COMMERCIAL GRAIN MERCHANDISERS: INTEREST IN PROFESSIONAL DEVELOPMENT

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by

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The undersigned, appointed by the dean of the Graduate School, have examined the thesis entitled

COMMERCIAL GRAIN MERCHANDISERS: INTEREST IN PROFESSIONAL DEVELOPMENT

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a candidate for the degree of Master of Science,

and hereby certify that, in their opinion, it is worthy of acceptance.

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ABSTRACT

Little information exists on grain merchandisers, their characteristics, and the skills needed to be successful. This research contributes toward filling this gap. A summary of survey responses from 230 experienced grain merchandisers quantifies personal characteristics, skills perceived as important, and desire for executive education. Parametric analyses identify factors contributing to merchandisers' salaries and their interest in establishing a certification process. Interestingly, experience but not formal education significantly enhances salaries.

Keywords: grain merchandiser, marketing, (executive) education, certification

CHAPTER 1: INTRODUCTION

> "What will our students do upon graduation? It is amazing to me that we have been so successful as an academic profession and yet have paid so little attention to this question" (Padberg, 1987).

Agricultural Economics graduates often pursue grain merchandising careers. They are then charged with the task of generating profit by organizing the purchase, sale, and transport (or otherwise transform) of commodity at particular locations for specified dates and prices. The process entails coordinating logistics, accounting for transaction costs, and managing the margin. Grain merchandisers are also required to master soft skills to such as communicating with clientele, solving day to day marketing problems, and working with others in the merchandising process. Hence grain merchandisers must assemble information, communicate market perceptions to potential clients and customers, and manage time and geographic logistics of market transactions. With increased price volatility in recent years, price risk management is even more important to merchandisers. Here, the U.S. has advantages over other countries due to viable futures and options markets, which enable price risk management strategies (Mckenzie, 2008). While undergraduate programs prepare students with strong communication capabilities and knowledge of production agriculture and commodity marketing terminology, a greater understanding of "what information experienced grain merchandisers value most" is valuable for baccalaureate curriculum development. This is important not only for determining program course content, but this information is also important for proper course selection from a multi-disciplinary course selection. This is

also an important aspect for grain merchandisers as they progress throughout their career. New contracts emerge, futures markets evolve, and the global economy expands. Continuing education through provided resources would give the ability to merchandisers to adapt to changes in the marketplace and reduce costly inefficiencies.

The objective of this research is to summarize respondent feedback from a mail survey of 2,500 experienced grain merchandisers, as to the skill-sets used in their job, the information content useful for their job (e.g., their use of advisory services), and their needs for executive education. The commodity diverse sample was drawn from a database of four thousand licensed grain marketing businesses across the Mid-West, East Coast, West Coast, Canada, and the Gulf States. The database contained a majority of businesses from the states of Missouri, Kansas, Minnesota, Iowa, Illinois, South Dakota, North Dakota, Nebraska, Texas and Ohio. The database was developed through on-line listings of large corporate company's addresses and through State Departments of Agriculture Grain Warehouse Licensing information. The list that each state provided was either a preceding month's list of licensed grain business that conducted business or the entire states database of licensed grain dealers.

Alreck and Settle (1995) explain that surveys are used to modify a product or service that may already be provided. According to Fowler (2008) surveys are conducted for three reasons. The first is to determine the public's view for media purposes. The second is for political candidates during elections to quantify the public's opinion and finally the third is to study consumer preferences through market research to help understand a consumer's attention. The reason pertaining to this study of research is the third. Besides gathering demographic information that is currently unavailable this

survey is aimed at gaining insight through research which will help to identify and understand what motivates the consumer of interest, which in this context is the grain merchandiser. Fowler (2008) goes on to explain about surveys:

> *Each of these well developed programs of survey research is aimed primarily at tapping the subjective feeling of the public. There are numerous facts about the behavior and situations of people that can be obtained only by asking a sample of people about themselves. Before using a survey one should explore thoroughly the potential for gathering the same information from existing records or from other sources.*

Fowler (2008) also cautions that due to time and cost constraints a survey should only be used when no existing data is available somewhere else. Because the targeted information does not exist the use of a survey to obtain information about grain merchandisers is necessary.

