technologies and their increasing presence in society today. This study offered an in-depth view of the educational needs and programming preferences of YBFR in Montana and can be used as a springboard for future research in this area. Both qualitative and quantitative studies are needed to provide support and elaboration of the findings from this study.

In future studies, a few considerations need to be taken into account when replicating this research or designing similar research studies. Dividing the focus groups by areas of the state proved beneficial for comparison purposes. However, future research that aligns regions with statewide statistical data such as the National Agriculture Statistics Service could provide more in-depth comparisons and conclusions from each focus group. Also, when planning focus groups to address questions similar to this study providing two hours for each focus group would provide a more exhaustive consensus of the issues discussed. During this research, several aspects appeared as surprising and should be researched further. These aspects included the focus on networking, generational relationships, mentorship interest, and the focus on longer duration events.

The YBFR in this study provided a unique and in-depth look into their educational needs. The findings from this research contribute to the understanding of

YBFR educational needs but further research is needed to expand on these findings and apply them to a broader audience. The findings from this study need to be tested using both qualitative and quantitative methodologies with other YBFR in both Montana and across other states. Quantitative studies evaluating the preferences of educational needs among YBFR could refine and verify the research results found in this study and make them more generalizable to a larger population. Further qualitative research is needed to expand on the usefulness of Maslow's Hierarchy of Needs in relation to the needs of YBFR; qualitative research evaluating the progression of YBFR through the hierarchy as a result of attending educational programs could provide valuable programming insights.

Multiple programing preferences and delivery formats were identified and described in this research. Research is needed to test these findings of preference for actual effectiveness within the YBFR demographic. Both qualitative and quantitative studies are essential to establish a connection between what YBFR prefer as delivery formats, use of these formats for specific information, and the actual educational advantages and disadvantages of these delivery formats. Patterns and cause and effect relationships need to be studied between the learning preferences of YBFR and the improvement of YBFR intellectual aptitude. Future research needs to evaluate if providing educational environments preferred by YBFR actually improves the ability to learn the material and if so, how and why this occurs. Testing the connection between preferred learning environments and future programing attendance is also needed; research is necessary to establish an actual connection between programs that are planned

to meet the needs and preferences of YBFR and overall attendance and impact of the program, as compared to other nonspecific educational programs.

Future research could explore the formal and informal educational opportunities that currently exist for YBFR. Applying the YBFR preferences found in this study, could provide useful evaluation characteristics. Researchers could also develop new programs to meet the needs and preferences of YBFR found in this study and create more beneficial formal and informal educational opportunities.

Research focusing on the difference between educational needs and preferences of YBFR and older, established farmers and ranchers is also needed. Although past research has considered the needs and preferences of both groups, little research actually compares the two groups. A comparison would provide program planners with a greater understanding of when this farmer and rancher group needs to be split by demographic or when one general program can effectively serve both groups.

The importance of networking arose as a critical component of YBFR. Research should focus on the types, structures, and impacts of networking opportunities developed for this demographic. Further development of the aspects of networking opportunities that appeal to YBFR, educational settings and activities that best facilitate networking, and the effectiveness of developing a mentorship program are all aspects that warrant future research.

Finally, longitudinal studies would provide insight into the evolution of farmers' and ranchers' educational needs and preferences throughout the lifespan. Long-term research that follows this group of YBFR through the life stages would provide insight

into not only the educational needs of each age range, but also details of how education, age, and experience impacts the needs and preferences of individuals. Other longitudinal studies could focus on the effect of continued education, through educational events and other delivery formats, on the overall knowledge and success of not only YBFR but all farmers regardless of age or experience. Developing a more comprehensive understanding of the evolving educational needs and preferences of farmers in general, will lead to more impactful educational programs and ultimately more successful agriculture operations.

Implications for Educational Programmers

YBFR are important to the future of agriculture both in Montana and in the United States. This group is enthusiastic and eager to learn new information and participate in networking opportunities. As Christina explained, “We [YBFR] realize that education is how you are going to get just one more step forward in your business.” Agriculture agencies and organizations need to work together to create educational programs that meet the needs of YBFR. By across organization collaboration, more comprehensive, information rich programs can be developed. The YBFR in this study received information from multiple sources and entities; therefore, by collaborating with multiple organizations, educational programs and materials can be developed that provide the detail and variety preferred by YBFR.

