

The Influence and Relationship between  
Livestock Producers and Salespeople in  
the Feed and Animal Health Industry

Laura K. Bohlander

Honors Theseis

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Advisor: Dr. Allen Gray

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## I. Introduction

### a. Summary

As the livestock industry continues to grow and change, complexity of the decision making process and the influence and relationship with the salesperson changes as well. In this research, these key issues are addressed and analyzed to conclude key results regarding the way current producers view the complexity of making decisions as well as the role and influence of the salesperson. The analysis is based on the age of individual producers of the operation, size of the operation, and primary species raised on the operation. As a result of the analysis, it has been concluded that the demographic of the individual producer has greater influence on the decision making process and the view of the salesperson rather than the type of species on the operation. Honesty is valued highly among all demographics when looking at the specific attributes of the salesperson, but the characteristic of being a friend is not valued highly when looking at the characteristics of the salesperson.

### b. Problem Statement:

The livestock industry continues to shift with changing demographic structures and outside forces of the economy and society. The increasing global demand for food has caused livestock producers to grow their operations in size to remain competitive and sustain

the growing demand. As operations continue to grow, demand grows for animal health and feed products, and the complexity of the decision process intensifies. Rapidly changing feed markets and animal health regulations increase the complexity of the choices producers have in purchasing feed and animal health products. For the livestock nutrition and health companies, the increasing need for their products is positive. However, the increasing competition within the industry for the livestock producers' business and the complexity of the producer's decision processes increases the importance of buyer understanding within the market.

Much research has been conducted regarding decision making in different industries to help businesses in those industries better understand the buying behaviors of their customers in different segments. For example, research has been conducted regarding agricultural financial market segments with an emphasis on identifying the distinct market groups for financial products with commercial US crop and livestock producers. Knowing the characteristics of different segments helps give insight to the differences in decisions for customers within those groups. Yet, there has been little research work done on differences in the perceived value of the sales force for livestock producers when purchasing animal health and feed products.

The current structure of the livestock industry is largely consolidated, which leads to farms with more specialized and sophisticated business models with more complex decision making processes. Larger farms are becoming more specialized within a particular species rather than having smaller amounts of multiple species combined with diversified crop production. As quoted by the USDA, "U.S. livestock production has shifted to much

larger and more specialized farms, and the various stages of input provision, farm production, and processing are now much more tightly coordinated...” (MacDonald 2009).

Increasing regulatory requirements combined with on-farm veterinary and nutrition services have had an impact on the relationship of farm specialization and the brand-loyalty to companies. When companies use branding to gain business, it has been proven to be more successful in retaining long-term business. However, customers differ in their perception of the importance of branding in the purchase decision, and these perceptions can be defined into specific clusters (Mudambi 2002). Thus, product similarities among brands and the changing decision structure allow for more substitutable effects and less value toward a specific product.

With visibly changing markets and buying behaviors, companies need a competitive advantage to target the livestock producers correctly. Livestock product businesses in the United States can benefit from a better understanding of behaviors of their buyers and what attributes are important as producers make decisions for the farm operation. Better understanding of behaviors will allow animal health and feed companies to gear their sales strategies to different groups that align with the key product and service strengths. This research seeks to discover the differences in buying behavior and preferences among different sizes and types of livestock producers. Of particular interest is the influence and relationship of the salesperson in the increasingly sophisticated decision process of livestock producers.

### **c. Objectives**

The objective of this research is to determine purchasing behaviors of livestock producers for animal health and feed products, understand ideal characteristics for the sales force to the

producers, and identify key attributes toward buyer purchases within each group of producers.

The specific objectives are to:

- (1) Determine how different purchasing decisions are made for different groups of producers
- (2) Compare and contrast differences in producers opinions about the role and importance of the sales force and other decision influences for animal health and feed products by:
  - a. Size and type of livestock operation
  - b. Age of the producer
- (3) Describe livestock producer groups according to their preferences for interaction with the sales force.

#### **d. Hypotheses**

If demographic segmentation and key attributes for purchasing behaviors are similar between livestock industry producers in swine, cattle and dairy, then there will be no significant differences in purchasing behaviors between livestock producer segments. This broad hypothesis leads to the following specific hypotheses:

- I. The complexity of the decision structure remains similar for product type and operation type when looking at producer age, species, and operation size.
- II. Livestock operations have similar preferences for relationships with suppliers and the sales force across types of operations
  - a. Across species
  - b. Across age
  - c. Across operation size

- III. As the type of livestock operation changes in size, producer age, and species, the preferences for relationship attributes and activities with suppliers and the sales force is similar.

## **IV. Literature Review**

### **a. Livestock Industry Description**

The main sector of the animal industry in focus consists of beef, dairy, and swine operations as well as the feed and animal health industries leading into these operations. The global demand leading to the high production of these animals has impacted the practices of the operations, with the main emphasis including high efficiency of production and high quality of the product. With many regulations on production and veterinary services developed over the years, the livestock industries have had to readjust practices to comply with the regulations. For example, to prevent antibiotic and drug residue violations in meat, producers have adopted different prevention methods such as adequate withdrawal periods, drug-overdose prevention, and enhanced record keeping to ensure that no violations occur before the animals go to market. Such regulations have also had an impact on the animal health and feed industries as the suppliers of the medicines and supplements as the inputs of the value chain.

The cattle industry, as with most industries, is mostly driven by the consumer. According to the College of Veterinary Medicine at Washington State University, "...Everyone in the beef industry and allied industries must remember that they are producing a product for the consumer, most often a human foodstuff, and that this consumer has other choices to satisfy their needs" (Gray). In terms of livestock production, the cattle industry represents the

largest section in American agriculture, producing 31.4% of the United States' total meat market products. The USDA has also concluded that cattle operations represent 34% of all farms in the country (Lowe). The major inputs in the beef value chain are feed, veterinary services, and genetics. This research will only focus on feed and veterinary services.

Cattle are fed based on the different stages of production, and feed types change according to each stage. The first two stages consist of pasture grazing with grain introduced in the second stage. The inputs are purchased from local grain elevators, which do not consist of a concentrated market or key market players. The third stage, consisting primarily of grains, is also attained from local grain supplies; supplements such as minerals and hormones are typically added at this stage to promote the growth of the animal before harvest. To gain the most revenue from the final product, feeding strategies become a crucial way to gain maximum yield within an ideal cost. Depending on different herd size demographics, the importance of these input prices becomes an issue as the farm is considered a "price-taker," where the operation is the primary source of income, or it is not as much of a concern for "non-economic" producers, where producers have the operations for other reasons such as property grazing or hobby (Gray). Dairy cattle have an enhanced need for nutritional supplements and feed to maintain a high enough metabolism during the constant lactating. As a salesman of feed inputs, it becomes necessary to determine the needs of the farmer based on the simple strategy of the operation.

Animal health is also a primary concern for livestock producers for the concern of the animal and of the operation; veterinarians are considered the most important source of off-farm information on animal nutrition for cow/calf operations, and one of the most important for feedlots (Lowe). The veterinary service industry is not concentrated, like the feed

industry. The 50 largest companies hold less than 10 percent of the market (Lowe). However, the animal health supply industry consists of a small number of large companies holding large market share. A concern for the input suppliers of any health service is the threat of generic products. To defend against the generic products, options for the product originator to maintain sales are: “to prolong the life of patents ...; to develop and commercialize related compounds; to strengthen the brand name; and to develop innovative formulations and delivery methods” (Piribo). Delivery methods, such as sales, have the potential to greatly impact the animal health industry as well as the livestock industry. One of the most crucial strategies of sales is determining the needs of the buyer. According to Gray, “different sized herds have different needs for veterinary services, the smaller herds typically requiring more basic animal husbandry services and the larger herds more specialized services” (Gray). Dairy cattle needs require proper veterinary assistance to aid in many ways similar to beef, such as sickness, breeding, and injuries. However, dairy requires special attention to medicinal products due to the milk production. If improper medications are used, the milk may become contaminated, causing potential problems for human consumption of dairy products. These qualities make product knowledge crucial to salesmen to provide the most effective product to the customer.

The swine industry is very crucial to the American economy, as pork is the world’s most widely eaten meat. To produce the high quality meat demanded worldwide, feed grains, high-protein feed ingredients, vitamins, minerals, corn, barley, milo, oats, wheat, and water are all used in feed produced and sold to customers (Internal Revenue Service - IRS). The feed industry for pork production is highly concentrated, with primary top firms that control majority market share (Lowe). The high concentration of firms still constitutes for high

competition in sales, so it is valuable for salesmen to know the customer's values to sell the product. Similar to the beef and dairy industries, the animal health industry is highly concentrated as well for swine health products. All three types of swine operations, farrow-to-feeder, feeder-to-finish, and farrow-to-finish, have direct control over antibiotic use (Lowe). Therefore, salesmen need to be educated on what is best for the stage of production to benefit the development of the animal.

## **b. Buying Behavior**

Over the past few years, the types of buyers and their buying preferences and behaviors have continued to diversify. Traditionally, agribusiness managers and salespeople have thought of producers as belonging to one of three segments (Downey, Holschuh, and Jackson, 1999). These segments consist of "business buyers," "economic buyers," and "relationship buyers." However, Gloy and Akridge (1999) examined the commercial producer market and identified four main market segments consisting of: Balance, Price, Performance, and Convenience. This change has happened due to many different factors, including advancing technology, changing age demographics for producers and increasing farm sizes and sophistication.

Viewable, yet unanalyzed results from the study have led to some key findings related to buying behavior of individuals. For example, price as a determinant of buying is not the top reason of choosing a product. Further analysis could show if there are any demographic differences as to which groups of producers favor certain attributes, such as price or honesty, when purchasing products. Initial results like this need further analysis to determine if any trends in demographics, age, farm size, or other variables have correlation with these findings.

In an interview with Scott Downey, a professor in Selling and Sales Management in the College of Agriculture at Purdue University, future possibilities of change in selling behavior leading from the results of this study were discussed. Reformation of different segments has led to a needed shift in the sales process away from sales calls toward innovation of information. Salespeople are aware of the change of business in agriculture over the past years, transitioning toward more specialized farming, and such changes are leading toward a change in selling tactics. Salespeople need to be more aware of the consumer business needs rather than simply selling the product. The highest benefits to the consumer will come from a product that meets the needs of the consumer. To be more aware of the customer's needs, more preparation is required about knowing different products and the customer's needs.

The final impact of buying behavior is the decision making process. A study conducted by Martin Kocher and Matthias Sutter revealed two significant results to buying behavior:

- 1) Time pressure reduces the quality of decisions, and
- 2) In the presence of time pressure, time-dependent incentive schemes lead to quicker and, on average, even better decisions (Kocher, 2006).

This study revealed that when analyzing average decision making times, the quality of the decision initially decreases when a time constraint is implemented without an incentive for quality decisions. However, when analyzing shorter decision making times paired with an incentive, the final decisions were made faster and of higher quality than without an incentive.

Such implications of decision making relate to decisions made of business owners in the agriculture industry as well. The industrialization of the agricultural industry throughout the 20<sup>th</sup> century has impacted the decisions made by industry participants through preferences and

constraints (Hendrickson, 2005). Industrialization of agriculture has limited the industry through: (1) limiting the decisions of farmers by restricting choice options or the types of decisions they can make, regarding marketing or any business function; and (2) constraining farmers to specific choices by forcing them into the kinds of decisions that they otherwise would not have chosen for ethical or other reasons, for example genetically modified crops or treatment of livestock. Many contractual farming relationships do not allow for flexibility within the contract. Such removal of choices could potentially induce the decision-maker to lower his ethical standards (Henderson, p. 19 Figure 4). Thus, constraining choices for farmers can lead to erosion in the ethical behaviors of farmers.

Many different factors contribute to the behaviors and decision making processes of business owners. It is important for the salesperson to be able to decipher the most important attributes to the client, whether those attributes include values, price points, product differentiation, or other factors. The changes toward industrialization in the agriculture industry have also changed the preferences of farmers to reflect the needs of the business according to necessary decisions to help the business succeed.