Similar surveys of grain producers offer insight regarding the influence of producer and farm characteristics on their use of marketing advisory services (e.g., Pennings, *et al*., 2005; Isengildina, *et al*., 2006), but similar information on grain merchandisers is currently unavailable.

What type of education does an undergraduate need to become a successful grain merchandiser? Do today's marketing services provide an adequate source of information for correctly managing risk with a merchandiser's product? Would it be beneficial to create a certification process to limit the costs of training newcomers? For these reasons and the pure lack of information regarding grain merchandisers, the overall marginal benefit of surveying grain merchandisers in the central United States is well worth the

effort. This research takes a step toward filling that gap by providing information on what curriculum would best prepare grain merchandisers and which type of grain merchandisers, if any, would be interested in a certification process entailing further formal training. For example, a model determining if a merchandisers would desire a certification process is hypothesized to be related to formal academic training, subscription to publications aimed at improving their skills, membership in the National Grain and Feed Association (NGFA), and finally interest in attending annual conferences.

Factors influencing grain merchandiser profitability are also identified. It is hypothesized that a merchandisers' annual income will be a function of experience, education, the number of locations the merchandiser manages, the presence of incentive-based components in the merchandiser's salary, and if he/she actively sought to improve their merchandising skills.

Chapter Descriptions

The remainder of this paper is organized as follows Chapter 2 provides a literature review on past surveys involving elevators, producers, and grain merchandisers. The final section of the literature review provides information surrounding the importance of the merchandiser's role in the commodity supply chain. Chapter 3 examines the process and rationale of the survey development as well as the process of the database development. The chapter also breaks down the survey design within each of the three sections and the results from the preliminary distribution of the survey.

Chapter 4 describes a detailed summary of survey responses based on returned percentages. In addition correlation table of statistics and figures are presented. Chapter

5 introduces the empirical model and the analytical framework. Three models were designed the first a probit model estimating a respondent's desire for a certification process. The second a probit model estimating a respondents desire for yearly conferences as a role in continuing education and finally the third probit model estimating a respondents desire for a new publication filling the a possible gap in current information. Chapter 6 reviews the three model results and provides tables with statistics. Chapter 7 provides concluding remarks, limitations of the survey, and finally recommendations for future surveys.

CHAPTER 2: LITERATURE REVIEW

During the last several decades agriculture market research has focused heavily on the producer. Academics have created extension programs to help update the practices, and educate and certify producers. Surveys have been conducted to determine what strategies producers utilize for marketing their cash grain and what tools they use in the commodity future and option markets. For example, Schroeder, *et al*. (1998) surveyed producers and extension economist to determine if both groups viewed sets of marketing tools with equal importance. Their study revealed that many extension and producer goals were aligned, but also that extension economists' focus on forecasting exceeded producer interest in the tool. Instead, producers desired more emphasis on minimizing risk. Davis and Patrick (2000) found that soybean producers' use of forward contracts is notably influenced by marketing services. Other studies showed the main reason for using forward pricing among grain producers are spreading sales over the marketing season can contribute to the financial success of a grain producer business (Mishra, Ashok, Hisham El-Osta and James Johnson, 1999). Pennings *et al.* (2004) found many producers using Market Advisory Services (MAS) use them for risk reduction, but the highest value producers place in MAS is as a "price-enhancing" tool.