YBFR expressed that they use many different information delivery formats to receive educational information; however, the overwhelming majority indicated that

longer duration producer events and face-to-face sessions were the most useful and preferred. Taking this into account, agriculture educators need to plan educational events that provide enough information to make it worthwhile for the YBFR to leave the farm and attend the event. Educational events should also mitigate as many barriers as possible; programmers should consider planning around busy times of the year, providing enough high quality information to make the time and distance requirement tolerable, and utilizing multiple forms of advertising, including social media groups and events.

The findings and insight provided from this study were broadly applied to the University of Wisconsin-Extension's logic model to develop recommendations for educators interested in building a program for YBFR illustrated in Figure 5.

Figure 6. Modified YBFR Logic Model.

Program planners must work to make educational programs for YBFR beneficial and positive experiences. The overall perception of the program impacts the desire for future education. Incorporating the identified educational needs draws YBFR into the educational program; it is essential that educators take into account these educational needs and the corresponding level of Maslow's Hierarchy of Needs when constructing programs for this group. The actual content presented must be relatable to the actual needs expressed by the YBFR and must be presented in a context that allows for application of the information on the farm or ranch. YBFR must be involved in the program planning process and the continuous assessment of educational needs to insure that after these initial needs are met, they can move up Maslow's Hierarchy of Needs (1954) to the upper levels of esteem and self-actualization. New needs will need to be identified as YBFR cognitive development surpasses the lower levels.

Educators and program planners must account for the learning preferences of YBFR. Learning environments must promote discussion and interaction amongst the participants and between the participants and the speaker. When the topic allows, hands-on learning activities and agriculture tours should be incorporated. Regardless of the topic or format, the atmosphere needs to be positive and interactive. It is important to remember that as John and Charlotte, expressed they attend educational events because it "helps give me a positive attitude" and to "get excited... and inspired again."

YBFR programs and events need to provide the group with enough information on the topic that they can take it home and apply it. A broad overview of information does not satisfy this need for applicable knowledge. Educators and facilitators should

take this into account and provide scenarios and role-playing opportunities to deepen the understanding and application of the information at the actual program. Building this more complete understanding of the problem and content during the educational event will improve retention and application of the techniques later on the farming operation. YBFR also discussed one major pitfall of educational workshops was lecture only learning environments. By incorporating small group learning, discussion, role-playing, and scenarios into the event, the retention and understanding of the content improves; by the same token, the overall YBFR's perception of the program also improves.

Regardless of the delivery format chosen to disseminate educational information, whether it is face-to-face conferences or webinars, archiving the presentation and the contact information of the presenter is critical. One method of providing this archived information from a face-to-face setting would be distributing electronic copies of the information presented at a conference on a flash drive or CD, because as Blair stated after the educational event, "if I need to look something up, at least have the talking points of what the speaker said."

Lastly, the YBFR discussed the desire to establish mentor relationships with successful, older farmers and ranchers. Agriculture organizations should utilize this interest and develop mentorship programs between older and younger members. By facilitating a relationship between older generations and this new generation, the younger members can develop new skills and a more robust understanding of agriculture information.

Young and beginning farmers and ranchers are driven by a desire to improve themselves and their farm or ranch. As Lilly expressed, “I want to make sure I make that place a better ranch... I want to go back an asset.” Developing programs that are specific to the educational needs and preferences of this group is important because it gives these farmers and ranchers an opportunity to meet other young producers. County, regional, state, and national YBFR events should be formed to encourage interaction at all levels. As Lexie stated, “When you’re the only young person [in your area] you feel completely and totally alone and coming to [young producer events] helps that.” Educational events that provide opportunities for young and beginning farmers and ranchers specifically were viewed as beneficial formats for providing both educational information and networking opportunities.