### **c. Contribution to the Literature**

The current literature on farmer preferences has focused on buying behavior, services, and other business functions in agriculture. However, a gap exists in the literature on farmer preferences for salesperson characteristics and interactions, as well as the decision making process. This study will begin to fill the gap by examining livestock producers' preferences for the personal characteristics of salespeople and the activities performed by salespeople. This research will also look at potential differences in decisions made by different types of operations and producers.

## V. Methodology

To perform this research, data from the “2008 Large Commercial Producer Project” will be used. The survey was conducted in 2008 by Purdue University’s Center for Food and Agricultural Business. A sample of 2,500 crop and livestock producers responded to this survey in January and February of 2008; only data relevant to livestock producers will be used for this particular analysis. The resulting sample of 1007 livestock producers included 333 hog producers, 205 cattle producers, and 469 dairy producers from across the United States. This study will be explored using SPSS statistical analysis, specifically using crosstabs of different variables to obtain results within the survey data. Each component of this analysis will be examined by operation size, species type, and producer age.

The questions from the survey to aid in this research have been selected by the relevance to the previously stated objectives. Each question is described below.

The first question to be used in this analysis will analyze the way in which purchasing decisions are made on the farm for the product categories of: Animal Health, Feed, Capital Equipment, and Financial Products. For each product category, only one “purchasing decision” option can be selected. The purchasing decisions are:

- Made by me with very little input from family members and/or employees.
- Made by me after extensive discussions with other family members and/or employees.
- Made by the person responsible for using the item after extensive discussion with others on the farm.
- Made by the person responsible for the item with little input from anyone else.

- Made by a purchasing agent hired by our farm.

The second question is a series of Likert scale questions designed to provide opinioned feedback for the following statements:

- I value my relationship with the salesperson I buy expendable items from more than the relationship I have with the companies they represent.
- I value my relationship with the salespeople I buy capital items from more than the relationship I have with the companies they represent.
- I am relying more on salespeople for information and advice than I did five years ago.

The third question to be analyzed will help determine the importance of the listed characteristics when thinking about the best agricultural salesperson the individual knows. The items are to be ranked in terms of importance, from lowest importance to highest importance. The characteristics are:

- Has a very high level of technical competence.
- Represents my interests.
- Is honest.
- Is a friend.
- Knows my operation well.

The final question to be analyzed will help identify important activities performed by the salesperson. Each item is to be ranked individually on a scale of importance when thinking

about the best agricultural salesperson the individual knows and how important are each of the activities the salesperson performs. The activities include:

- Calls on me frequently.
- Provides good follow-up service.
- Is a consultant to my operation.
- Brings me innovative ideas.
- Provides relevant/timely information.
- Brings me the best price.
- Provides access to supplier resources.
- Helps me feel confident about my purchase decisions.

By using the stated questions, we will be able to analyze the objectives and hypotheses determined for the study. The first objective, “Compare and contrast differences in producers opinions about the role and importance of the sales force and other decision influences for animal health and feed products by: size and type of the livestock operation, and age of the producer,” will use the first question analyzed, which looks at the value of the salesperson to the producer. The second objective, “Describe livestock producer groups according to their preferences for interaction with the sales force,” will use the third question analyzed, which relates to the activities the salesperson performs. This objective will use the second question analyzed, which looks at the attributes of the salesperson important to the producer. The final objective, “Determine how different purchasing decisions are made for different groups of producers,” will be analyzed by the fourth question, which explores the decision making process by different product categories. The objectives to be analyzed will help form conclusions when testing the hypotheses that have been developed.

T-tests will be used to determine differences among different groups of producers, graphical analysis of crosstabs will be used to visually determine differences and draw conclusions, and statistical tests of differences across the crosstabs will be conducted to discover insights of producer preferences based on the questions analyzed.

## VI. Data and Analysis

### Introduction to Data Used

The data collected from the 2008 Large Commercial Producer Project had specific definitions for the classifications used. Of the farm types, the producers were broken into Dairy, Finished Hogs, Feeder Pigs, Finished Cattle, and Feeder/Stocker Cattle. From those specific categories, size ranges were determined for “Mid size,” “Commercial,” and “Large” operations based on the number of head at the farm. The physical units defining Mid size, Commercial, and Large livestock operations are defined in Figure 1.

Farm Type	Mid size	Commercial	Large
Dairy (cows, milked/day)	40-199	200+	1,100+
Finishing Hogs (head marketed/year)	800-3999	4000+	28,000+
Feeder Pigs (head marketed/year)	3,300-16,499	16,500+	42,000+
Finished Cattle (head marketed/year)	150-799	800+	7,000+
Feeder/Stocker Cattle (head marketed/year)	250-1,249	1250+	7,000+
***2008 Themes Report.” Purdue University, Center for Food and Agricultural Business			

**Figure 1: Physical Units Defining Mid size, Commercial, and Large Livestock Enterprises**

For this specific research, only categories of Dairy, Finishing Hogs, and Finished Cattle were used for analysis. A breakdown of the number of respondents per operation size per category is shown in Figure 2.

	<b>Hog Producers</b>	<b>Cattle Producers</b>	<b>Dairy Producers</b>
Mid size	106 (32%)	111 (54%)	151 (32%)
Commercial	192 (57%)	82 (40%)	269 (57%)
Large	36 (11%)	12 (6%)	49 (11%)
<b>Total Sample</b>	<b>333 (100%)</b>	<b>205 (100%)</b>	<b>469 (100%)</b>

**Figure 2: Proportion of Data Sample Categorized by Operation Size and Species**

As seen, the proportion of operations, broken down by size, is identical between hog producers and dairy producers. By looking at the data, “Large Cattle” is a very small representative sample. This should not have any effect on the data since all Large Operation analysis is conducted with all species combined.

Respondents were also classified by age. Age categories were grouped into: Under 35, 35-44, 45-54, 55-64, and 65+. Hog producers overall are younger than cattle and dairy farmers in the sample. This could potentially be a reason for any significant differences between species when looking at the data analysis. However, the mean is within 3 years between all species categories. A breakdown of respondents’ age by species is shown in Figure 3.

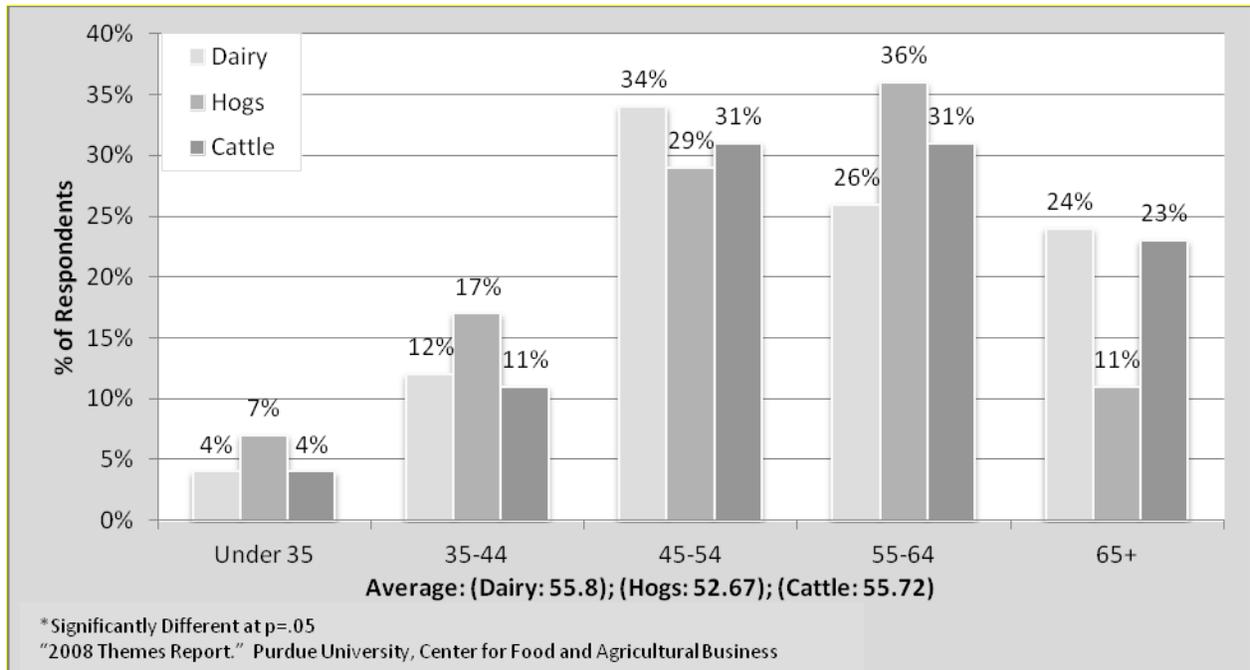


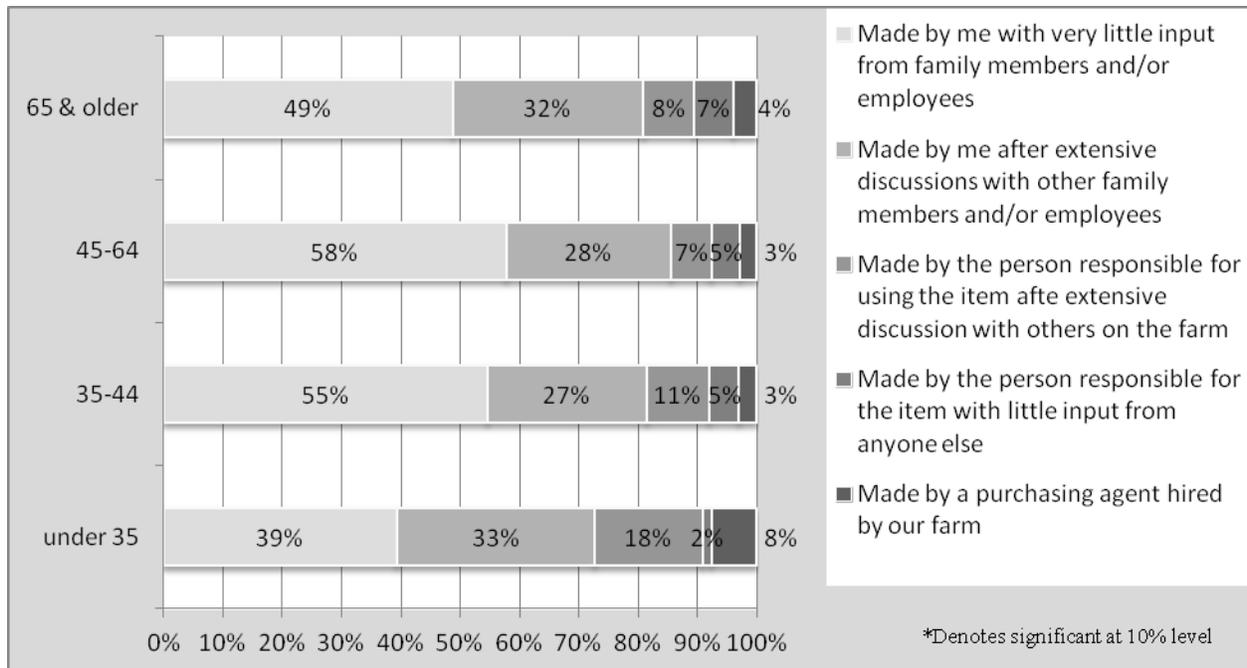
Figure 3: Proportion of Data Sample Categorized by Species and Age\*

## Differences in Decisions Made by Differences in Producers

The decision making aspect of producers is analyzed in this research through the way a decision is made for four different products: animal health, feed, capital equipment, and financial products. The survey instructed the respondent to choose only one decision method per product, and the results are shown as percentages of the total respondents. Each product is studied by age, operation size, and species to determine if farms with more complex decision strategies have parallel sales person preferences as those with less complicated structures.