The academic community has accumulated much information on producer characteristics, but in doing so they have neglected a key component of the grain marketing system – the grain merchandiser. The last survey addressing the educational requirements of grain merchandisers was conducted in the mid 1960s (i.e., Fiscus, 1965). Fiscus surveyed twenty grain elevators located in east central Illinois to determine such

information as average age and average educational level. Fiscus does not target or identify specifically grain merchandisers but does identify an elevator manager. In this context the duties of the elevator manager closely resemble the duties of today's current grain merchandiser. The survey conducted by Fiscus (1965) found that the average age of elevator managers was 48.4 years of age. On average managers had 12.1 years of education in which the lower bound was elementary school and the upper bound was a completion of a bachelor's degree (Table 2-1). A typical respondent had been an elevator manager for 9.9 years, had worked in some aspect of the grain handling business for 18.2 years, and had at least 8.3 years of prior experience before assuming a managing position (Table 2-1). Mangers were also asked to rank a set of knowledge skills 1-5. A selection of a 1 indicated that a manager needed no understanding of the skill and a 5 indicated that a manager needed a thorough understanding. Fiscus (1965) highlighted knowledge skills with an overall survey mean from 4.50-5.00. Several skills that fell within this average were as follows (Table 2-1):

1. Understanding the types and processes of crop marketing
2. Understanding the economic factors affecting the management of agriculture business
3. Understanding market information
4. Understand the economic factors to consider in the expansion or enlargement of agriculture business

It was less important for a manager to have international trade knowledge with respondents indicating an average rating of 3.75 (Table 2-1). Also, close to this average was having knowledge of laws affecting agriculture products and understanding business

integration (Fiscus, 1965). One interesting mean of 2.80 was placed on the importance of understanding marketing cost and transportation losses within the livestock sector integration (Fiscus, 1965) (Table 2-1). Overall, managers seemed to place a great importance on business practices within their daily activities. Fiscus (1965) concludes that a higher level of education was needed for individuals that managed grain elevators. Fiscus (1965) also makes a recommendation for future curriculum development at the post high school level for skills such as understanding the process of crop marketing and understanding market information. Understanding the economic factors affecting the management of agriculture businesses was considered a skill to be taught at an adult or continuing educational level.

Survey Item	Mean
Age	48.40
Years of formal education	12.10
Years as an elevator manager	9.90
Years in the elevator business	18.20
Years of prior experience	8.30
Understanding the types and processes of crop marketing	4.60
Understanding the economic factors affecting the management of agriculture business	4.65
Understanding market information	4.55
Understand the economic factors to consider in the expansion or enlargement of agriculture business	4.50
Understanding the factors affecting foreign and world markets for agriculture products	3.75
Understanding the principles of vertical and horizontal integration in farming and other agriculture business	3.65
Understanding laws affecting agriculture products	3.65
Understanding marketing cost and transportation losses within the livestock sector	2.80

Table 2-1 Summary Statistics: Survey of Grain Elevator Managers, Fiscus 1965

Another analysis looked not directly at the grain merchandiser but at his/her job function in relationship to elevator profit margins (Thompson and Dziura, 1987). Whitacre and Spaulding (2007) examined the structural changes, for instance in capacity,

that elevators have gone through in the past decade and how contracts offered to the producer have evolved. Their research indirectly relates to the grain merchandiser role.

Past research offered a dynamic view of a typical grain elevator, but the question remains, "What do grain merchandisers need and want to know?" With the uncertainty in commodity markets in the coming years, based on information written by Melvin Brees in the Food and Agriculture Policy Research Institution Newsletter (2009), an understanding of not only domestic but also world markets is increasingly important for merchandisers. It is also apparent that having a keen understanding of logistics is an important role for grain merchandisers. For instance, having this keen understanding is vital to merchandisers that utilize trade within the Gulf. Dr. McKenzie (2005) establishes that if the United States domestic market would incur a shock due to a change in crush margins or a change in the economics behind storage, barge rates in the Gulf would immediately react. This immediate reaction would alter internal basis levels and change barge rates. Due to this, the market located in the Gulf is perceived as a price discovery region and when shocks are experienced this area is responsible for expressing indicators from export markets (McKenzie, 2005). Besides logistics being a serious concern for merchandisers, correctly designing a sufficient hedging program for a product being merchandised becomes a major challenge. Wilson *et al*. (2006) explain that hedging can be different for processors of agriculture foodstuffs because of two issues. The first is the hedge horizon which indicates the period of time it takes a processor to cover its short cash position. The second concern is the relationship between the input prices of the raw product weighed against the price received for the completed product. This second issue is not a large problem for processors in which both the input and output products have an

openly traded futures market. If the case is that a futures market does not exist for both products a merchandiser must develop a hedging strategy that uses a futures market of a correlated commodity. In the event that a closely correlated commodity does not exist, merchandisers will be required to develop a custom hedging strategy to become protected from price risk (Wilson *et al*. 2006).