Recommendations for Industry Programmers

Program planners and educators within the agriculture industry need to address several findings within this research and adapt current dissemination and educational practices to reach this important group of YBFR. The barriers and attitudes toward education identified within these focus groups leads to several recommendations. YBFR are busy and prefer information sources that provide educational information when they need it, at their discretion. Traditional education sources such as agriculture related radio shows and early morning agriculture focused television broadcasts were not mentioned by the YBFR although they have been traditionally viewed as important and heavily trafficked by farmers and ranchers. With advents of new online technologies such as

video streaming sites and smart phone applications (apps), industry educators need to investigate these dissemination avenues to reach YBFR. Archiving traditional agriculture programs such as Montana Ag Live, the Northern Ag Network, and other agriculture radio and television programs online, in a common area, would allow for easy access by YBFR. Through developing this online agriculture channel of webinars, videos, and audio recordings, industry programmers will address several barriers discussed by YBFR and provide efficient and easy access to educational information that fits into their daily lives. Emails with hyperlinks to these videos should be sent to YBFR to promote initial use of the online service. Smart phone apps could provide instant, mobile access to these online educational channels and need to be developed reach the YBFR in today's technology driven society.

YBFR also expressed the need to attend events and network with peers, other farmers, and industry professionals. Providing one longer duration event a year and then providing supportive workshops and meetings more locally throughout the year would increase the face-to-face interactions and networking valued by YBFR and minimize time and distance barriers. Working around busy times of the year and providing support services such as childcare and travel scholarships could further reduce barriers. When local programs are not feasible, a monthly email providing hyperlinks and educational updates would provide the baseline educational experience desired by this group. Social media groups also need to be formed to promote these educational events and continuous networking among YBFR.

YBFR identified educational needs within the realm of agriculture skills as well as communication and business skills, which can be related to industries outside of agriculture. Industry professionals should look into family business management trainings and resources provided across all industries. By looking to other industries for sources, agriculture educators and programmers can provide the education on communication and business skills desired by YBFR. Collaborating with educational institutions, private and public organizations, and government agencies within agriculture and beyond agriculture will provide programmers with the resources to meet the expansive list of needs identified by YBFR.

Summary

The conclusions of this qualitative study demonstrate that YBFR have unique educational needs and delivery preferences. The findings provided insight into the factors, barriers, and programing characteristics that impacted YBFR perception of educational programs. Findings and conclusions must be acknowledged by organizations and agencies providing educational information to farmers and ranchers and utilized to create impactful educational programs for young and beginning farmers and ranchers. By reaching out to this demographic, agricultural educators will not only create more specific and comprehensive programs, but will also stimulate future utilization of educational resources, expand the knowledge of young and beginning farmers and ranchers, and ultimately build a more prosperous agriculture industry.

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APPENDICES

APPENDIX A

CODES

Across Focus Group Codes

Open Codes (in vivo)

Axial Codes

Selective Codes

Skills, competencies and needs of young and beginning farmers and ranchers

Open Codes (in vivo)

Axial Codes

Selective Codes

Open Codes (in vivo)

Axial Codes

Selective Codes

Open Codes (in vivo)

Axial Codes

Selective Codes

Open Codes (in vivo)

Axial Codes

Selective Codes

Western Region Focus Group Codes
Focus Group 1

Skills, competencies, and needs of young and beginning farmers and ranchers

Open Codes (in vivo)

Axial Codes

Selective Codes

Educational programming preferences designed for young and beginning farmers and ranchers.

Open Codes (in vivo)

Axial Codes

Selective Codes

Taught in small groups

Interactive

Worksheet that goes with their discussion

Personal interaction

Hands-on

Interactive,
Small Group Learning

Getting off the farm

Get away from the kids

Have some fun

Positive attitude

Get excited again

Get inspired again

Inspiring, Positive,
Off-farm Experience

Entertaining or inspiring speaker

One on one communication between the speaker

Upbeat and positive

Practical in the field knowledge

Follow-up with individual participants

Inspiring,
Knowledgeable
Speaker

Positive,
Interactive
Learning
Environment

Open Codes (in vivo)

Axial Codes

Selective Codes

Open Codes (in vivo)

Axial Codes

Selective Codes

Open Codes (in vivo)

Axial Codes

Selective Codes

Delivery formats preferred by young and beginning farmers and ranchers.

Central Region Focus Group Codes
Focus Group 2

Skills, competencies, and needs of young and beginning farmers and ranchers.

Educational Programming preferences designed for young and beginning farmers and ranchers.