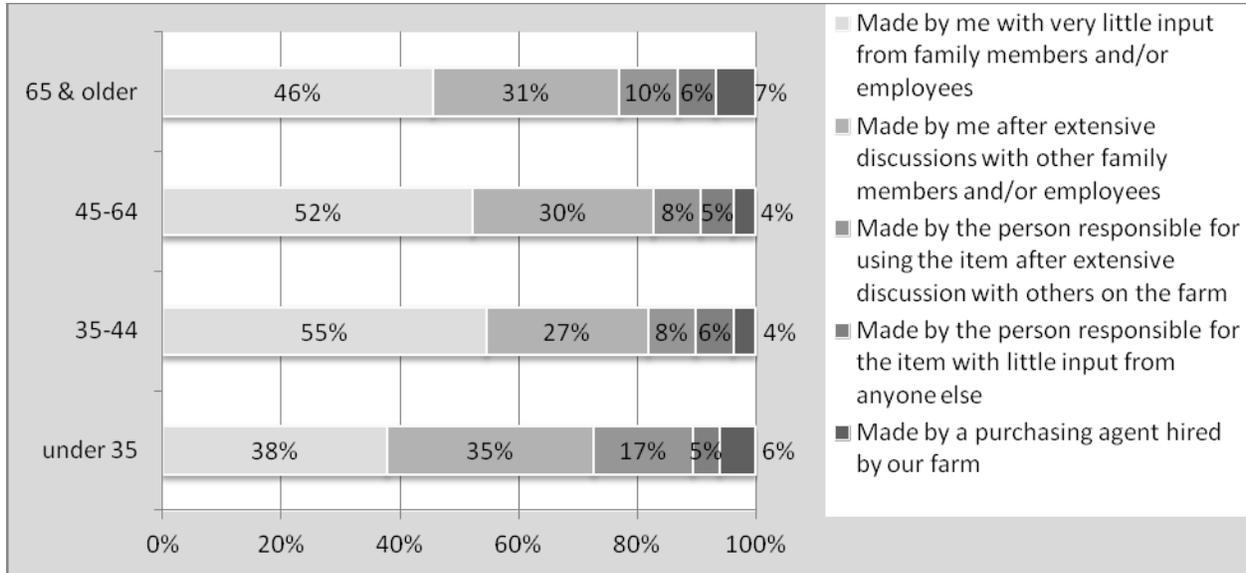
As seen in Figure 4, the age categories of Under 35 and 65+ resemble each other with around the majority of respondents having decisions "made by me with very little input from family members and/or employees" and a larger percentage "made by me after extensive discussions with other family members and/or employees" for all product categories. This possibly could be caused by the generation gap; older and younger producers are sharing decisions rather than making decisions solely by themselves to eventually lead to the transfer of

ownership on the farm. Under 35 makes the least amount of decisions on their own, possibly due to a lack of knowledge of running and operation, so these respondents more willingly let others help in the decision making process. For respondents in the 35-44 and 45-64 age groups, responses are relatively similar with the types of decision making made on the farm operation.



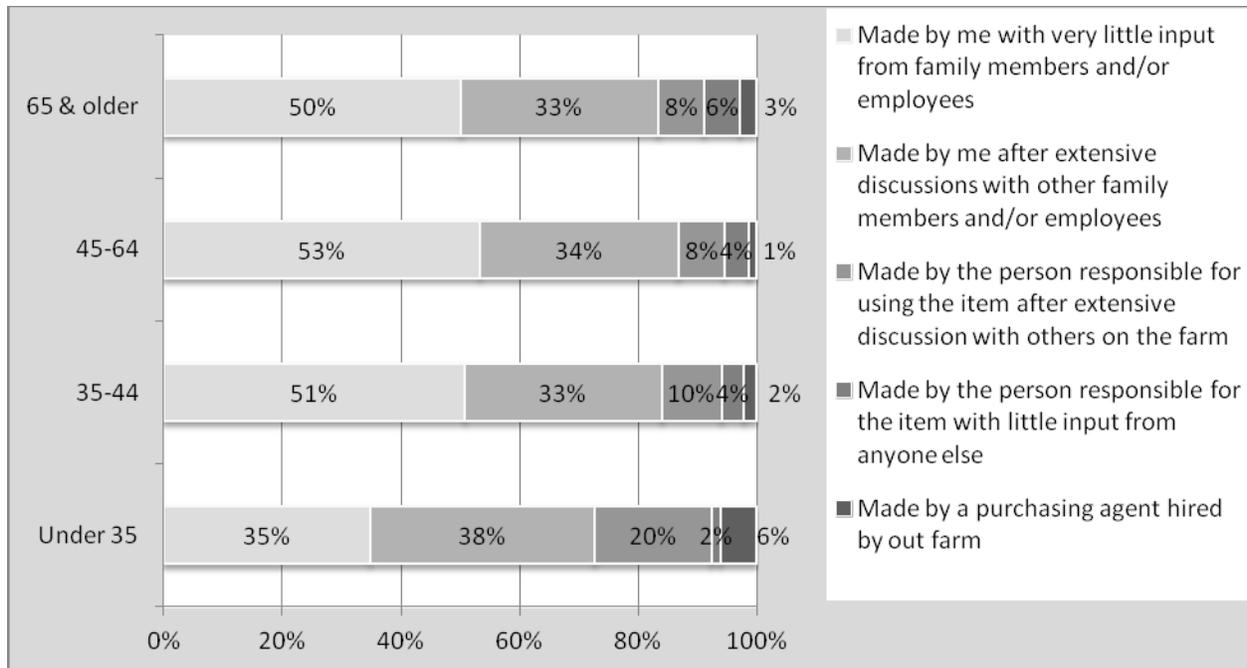
**Figure 4: Purchasing Decisions made on the Farm by Age for the Animal Health Product Category\***

Similar to animal health, the age groups of Under 35 and 65+ resemble each other when making decisions for the feed product category with close to the majority making the decision “by me with very little input from family members and/or employees,” and the next largest percentage “made by me after extensive discussions with other family member and/or employees.” Age groups of 35-44 and 45-64 are relatively similar with the percentage of respondents making decisions in those two categories. Figure 5 shows this depiction.



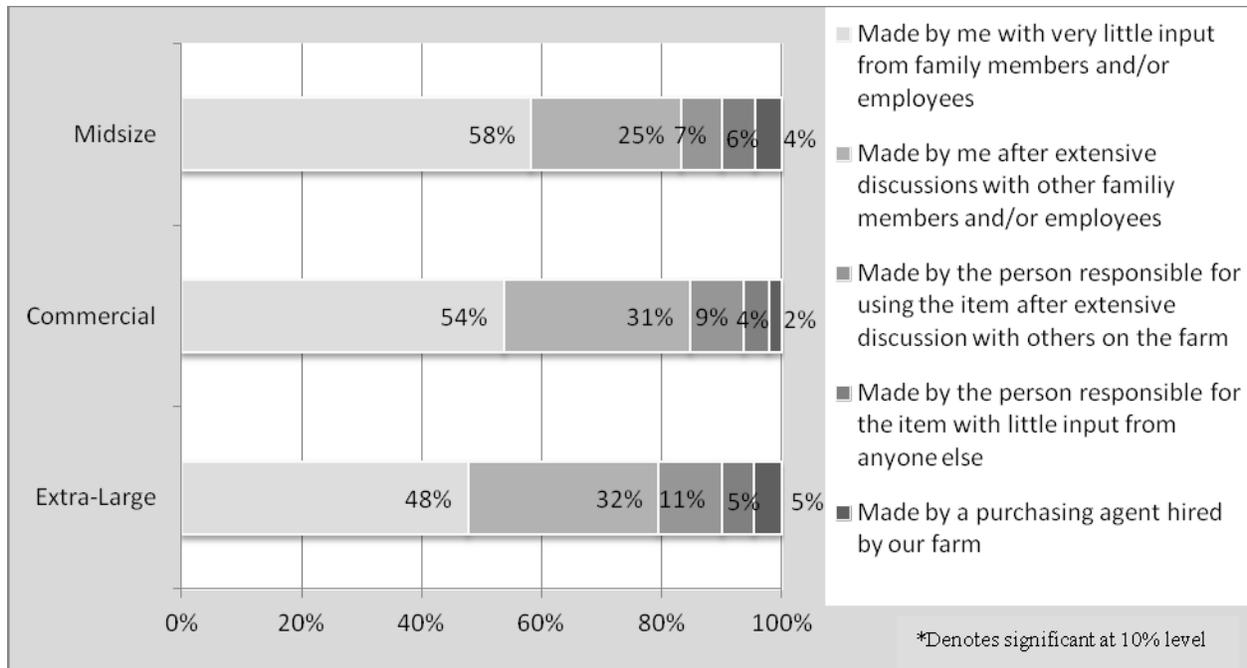
**Figure 5: Purchasing Decisions made on the Farm by Age for the Feed Product Category**

Capital equipment is a less frequently purchased product than animal health and feed. Figure 6 shows a different outcome for the way decisions are made with this product category. Under 35 are significantly less likely to make decisions with little input from family and/or employees; the majority of decisions in this age group are “made after extensive discussion with other family members and/or employees.” Since capital equipment is a much larger financial burden on a young farmer compared to animal health and feed, this age group is less willing to make decisions alone. The other three age categories are very similar to each other, with the majority of decisions made by the individual with very little input from family members and/or employees. These age categories might feel more financially stable to make such decisions or might feel more knowledgeable to make the correct decisions for the operation.



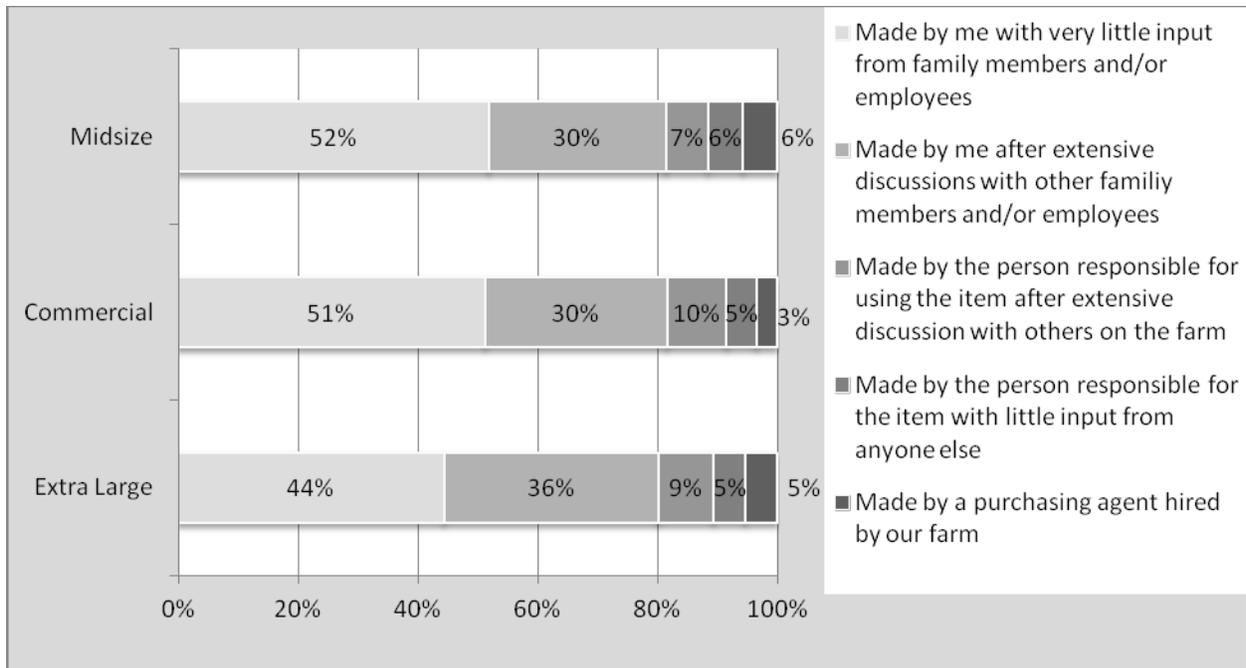
**Figure 6: Purchasing Decisions made on the Farm by Age for the Capital Equipment Product Category**

The size of the operation shows to have an impact on the way decisions are made on the operation, as shown in Figure 7. For animal health products, the trend shows that as the size of the operation grows from Mid size to Commercial to Extra Large, producers make decisions “by me after extensive discussion with other family members and/or employees” more as size increases, and less “made by me with very little input from family members and/or employees.” A small increase is also seen with decisions “made by the person responsible for using the item after extensive discussion with others on the farm” as size increases. As the size of the operation increases, more people are a part of the decision making process and more influences are a part of making decisions. The findings reveal that, naturally, smaller operations operate on a more owner decision making basis, whereas larger farms with greater decision impact are made with more input from others involved in the operation.