Merchandisers play a key role in orchestrating the movement of grain from producer to end user and in doing so the grain merchandisers perform the key economic role that Schrimper (2001) explains to be a value adding proponent. Schrimper (2001) explains that this is only the case when the economic benefit of the end product is greater than the cost to transport the raw product. It is the merchandiser's role to find logistical outlets that will accomplish this goal (Figure 2-1). By doing this reliable markets are created that allow businesses to make informed decisions (Schrimper, 2001). Schrimper (2001) graphically illustrates two scenarios (Figure 2-2). The first is in the presence of two isolated markets in which transportation cost are considered to be zero. For purposes of this research the graph marked as "Trade Sector" will play the role of grain merchandiser with the position to help transfer grain ownership at price level sellers and buyers agree to. Market A represents a market with low supply and high demand. Market B represents a market with a large supply and small demand. If transportation costs are zero, Schrimper (2001) explains that due to excess supply and demand in the two markets the diffusion of a product to the "Trade Sector" will occur until equilibrium is established. This represents basic supply and demand shaping the market clearing price. In this case, a merchandiser's role would be small such as to only match buyers and sellers from each market but in reality transportation cost are not zero. Due to this,

diffusion of products within markets can be a very difficult hurdle. Schrimper (2001) next illustrates a figure with the same two markets and introduces transportation cost (Figure 2-3). Transportation costs are illustrated by the perpendicular line separating the distance between ED and ED^1 and ES and ES^1 (Schrimper, 2001). Schrimper (2001) states that Q_T represents the amount of product that is required to shift from each market based on market-clearing conditions in each market. Ultimately, in this more realistic scenario, a grain merchandiser's job is to relay prices to sellers and negotiate transportation cost to guarantee delivery of a commodity from one sector to another while maintaining an adequate margin.