Open Codes (in vivo)

Axial Codes

Selective Codes

Open Codes (in vivo)

Axial Codes

Selective Codes

Open Codes (in vivo)

Axial Codes

Selective Codes

Open Codes (in vivo)

Axial Codes

Selective Codes

YouTube
Internet

Electronic Sources of
Information

Browse a couple emails
Steady stream of, of what's going
Constant kind of changes
Opens up the greater discussion

Brief Emails for Information

Editorials
Newsletters
Books
Magazines

Print Sources of Information

Day to Day
Information
Sources

National YFR
Montana Farm Bureau
Collegiate Stockgrowers
American Simmental Assoc
MSU Extension
College of Ag
Federal agriculture research (Ft Keogh)
Industry suppliers

People & Organizational
Information Sources

Social media these days is huge
Not just Facebook
Twitter
LinkedIn
Is really powerful, it is also really dangerous
A great place to start of feud
Reach out to a lot of younger people

Perceptions and Use
of Social Media

Social Media Use
for Reaching
Younger
Generation

Conference attendance
Seminars
Conference setting
Get more from being here and being present

Conferences
Formatted Events

Prefer Extended
Producer Educational
Events

Delivery formats preferred by young and beginning farmers and ranchers

Eastern Region Focus Group Codes
Focus Group 3

Skills, competencies, and needs of young and beginning farmers and ranchers

Open Codes (in vivo)
Codes

Axial Codes

Selective

Educational programming preferences designed for young and beginning farmers and ranchers.

Open Codes (in vivo)

Axial Codes

Selective Codes

Face to face

Opportunity to feed off of one another to come up with a
question that I wouldn't have thought of someone else will

I would much rather talk to someone

Role-playing that put us on the other side of positions
that we weren't used to

Interactive,
Small Group
Learning

This is great for me because it kind of jump starts you

You get re-inspired to push & learn more;
maybe look at a new way of doing things

Feel better about the way you might be doing things at home

Inspiring,
Positive
Learning
Experience

I am more of a kinetic learner

You got to take me, take me through the steps

For more in-depth stuff I do hands-on

Well I am a real big hands-on learner

Hands-on Learning
Experiences

Going on those tours helps you understand
that agriculture is bigger than Montana

Educational tours

Agriculture Tours

Positive,
Interactive
Learning
Environment

Open Codes (in vivo)

Axial Codes

Selective Codes

New ideas

Wanting the knowledge that is here

Fine line between chasing trends &
trying stuff that is proven but new

Help us in the long run, to take back & try new things

Ways to become more diverse in production

Research

Enough information to decide one way or another
if it would work for our situation

Education is how you are going to get just that one more
step forward in your business

Didn't stay in business doing the same thing year after year

New Information
& Innovations to
Improve Self &
Operation

Not focused on one single thing

Broader opportunity here to learn about cattle, pulse crops,
about all these things & we can take bits and pieces & apply it

Good trade with tons, tons of different options

Multiple facets including assistance programs,
budget, market values, opportunity research

Learned about multiple crops, practices, ect.

In different topics in Ag and sit through different seminars

Variety of
of Content

Nature
Program
Content

A real life application

It's worth so much to know how to run stuff, mechanic, &
welding so you know the knowledge & skills to fix it yourself

Subject that is very currant and relevant to my situation

Problem solving

Tailor it very well to our specific needs

Content
Relevant
to Situation
& Problems

Open Codes (in vivo)

Axial Codes

Selective Codes

Open Codes (in vivo)

Axial Codes

Selective Codes

Delivery formats preferred by young and beginning farmers and ranchers.

Open Codes (in vivo)

Axial Codes

Selective Codes

I think we have to embrace social media
 “Marketing yes, education not so much
 I think it entices you more than anything
 A Facebook page they post stuff on there;
 it’s good to just read it real quick
 Realize it can be a deterrent to us too

Perceptions & Use
 of Social Media

Social Media for
 Program Promotion

Conferences
 NWFCs seminars
 Local Ag related meetings
 Trade shows
 Convention
 Weeklong
 A day and a half

Conference Formatted Events

Prefer Extended
 Producer Educational
 Events

APPENDIX B

MODERATOR GUIDE AND QUESTIONING ROUTE

Moderator Guide and Questioning Route

Moderator: Hello and welcome. Thank you for taking the time to join our focus group discussion on the educational needs and preferences of young and beginning farmers and ranchers. My name is Dr. Shannon Arnold and I am an assistant professor in agricultural education at Montana State University. Assisting today is Alexandra Hill and Nikki Bailey also from MSU.