**Figure 7: Purchasing Decisions made on the Farm by Operation Size for the Animal Health Product Category\***

Animal health and feed resemble each other closely in the ways each age group makes decisions on the farm. As the size of the farm increases, less of the decisions are “made by me with very little input from family members and/or employees.” The feed product category decisions are made more frequently, thus the decision can be changed frequently over the course of time to change the outcome of the decision. Figure 8 shows this trend.



**Figure 8: Purchasing Decisions made on the Farm by Operation Size for the Feed Product Category**

As mentioned previously, capital equipment is a decision that is made less frequently than animal health or feed decisions. However, the trend still exists with the most respondents making decisions “by me with very little input from family members and/or employees.” This decision making option decreases as operation size increases shown in Figure 9. The decision being “made by me after extensive discussions with other family members/employees” increases as farm size increases. Extra Large and Commercial operations are similar in this trend. Mid sized operations are less in this decision option possibly because less people are involved in the operation.

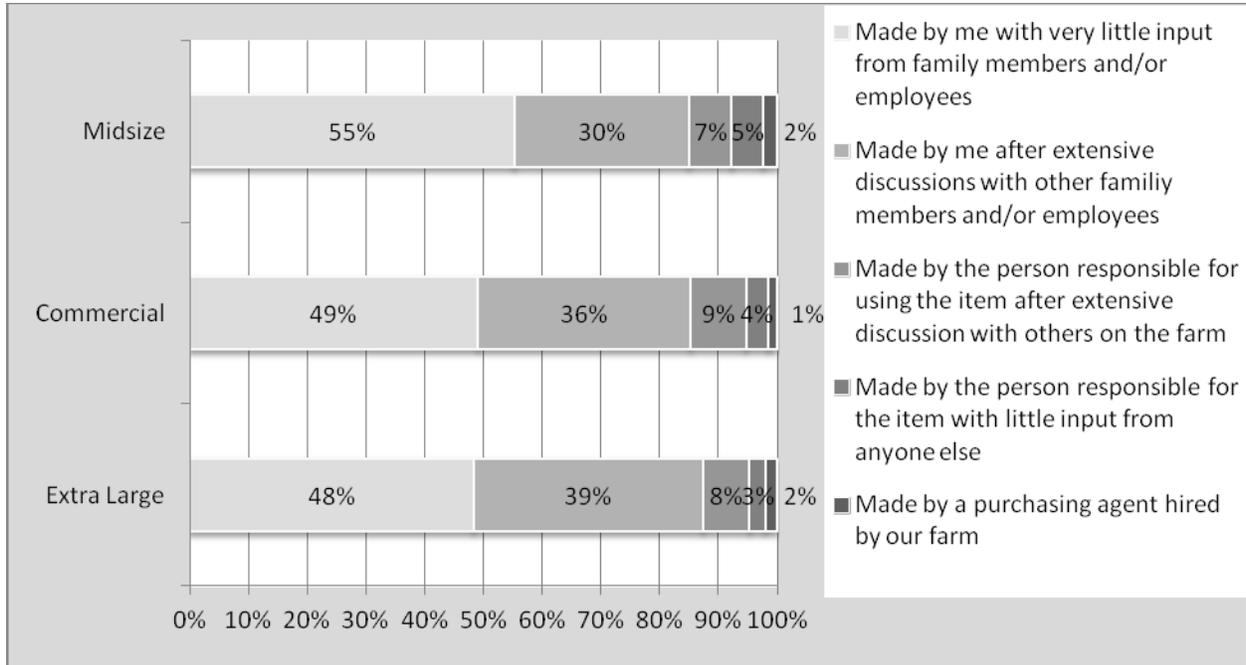


Figure 9: Purchasing Decisions made on the Farm by Operation Size for the Capital Equipment Product Category

When analyzing decision making among species operations, animal health products show very minimal differentiation in the way decisions are made on the farm, shown in Figure 10. Similarly with making decisions regarding feed, producers make decisions by majority “made by me with very little input from family members and/or employees.” However, hog producers tend to make decisions less with extensive discussion with other family members and/or employees compared to the cattle and dairy species. This is shown in Figure 11.

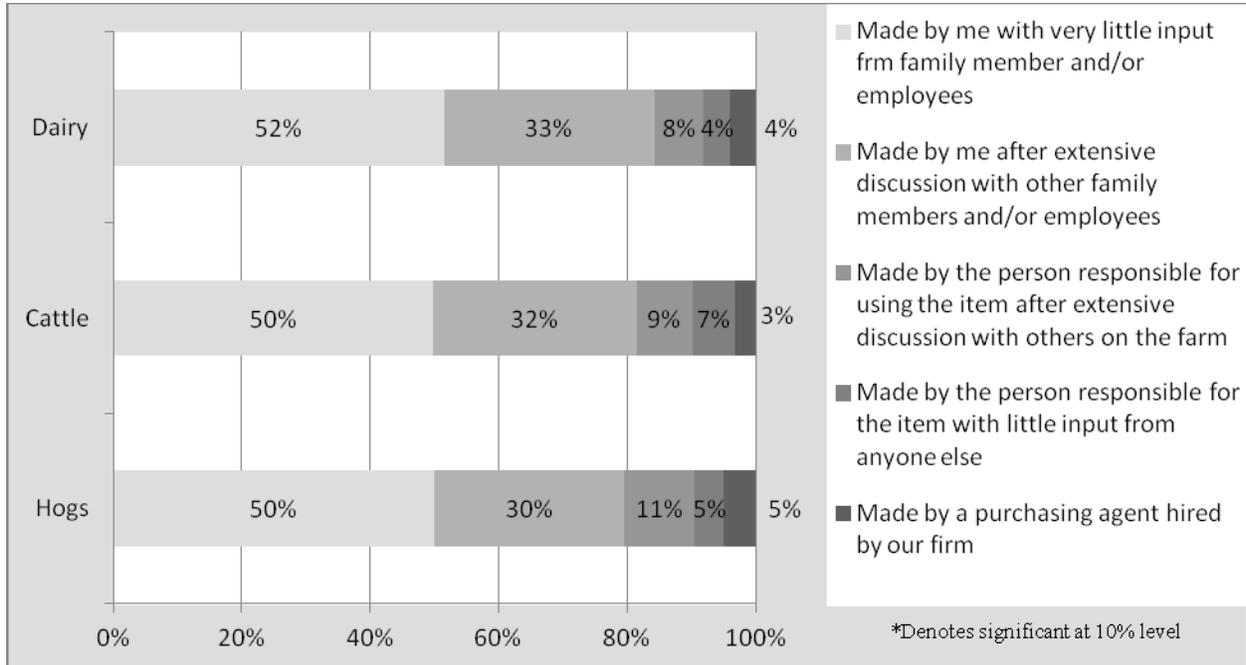


Figure 10: Purchasing Decisions made on the Farm by Species for the Animal Health Product Category\*

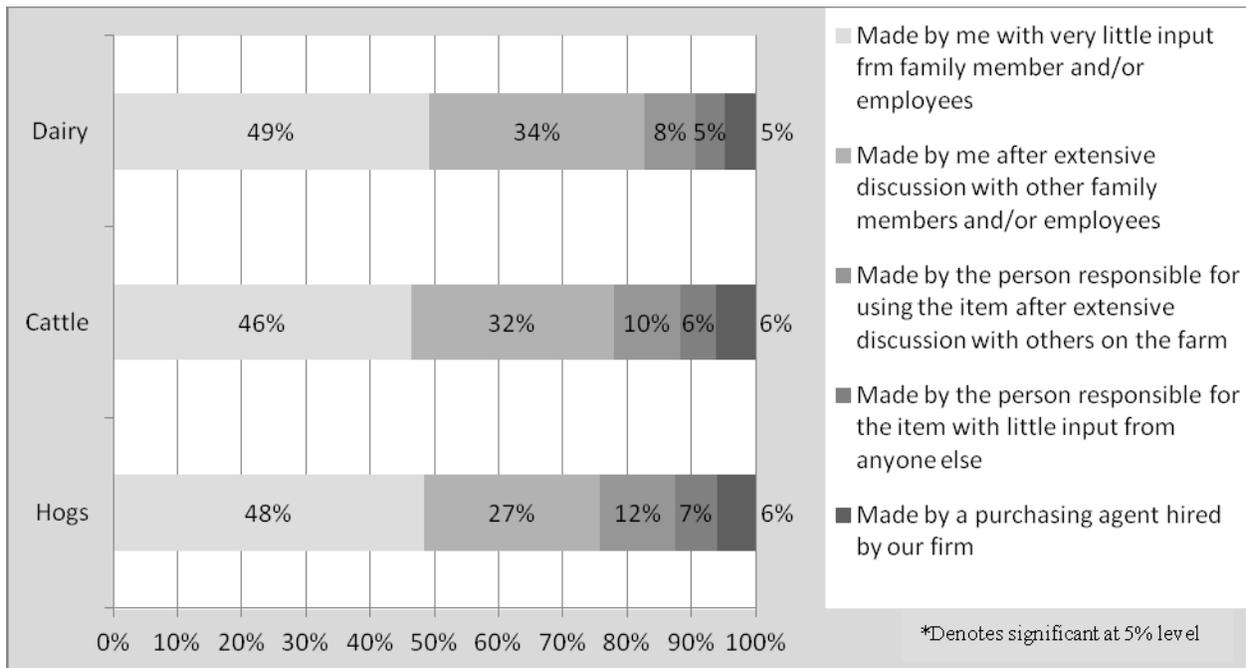


Figure 11: Purchasing Decisions made on the Farm by Species for the Feed Product Category\*

When analyzing capital equipment, as seen in Figure 12, hogs have a lower conviction of making decisions regarding capital equipment with little input from family members and/or employees compared to cattle and dairy. This species has a larger percentage of decisions made

by the individual after extensive discussion with other family members and/or employees compared to cattle and dairy. This is possibly due to the type of capital equipment used in hog production compared to the other species.

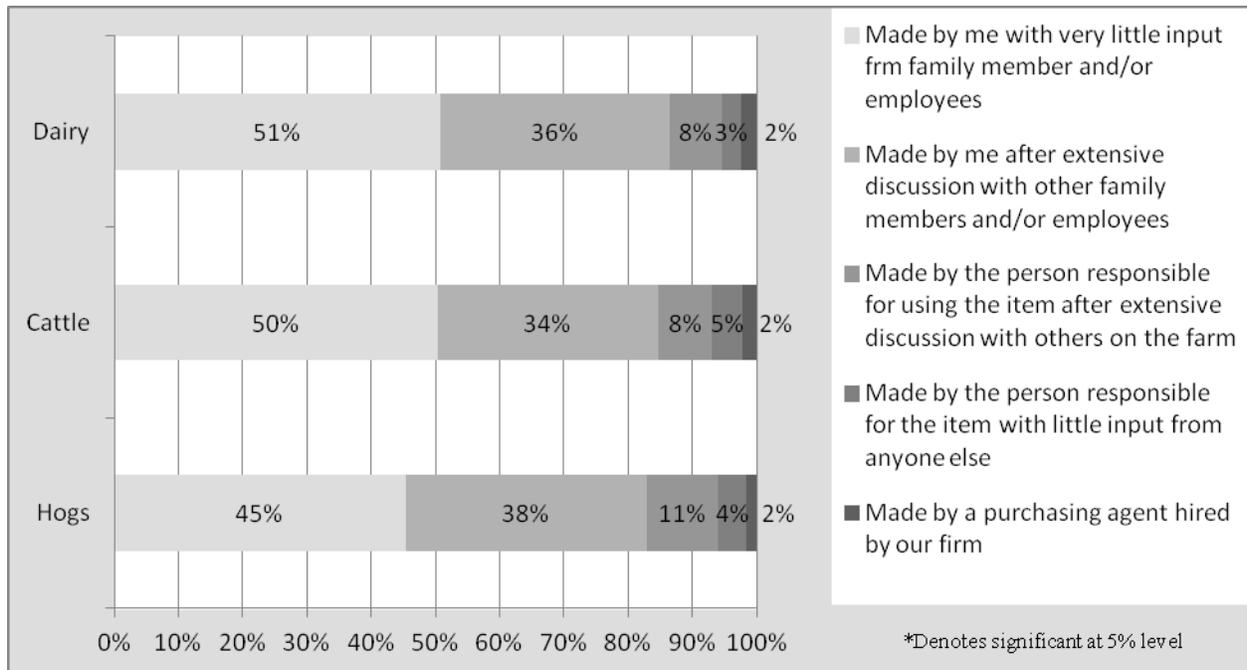


Figure 12: Purchasing Decisions made on the Farm by Species for the Capital Equipment Product Category\*

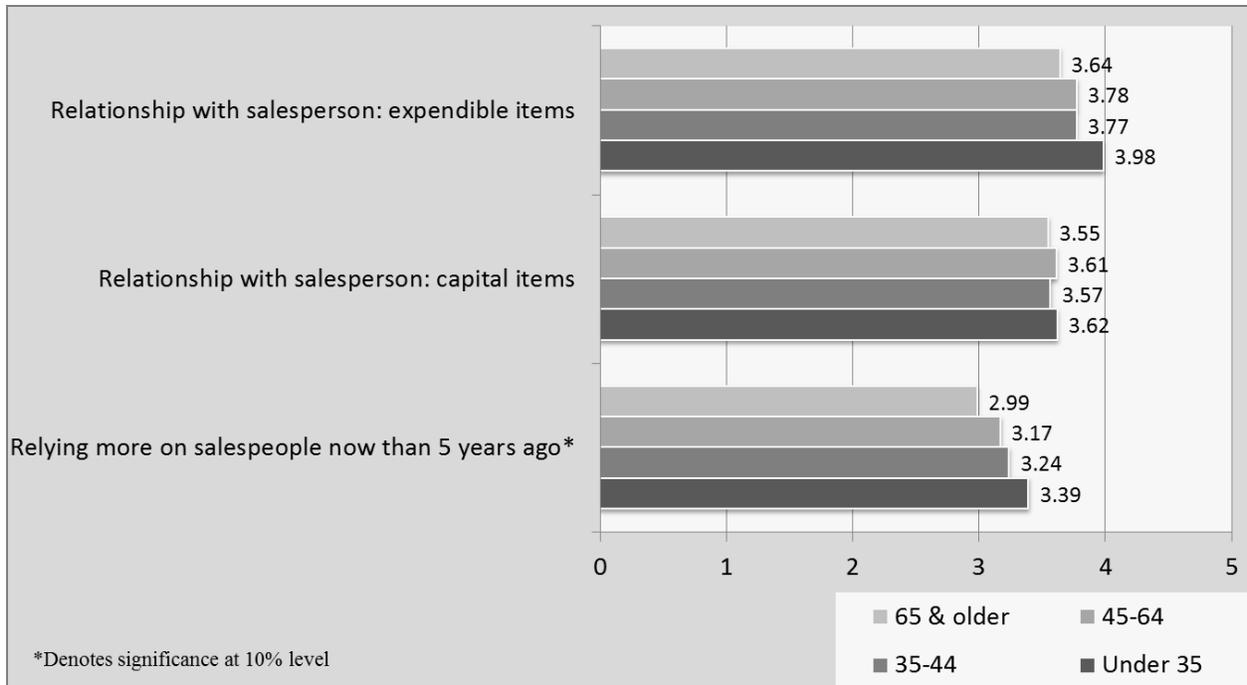
After analyzing the decision structures of operations by producer age, operation size, and species, we can conclude that differences in the type of operation results in differences in the complexity of the decision structure. With age, younger individuals tend to make decisions solely by themselves. Similarly, the oldest age group does not tend to make decisions alone. Thus, depending on the age of the producer and the amount of investment in the decision, we see that the decision structure changes with the different types of products. With operation size, the trend shows that as a farm grows in size, less of the decision making responsibility is held by one individual. With species, there is minimal differentiation among the types of species in differences of decision making complexity. Therefore, we reject the null hypothesis that the complexity of the decision structure remains similar for product types and operation types when

looking at producer age, species, and operation size. Nonetheless, in all cases, almost half of the respondents indicate that the decision making process involves more than one person. This suggests that a salesperson must understand the complexity of the decision process on the farm to be effective.

### **Role and Importance of Sales Force**

When studying the role and importance of the sales force, this study is seeking to discover if salespeople play a different role at different stages of age, different operation sizes, and different species operations. Each area of study is analyzed by characteristics that are specific to sales-producer relationship to determine if any difference exists within these categories. The focus of the discussion will be on those items that were statistically significantly different.

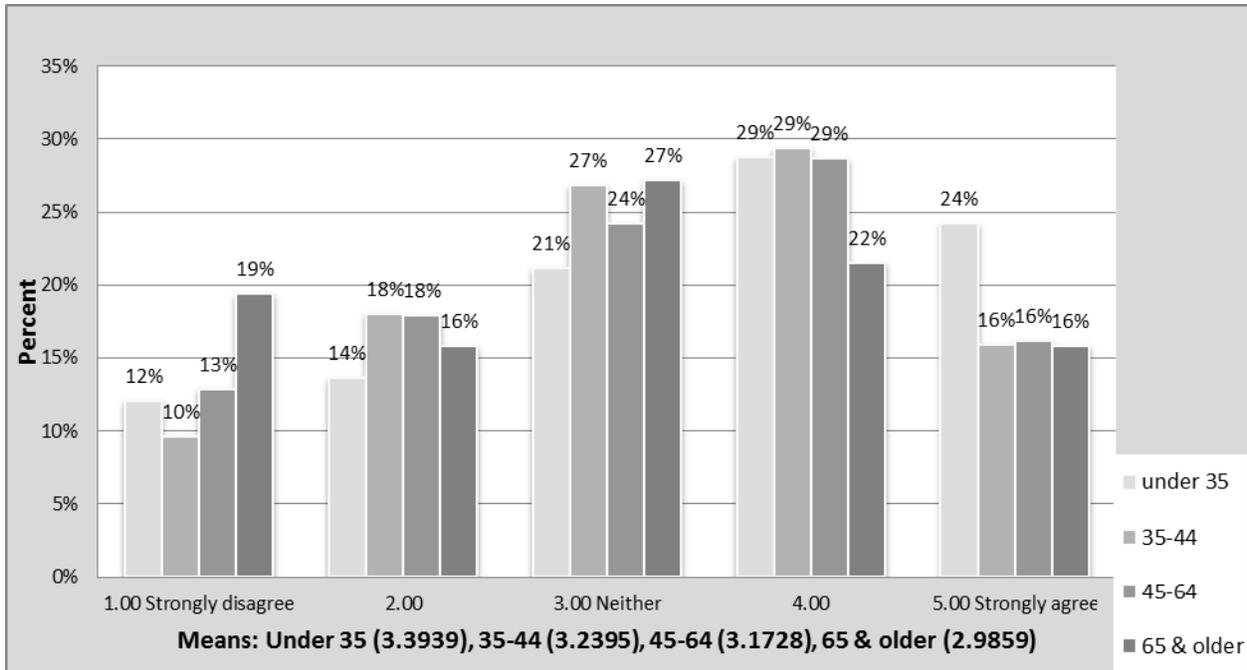
When analyzing the role and importance of the sales force, specific age categories show a trend from higher convictions toward salespeople at a younger age, to a lower conviction at a higher age. As shown in Figure 13, relationship with the salesperson based on capital items, expendable items, and reliance on the salesperson more now than 5 years ago, a trend exists. As age increases, the valuation of the relationship characteristics of the salesperson is not as important as when the producer is younger in age.



**Figure 13: Valuations of Sales Force Relationship Characteristics by Age**

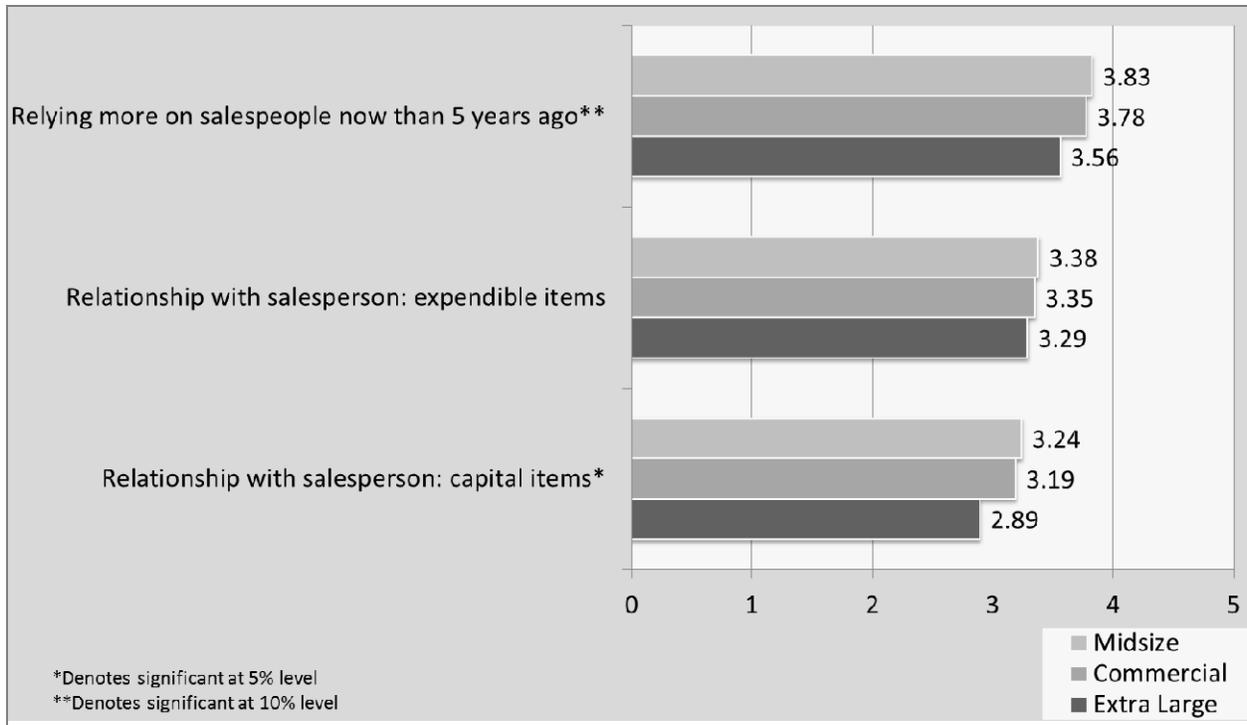
A possibility for this trend could be that as the producer ages, he may become more loyal to the “company” rather than the specific salesperson, since the salesperson is no longer in the same employment position as before. This is congruent with the producer responses to the question about relying on the salesperson more than five years ago, as many producers were in different age categories at that time.