You have all been invited here today because you are all young and beginning farmers and ranchers and active members in production agriculture. This focus group is designed to develop baseline qualitative information concerning the educational needs and preferences of young and beginning farmers and ranchers for educational programs. In front of you is an informed consent form. Please read through the consent form in front of you and sign it if you agree to participate in this focus group session. Please hand the form to Nikki when you are done.

Before we begin, let me go over a few things that will make our discussion more efficient and productive. First, there are no right or wrong answers in this discussion; only differences in perceptions and opinions. Please feel free to express your opinions and point of view on all the topics even if it differs from others in the group. Second, for clarity, please only one person speak at a time and please speak clearly.

We are video-taping and recording this discussion to insure that we don't miss any of your important thoughts and comments. Although we will use first names here, however, in later reports, no names will be used and your identities will remain confidential.

As the moderator, my role is to ask the questions and listen. I will not participate in the discussion. Please feel free to discuss each of the questions with each other. It is essential for each one of you to participate in the conversation today. Each of you has different a background and different experiences that are valuable to the discussion. I'll be asking about 8 questions and move the group from one question to the next. Once again, it is important that everyone expresses their thoughts and opinions to the questions. Therefore, if you are sharing a lot, I might request that you give others an opportunity to express their thoughts. By the same token, if we haven't heard much from you, I may ask for your input in the discussion. This will help ensure that we have a wide range of perspectives represented.

This focus group will last about 1 hour. Since we only have a short time to hear your valuable opinions, if you have a cell phone please place it on silent.

Alright, let's begin the session by introducing ourselves to the group. Please go around the room and tell us your name, where you are from, and briefly explain how you are involved in agriculture in one minute or less.

Nominal group technique

Thank you. Now I'd like to begin the discussion portion of this focus group by having each of you participate in an activity to learn more about your educational needs.

In front of each of you, you have a pen and sticky notes. I would like each of you to answer the following question by writing one word or a short phrase to answer the

following question. Please write only one answer on each of the sticky notes in front of you.

- In your opinion, what are the most important topics for educational programming for Montana young and beginning farmers and ranchers?

Everyone should have at least five responses to the question on five different sticky notes. When you have completed your answers, please walk up to the board and place the sticky notes on the board.

Thank you. Your answers will be grouped into categories and prioritized by the assistants.

Unaided

I would now like to move onto more discussion of your educational needs as young farmers and ranchers. Please share your opinion and discuss as a group your overall perceptions of the next set of questions.

- What do you consider as the most critical management skills and competencies needed of young and beginning farmers and ranchers?
- In your opinion, what motivates you to seek out and participate in educational programs?

Thank you; now let's move onto more specific questions about your needs for educational programs.

- Think back to the most successful educational workshop/program you have attended...

On the piece of paper in front of you, please create a model that conceptualizes a successful educational experience. Thank you. Now will you please discuss with the group...

- What makes an agricultural educational workshop/program successful?
- What delivery format do you prefer to receive educational information?
- What do you hope to gain from attending educational programs?

Concluding discussion

Thank you for your discussion so far, this has been very insightful and thought provoking.

- Have you thought of any other thoughts or important points you would like to add about young and beginning farmers and ranchers educational needs or aspects of successful programs?

Now Nikki is going to summarize the important themes from today's discussion. These will be the main points and themes developed from this focus group. The main topics discussed were...

- Is this a satisfactory summary?

Moderator: As presented at the start of the focus group, the purpose of this discussion was to develop qualitative data on the educational needs and preferences of young and beginning farmers and ranchers. Your comments today will be useful in developing programming recommendations for educators.

- Have we overlooked any important points or would anyone like to make any final comments?

Moderator: Thank you for participating today and sharing your thoughts and insight.

We greatly appreciate your participation and you have provided a unique perspective on this topic. Thanks again.

Researcher facilitates the following debriefing questions between moderator and assistants after each focus group.