Taking a closer look at reliance of the salesperson now than 5 years ago in Figure 14, it is clear that age 65+ has very differing opinions, with 19% of respondents strongly disagreeing with the statement and 16% strongly agreeing. Under 35 strongly relies on the salesperson, with ratings of 4 and 5 at 29% and 24%, respectively. This could potentially be due to the newness of the role of the individual in the operation at that age or the age similarity with the salesperson. Throughout all scale points, groups 35-44 and 45-64 closely resemble each other in the responses.



**Figure 14: Valuation of “Reliance More than Five Years Ago” Characteristics by Age**

As the difference in the importance of salespeople changes by age, it is also apparent that a difference in importance also occurs with operation size. In Figure 15, Mid size producers more strongly recognize the importance of salespeople to the operation. Large producers care about the relationship with the salesperson in terms of expendable items (mean = 3.29), but not as much with capital items (mean = 2.89).



**Figure 15: Valuations of Sales Force Relationship Characteristics by Operation Size**

By more closely comparing the preference of the salesperson in terms of capital items in Figure 16, Extra Large producers have less value, compared to Midsize and Commercial toward the value of the salesperson in terms of capital items (i.e., machinery). In a closer analysis, 65% of Mid Size producers, 58% of commercial producers, and 46% of Extra Large producers show agreement with the valuation of the salesperson characteristics when looking at capital items. This large difference between operation sizes shows an interesting finding..

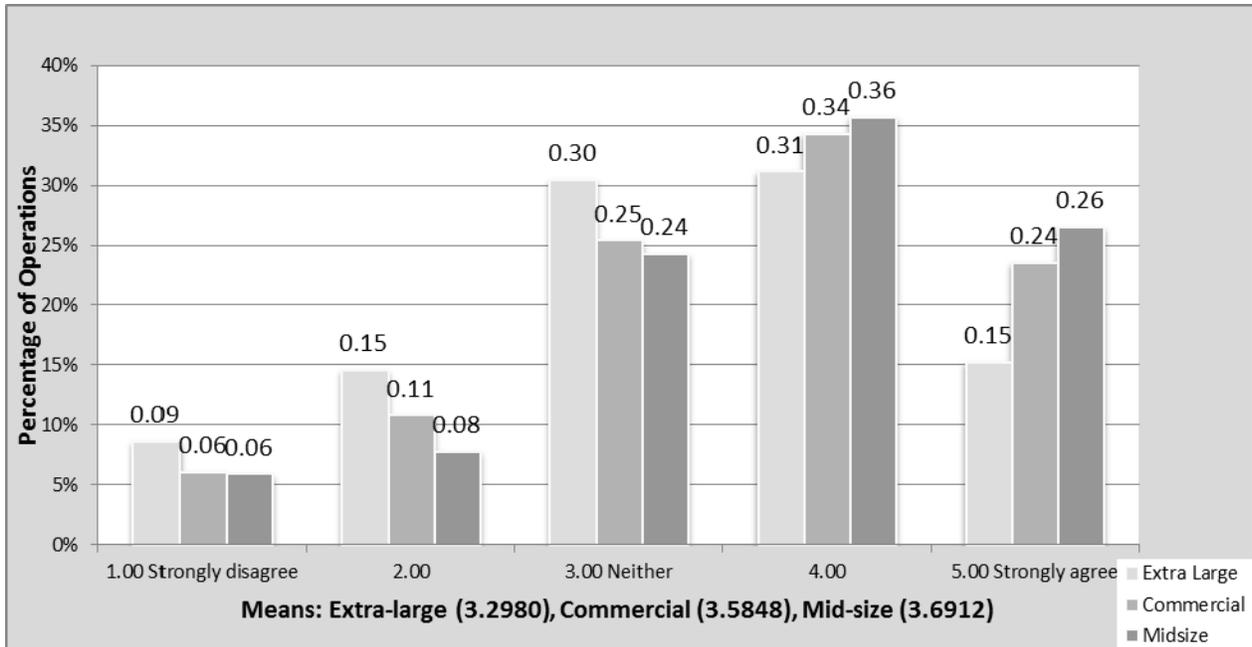


Figure 16: Valuation of “Capital Items” Characteristics by Operation Size

Mid size producers value the relationship the most in this instance. The reason for this difference between sizes could be that as a Mid size farmer, a very large percentage of expenditure is most likely on capital items, so the significance of the salesperson to inform the farmer of such a huge financial decision is necessary. Extra Large producers have more income to spend on such items, so the value of the salesperson is not as significant, but still valued.

Similar to capital items, Mid size operations have stronger convictions of relying on the salesperson more than five years ago, whereas Extra Large operations are strong in the conviction of not relying on the salesperson as much compared to five years ago (shown in Figure 17). Possibly five years ago, the producers in the Extra Large category might have been in one of the other size categories. 22% of Extra Large producers strongly disagree with this statement, which shows a great conviction within the group. However, when comparing the agreement across operation sizes, 41% of Extra Large producers, 46% of Commercial producers, and 47% of Midsize producers agree with this statement. This conviction is similar across all

operation types. The Commercial and Midsize operation groups show similar results across the levels of agreement.

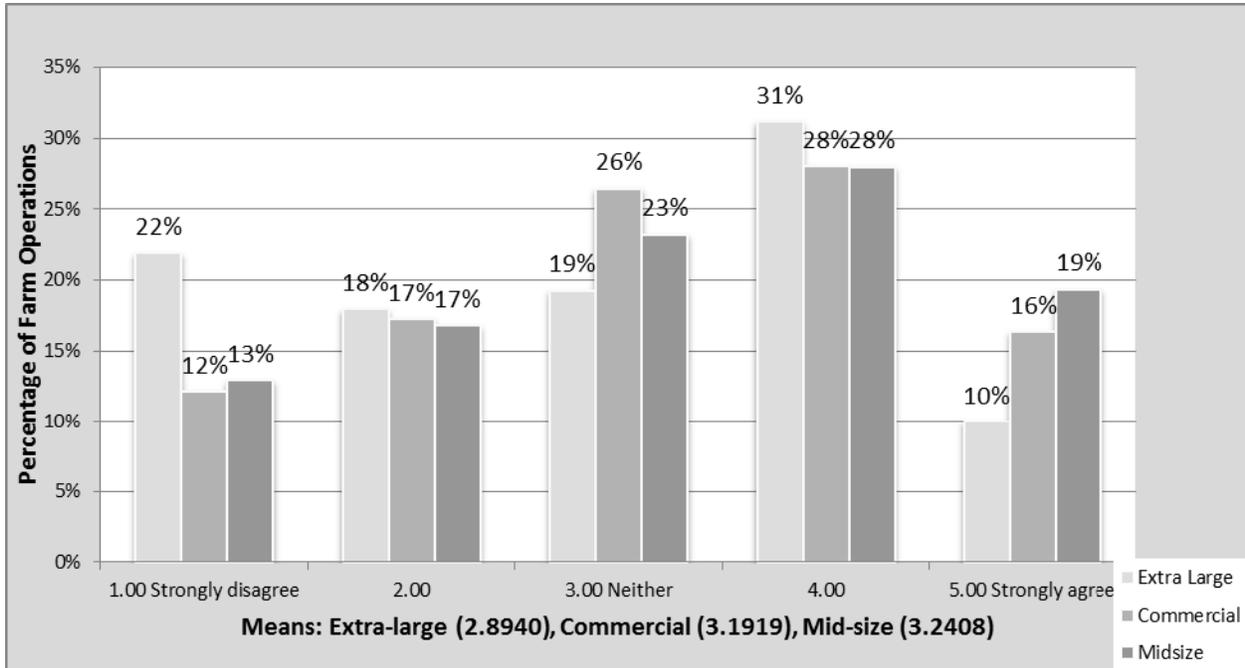
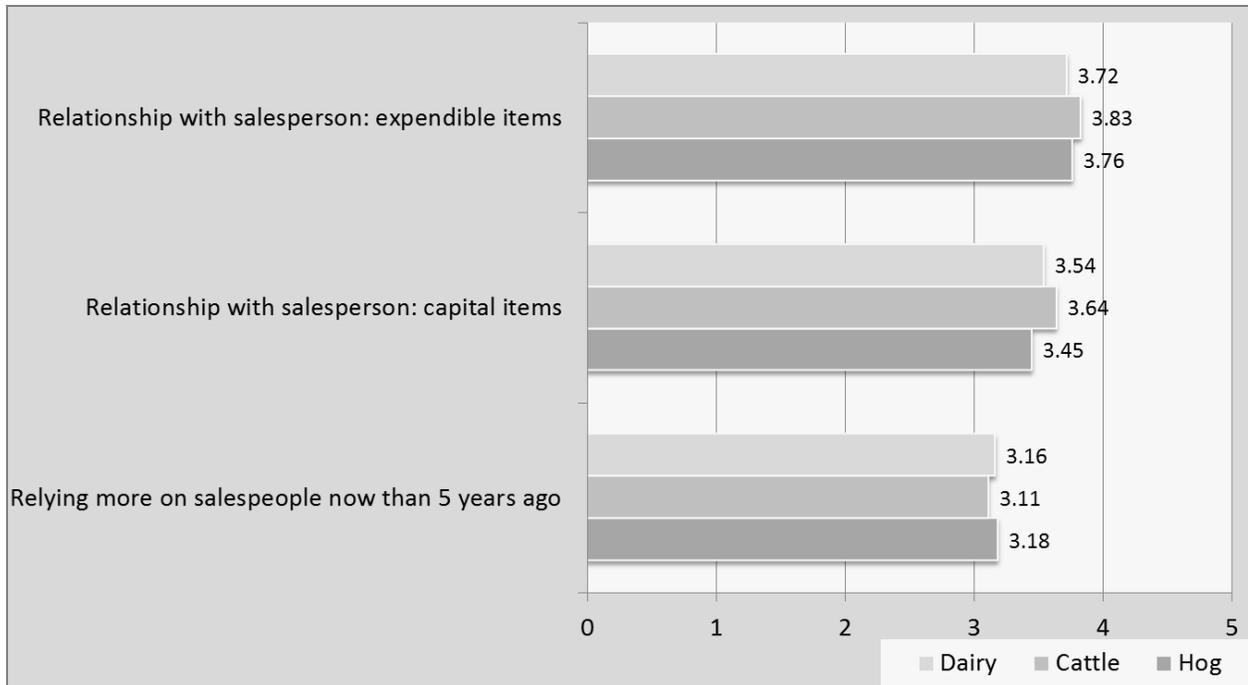


Figure 17: Valuation of “Reliance more than Five Years Ago” Characteristic by Operation Size

Interestingly, while differences and trends appear when looking at “reliance on the salesperson” within the age and operation size categories, those differences and trends do not have significance when comparing across species. Figure 18 shows that means are fairly similar among all species for each category. Cattle producers show the highest means for all variables except relying on the salesperson more than five years ago, but this is not significantly different than the other species.



**Figure 18: Valuations of Sales Force Relationship Characteristics by Species**

After analyzing the preferences for relationships of suppliers and the sales force, we reject the null hypothesis of “Livestock operations have similar preferences for relationships with suppliers and the sales force across operations.” Even though Species showed no significant differences in preferences, Age and Operation Size had distinct differences in preferences. While products may be specific to a species, the relationship between the salesperson and the decision-maker is more dependent on the demographics of the individual producer and the sophistication of their business than the species or industry in which the operation is focused. Thus, there are differences in preferences for relationships of suppliers and the sales force. The sales force should understand these differences and determine appropriate tactics to provide the necessary relationship criteria important to specific categories of producers.

## **Producer Preferences for Salesperson Characteristics**

The producer preferences for personal attributes and sales activities of salespeople will be examined based on the producer's demographics. Attributes are ranked from most important to least important, while activities are rated on a scale from most important to least important. Looking at attributes and activities by producer age, operation size, and species, analysis will aid in determining similarities or differences with producers' belief of important traits for a salesperson.

Respondents to the survey were asked to rank the characteristics of the best salesperson they know in terms of: technical competence, representation of interests, honesty, being a friend, and knowledge of operation from most important to least important. A value of 5 is the highest rank, and a value of 1 is the lowest rank. To analyze this response, the means of the responses were compared to determine which characteristic had the highest ranking among respondents. As shown in Figure 19, the analysis of producer age shows honesty as the most important attribute for a salesperson for all ages.

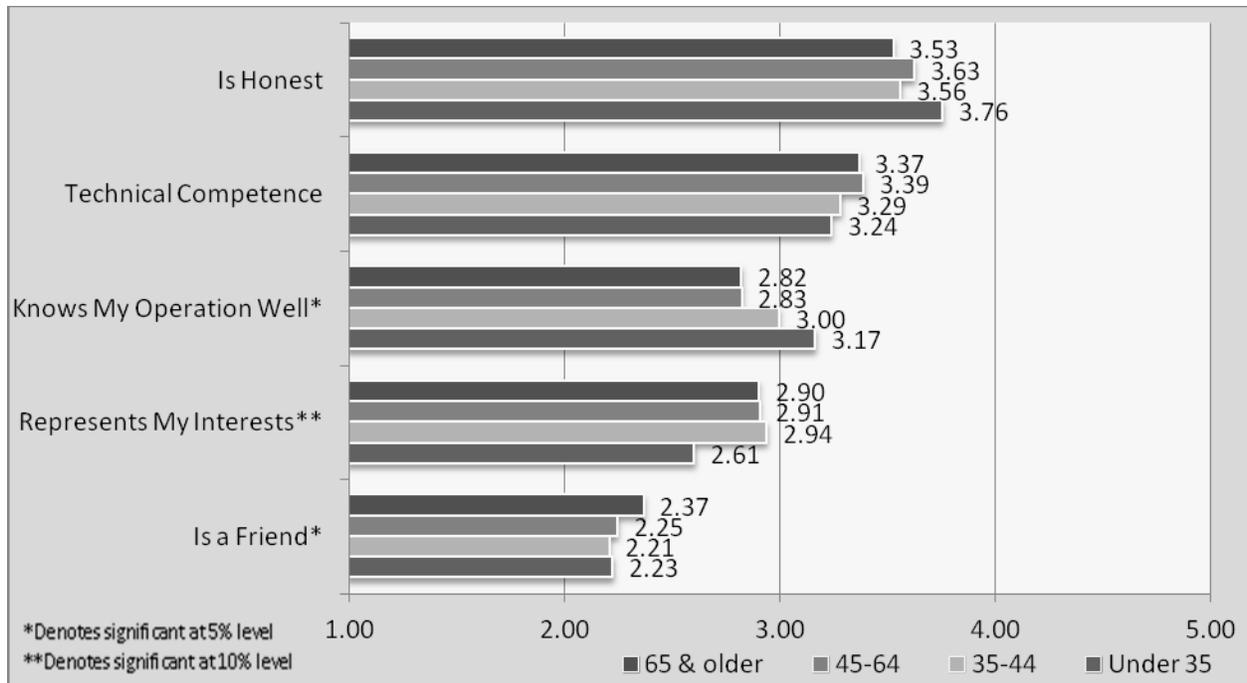


Figure 19: Ranking of Salesperson Attribute by Age

A similar pattern is seen through all age levels in ranking the different categories. As seen, Under 35 highly values “honesty,” similar to all other categories, and this group values “Knows My Operation Well” more highly than other groups. This significance might be caused by the need for a business partner characteristic at the early stages of the farmer’s career. As age increases, this characteristic becomes less important to the operator. The youngest age group does not value “Represents My Interests” as highly as the other three age groups. At the early stages of relationship building, younger individuals might value the needs of the operation more highly than personal interests when developing the relationship with the salesperson. Very similar among the younger three age groups is the attribute of “friend” being not as important in a salesperson. Individuals 65 and older rank this attribute more highly, but it is still ranked lowest compared to all attributes.

Figure 20 shows the value of the attributes for operation size. With this demographic, the value of “friend” is not a quality being sought after by producers, similarly when comparing

different age groups. Among all operation sizes, “honesty” and “technical competence” are the most highly valued attributes for a salesperson. Extra Large producers value technical competence very closely with honesty. With these farms being very large in size, technology is very significant to these operations. A comparison of the factors is seen below.

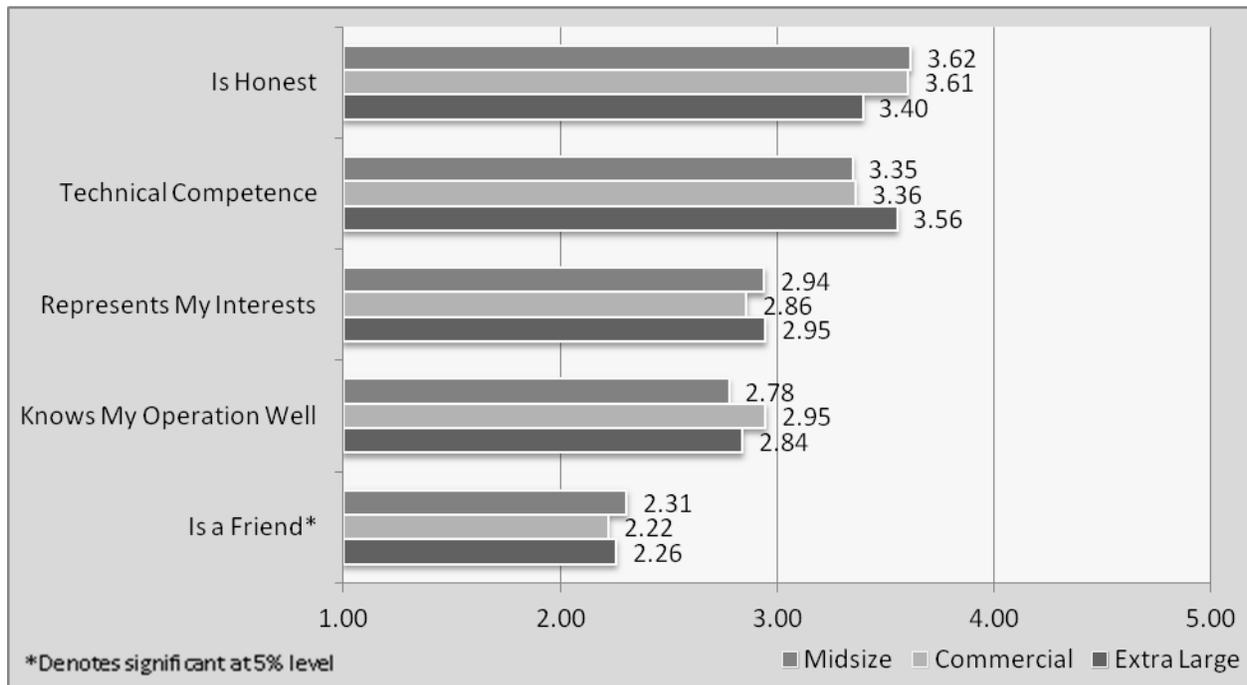
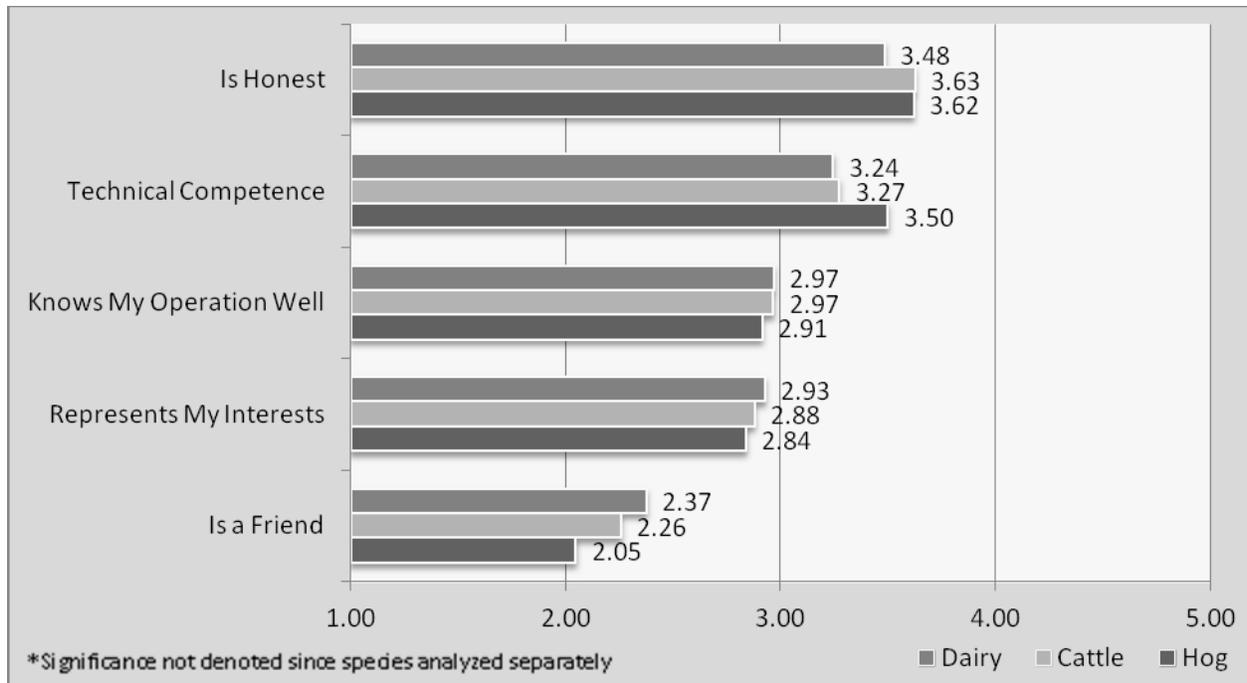


Figure 20: Ranking of Salesperson Attributes by Operation Size

Species shows a similar pattern to the ranking of attributes compared with age and operation size. Honesty and technical competence are the most highly valued, with all means close to or above 3.25. The least valued attribute among all species is being a friend with means below 2.50, similar to age and operation size. Results of this analysis are seen in Figure 21.



**Figure 21: Ranking of Salesperson Attributes by Species**

With small differentiation between the attributes that are ranked most important, honesty is consistently ranked as the most important attribute for a salesperson followed closely by technical competence, while being a friend is consistently ranked as the least important attribute for a salesperson, among producers in the comparison of age, operation size, and species. Variation exists in the other factors, however. We can conclude that the preference for relationship attributes with suppliers and the sales force is similar when comparing among age, operation size, and species.