1. What are the most important themes or ideas discussed?
2. How did these results differ from what we expected?
3. How did these differ from what occurred in earlier focus groups?
4. What points need to be included in the report?
5. What quotes should be remembered and possibly included in the report?
6. Were there any unexpected findings?
7. Should we do anything differently for the next focus group?

APPENDIX C

PARTICIPANT PROFILE PAGE

Young and Beginning Farmer and Rancher Focus Group

Participant Profile Page

Please fill out this page and bring it with you to your focus group. Thank you!

Name: _____

Age: _____

Number of years farming/ranching: _____

Type of agriculture operation: _____

Position of the farm/ranch:

What existing agriculture educational resources do you currently use?

What are program areas/topics that you would like to see focused more toward young/beginning agriculture producers rather than just agriculture producers as whole?

APPENDIX D

INTERNAL REVIEW BOARD APPROVAL

INSTITUTIONAL REVIEW BOARD
For the Protection of Human Subjects
FWA 00000165

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Administrator:
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MEMORANDUM

TO: Nikki Bailey and Shannon Arnold
FROM: Mark Quinn, Chair *Mark Quinn*
DATE: September 24, 2012
RE: "Educating the Future of Agriculture: A Focus Group Analysis of the Programming Needs of Montana Young and Beginning Farmers and Ranchers" [NB092412-EX]

The above research, described in your submission of September 24, 2012, is exempt from the requirement of review by the Institutional Review Board in accordance with the Code of Federal regulations, Part 46, section 101. The specific paragraph which applies to your research is:

- ☐ (b) (1) Research conducted in established or commonly accepted educational settings, involving normal educational practices such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
- ☒ (b) (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.
- ☐ (b) (3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
- ☐ (b) (4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available, or if the information is recorded by the investigator in such a manner that the subjects cannot be identified, directly or through identifiers linked to the subjects.
- ☐ (b) (5) Research and demonstration projects, which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.
- ☐ (b) (6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed, or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the FDA, or approved by the EPA, or the Food Safety and Inspection Service of the USDA.

Although review by the Institutional Review Board is not required for the above research, the Committee will be glad to review it. If you wish a review and committee approval, please submit 3 copies of the usual application form and it will be processed by expedited review.

APPENDIX E

INFORMED CONSENT FORM

Subject Consent Form for Participation in Human Research at Montana State University

Project Title: Educating the Future of Agriculture: A Focus Group Analysis of the Programming Needs of Montana Young and Beginning Farmers and Ranchers.

You are being asked to participate in a study exploring the educational needs of young and beginning farmers and ranchers in Montana. You have been chosen for participation in this study because you are currently involved in production agriculture as a young and beginning farmer or rancher and located within the study area. You will participate in one voluntary focus group which will be conducted at the 2012 Young Ag Leadership Conference. The focus group should take around 1 hour to complete and will be video recorded.

The study is completely voluntary. If you agree to participate, your responses will be anonymous and confidential in all reports. If you elect to participate in this study, you will be asked a series of questions in a group interview setting. The focus group discussion will take around 1 hour. As an incentive for participating in the study, you will be entered into a drawing for a \$25 gift card after completing the focus group. A total of three gift cards will be awarded, one per focus group, and will be awarded in a random drawing at the completion of each focus group.

There are no risks beyond the minimal associated with your participation in this study. The video recording of this focus group will not be distributed and will only be viewed by the researcher for data analysis purposes. The answers and discussion will be used to achieve insight into the educational needs of young and beginning farmers and ranchers in Montana.

If you have questions regarding this research, the data collection or analysis process, or plans for dissemination of results you may contact Nikki Bailey at (406) 231-1075 or email: nikki.bailey@msu.montana.edu or Dr. Shannon Arnold at (406) 994-6663 or email: Shannon.arnold@montana.edu. If you have questions or concerns about your rights as a human subject involved in this research, you may contact Dr. Mark Quinn, Institutional Review Board Chairperson, at (406) 994-4707, or email: mquinn@montana.edu

AUTHORIZATION: I have read the above and understand the discomforts, inconvenience, and risk of this study. I, _____ (name of subject), agree to participate in this research. I understand that I may later refuse to participate, and that I may withdraw from the study at any time. I have received a copy of this consent form for my own records.

Signed: _____

Investigator: _____

Date: _____

APPROVED
MSU IRB
09/24/2012
Date approved