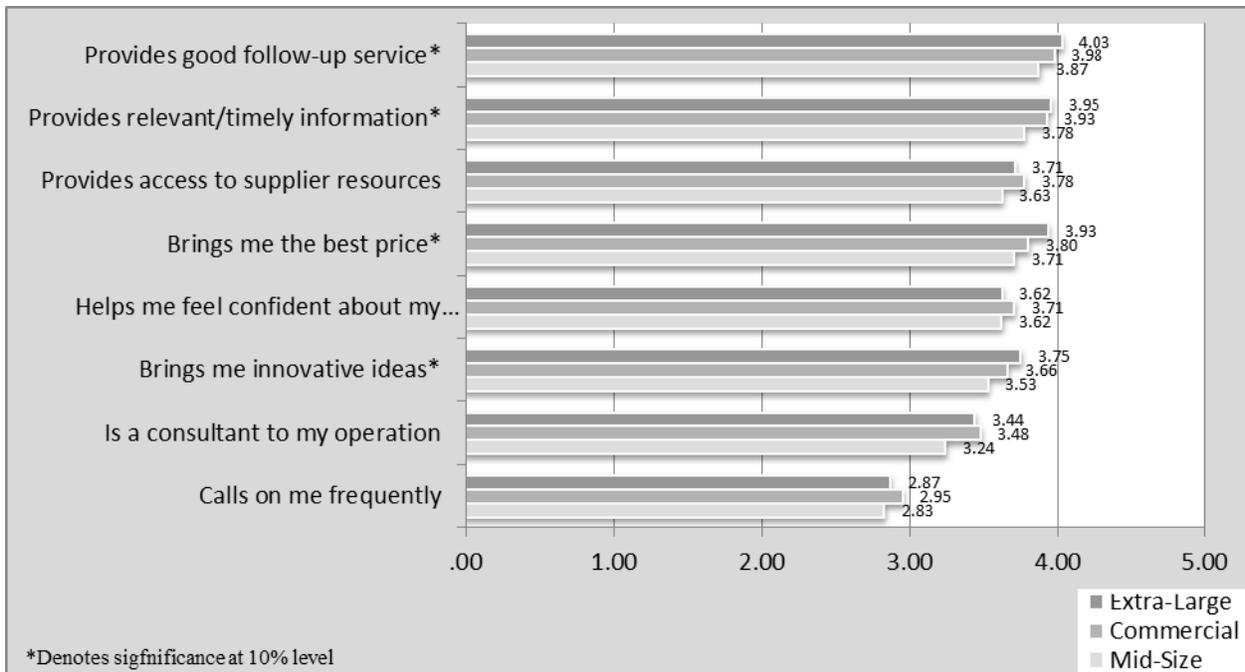
Respondents of the survey were then asked to rate the activities of a salesperson for importance of each activity. Among the age divisions, the 65+ age group consistently had the lowest means for each activity, as seen in Table 1. This age group shows to not have as strong convictions toward the activities of the salesperson comparative to the other age groups. The Under 35 age group consistently had the highest means for each activity, except for “provides access to supplier resources” when the 45-64 age group has the highest mean. An interesting

observation is the difference among age groups when looking at “calls on me frequently.” For such high means with “provides good follow-up service,” the form of follow-up service “calls on me frequently” does not show strong convictions. The difference between the ages is possibly caused by the need and value for a salesperson at the different ages of a career. As earlier seen with the value of the salesperson, younger producers tend to value the salesperson more than older producers, and activities of the salesperson also have the same result.

Salesperson Activity	Under 35	35-44	45-64	65 +
Provides good follow-up service	4.00	3.93	3.98	3.70
Provides relevant/timely information	3.92	3.92	3.88	3.68
Provides access to supplier resources	3.80	3.78	3.82	3.63
Brings me the best price	3.79	3.74	3.72	3.6
Helps me feel confident about my purchase decisions	3.71	3.63	3.68	3.53
Brings me innovative ideas	3.68	3.57	3.64	3.43
Is a consultant to my operation	3.47	3.39	3.38	3.23
Calls on me frequently	3.12	2.87	2.9	2.83

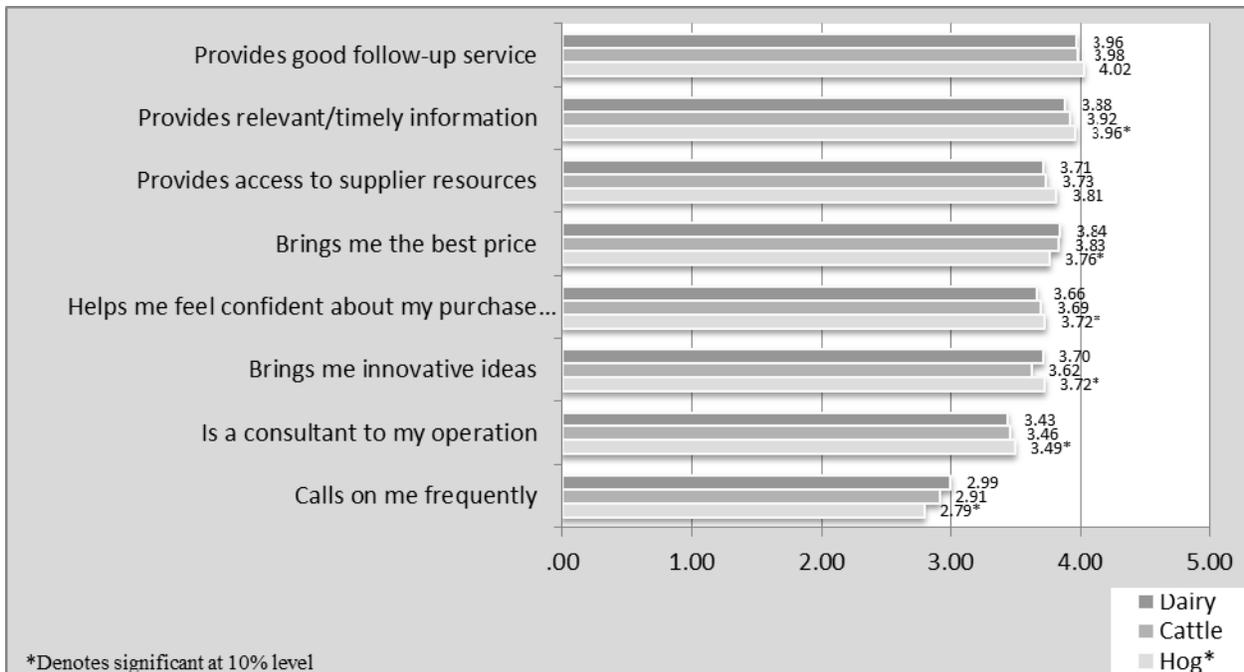
**Table 1: Importance of Salesperson Activities by Age**

When comparing operation size by rating salesperson activities, Mid size producers are consistently less convicted toward salespeople activities compared to Extra Large and Commercial producers. Extra Large producers show strength in caring more about having the best price, providing relevant/timely information, innovative ideas, and good follow-up services, all of which are statistically significant. Extra Large producers show to have higher expectations in these categories. Commercial producers strongly care more about feeling confident with purchase decisions, access to supplier resources, being a consultant to the operation, and calling more frequently. Figure 22 shows the comparison of operation size to salesperson activities.



**Figure 22: Importance of Salesperson Activities by Operation Size**

Comparing salesperson activities with species shows a similar overall pattern with age and operation size (shown in Figure 23). “Provides good follow-up service” consistently ranked highest, similar to age and operation size, among the different species. “Calls on me frequently” consistently ranked lowest as well. Hog producers are consistently more highly convicted toward importance of each activity in relation to the other species, with the exception of “brings me the best price” and “calls on me frequently.” Best price could possibly not be as important to hog producers due to the higher turnover of the product and more trials throughout the year compared to dairy and cattle producers. With not as much invested in the crop, hog producers might not care about price as strongly as the other two species. It is possible that the flexibility of input choices might be greater for hogs, which might lead hog producers to not be as focused on price. However, hog producers still want the best price.



**Figure 23: Importance of Salesperson Activities by Species**

As age, operation size, and species are compared by salesperson attributes, it is apparent that the activity of “calls on me frequently” is the least important for all groups, and “provides good follow-up service” is the most important for all groups. Variation exists in the other factors, however. We can conclude that the preference for salesperson activities with suppliers and the sales force is similar when comparing among age, operation size, and species.

Since salesperson attributes and activities were both similar with the top ranked and lowest ranked among all age groups, operation sizes, and species, we fail to reject the hypothesis “preferences for relationship attributes and activities with suppliers and the sales force are similar as the type of livestock operation change. “Honesty” consistently ranked as the most important attribute, and “Being a friend” consistently ranked as the least important attribute. “Provides good follow-up service” rated the most important salesperson activity, and “Calls on me frequently” rated the least important salesperson activity.

## Conclusions

This research aimed to deliver key insights to the decision making process for livestock producers and important attributes and characteristics needed for an effective producer-salesperson relationship by age, operation size, and species. The main objective of the research was to determine purchasing behaviors of livestock producers for animal health and feed products, understand ideal characteristics for the sales force to the producers, and identify key attributes toward buyer purchases within each group of producers. Specifically, this research sought to:

- (1) Determine how different purchasing decisions are made for different groups of producers.
- (2) Compare and contrast differences in producers opinions about the role and importance of the sales force and other decision influences for animal health and feed products by size and type of livestock operation, as well as age of the producer.
- (3) Describe livestock producer groups according to their preferences for interaction with the sales force.

From the analysis, significant conclusions can be drawn. When looking at the complexity of the decision structure, we are able to conclude that individuals under the age of 35 do not predominantly make decisions by themselves, and individuals age 65 and older similarly do not predominantly make decisions by themselves. When analyzing decision complexity with regard to the operation, the trend is evident that as the size of the operation increases, decision making complexity increases. Yet, across species, no significant differences are revealed when analyzing the decision complexity of the operation. Therefore, we reject the null hypothesis of complexity of the decision structure remaining similar for product types and operation type when

looking at producer age and operation size, but we cannot make the same conclusion with regard to species.

Looking at relationship preferences, it is evident that livestock operations do not have similar preferences with suppliers and the sales force across operations with respect to age and operation size. At younger ages and smaller operations, the convictions of preferences with suppliers and the sales force is stronger and decreases as the age and operation size increases. However, livestock operations do have similar preferences for relationships with suppliers and the sales force across operations with respect to species. While products may be specific to a species, the relationship between the salesperson and the decision-maker is more dependent on the demographics of the individual producer and the sophistication of their business than the species or industry in which the operation is focused. Therefore, we reject the hypotheses of livestock operations having similar preferences for relationships with suppliers and the sales force across operation types.

The final analysis helped discover any similarities or differences with producer preferences for relationship attributes and activities of salespeople. From the analysis, it is evident that attributes are similar with the top ranked and lowest ranked attribute among individuals independent of age, operation size, or species. Honesty is consistently ranked the highest, while being a friend is consistently ranked the lowest. Similarly, salesperson activities are ranked consistently with “Provides good follow up service” as the highest and “Calls on me frequently” as the lowest. Therefore, we fail to reject the hypothesis of preferences for relationship attributes and activities with suppliers and the sales force are similar as the type of livestock operation changes in size, producer age, and species.

After conducting and analyzing the tests, three implications can be drawn from the results. First, the salesperson should pay more attention to the age and operation size of the producer when determining the appropriate characteristics and attributes to expose during the interaction with the producer. Species are differentiated in the product type, but little differentiation is noticeable when characteristics and attributes were analyzed. Second, the salesperson needs to always be honest, but do not try to be the friend; rather, be the professional. Since every test showed honesty as the most highly valued attribute and being a friend as the least valued attribute, this implication is applicable to producers regardless of age, operation size, or species. Third, younger individuals will rely on the salesperson more; however, younger individuals are less likely to make decisions on their own. Developing the salesperson/producer relationship early is a key influencer as the individual gains more decision-influencing power as he increases in age and rank within the operation. Finally, the nature of the salesperson/producer relationship changes from a consultant-partner relationship to a “tangible service provider” relationship. The results show that as size of the operation increases, more people have influence on decisions made for the operation, and there is a greater need for “hard” details to help the success of the operation. Extra large operations place a high value on “hard” details that include price, information, innovative ideas, and follow-up service. Commercial operations place a high value on the “soft” details that include feeling confident about decisions, having access to resources, having the salesperson act as a consultant to the operation, and having a salesperson that calls on the producer more frequently. Thus, the relationship with the salesperson begins as a “consultant-partner” relationship to a “tangible service provider” relationship.

As previous research has shown, the relationship between the salesperson and the customer is crucial to the success of both individuals. Knowing what characteristics and

attributes appeal to different individuals helps the salesperson cater to the specific needs of each client. More importantly, understanding the decision influences of the client aids the salesperson to form a more developed and influential relationship with the client. In this research, we showed the differences in decisions that are made by differences in producers. It is up to the salesperson to implement appropriate strategies to progress further and help on a higher level within the operation. Understanding such differences will allow for the further development of farm operations and future changes in the livestock industry.

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