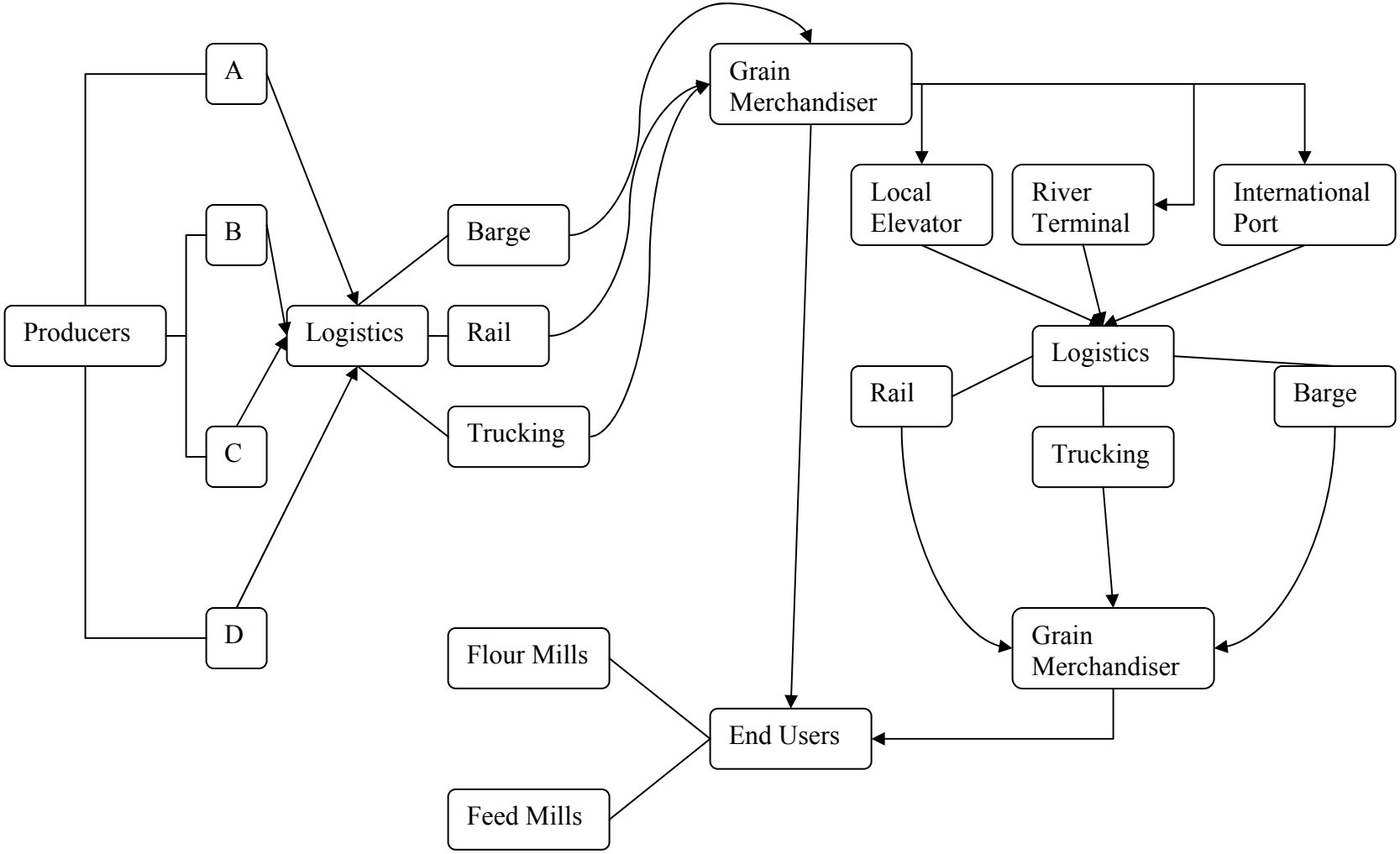

Figure 2-1 Merchandiser's Role in the Commodity Supply Chain

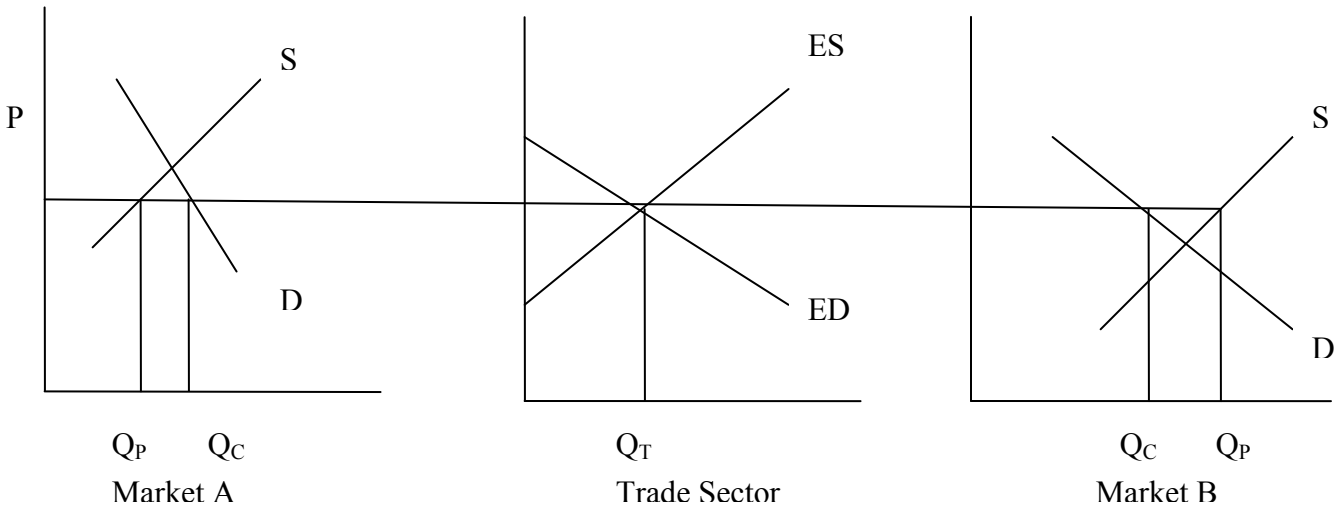

Figure 2-2 Schrimper's Two Region Model: Zero Transportation Cost

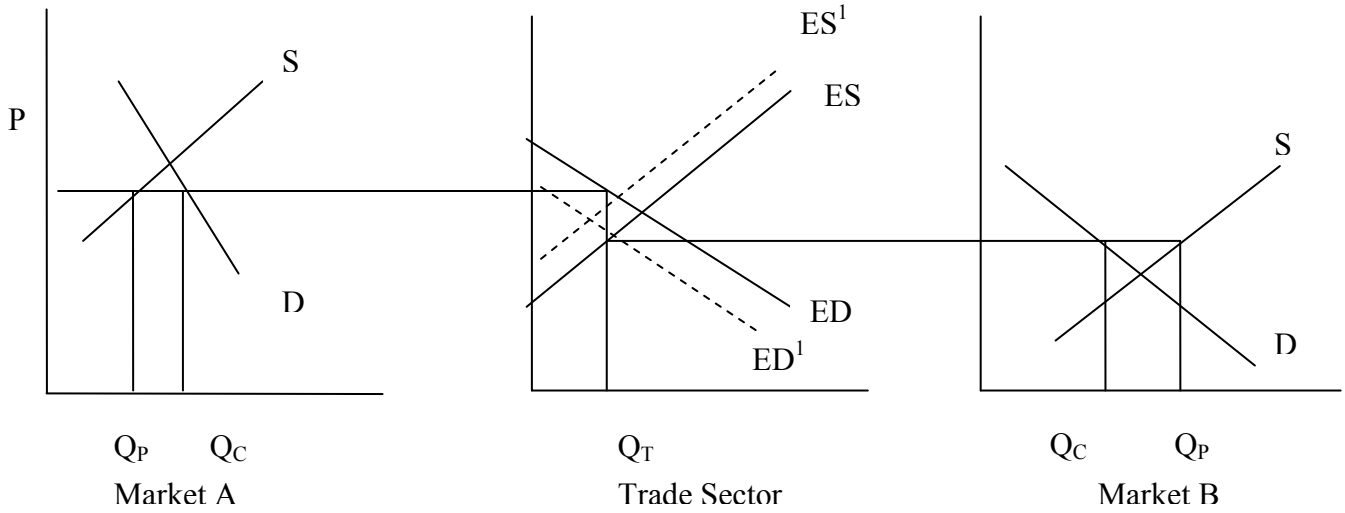

Figure 2-3 Schrimper's Two Region Model: Transportation Cost Included

Working (1949) contends that future markets are a sign of supplies that are currently in existence. Merchandisers must use future contracts in conjunction with price contracts, such as forward contracts, to adjust their basis to entice producers to deliver the raw commodity. The merchandiser will adjust this basis level in times of excess or shortages. They then must hedge based on known market information to compensate for the appreciation or deprecation of the contracted commodity, and the cost to store the commodity. This does differ among different grain handling firms. For example, in the case of a grain processor storage is considered a fixed cost of doing business. In this scenario processors will hold a commodity even if there is no instant return for storing that commodity (Working 1949).

Pennings and Leuthold (2000) take a dynamic look at the incentive for producers to hedge and develop an additional theory. Current typical theories suggest that producers and end users engaged in hedging behavior for several different reasons. The first include Price Insurance Theory. This theory was developed and relied on until the 1940s and states that a hedger's use of the futures market is similar to paying an insurance premium to protect marginal revenue. The speculator is holds risk for the hedger for a premium (Pennings and Leuthold, 2000). A second is the Portfolio Theory. The idea behind this theory is that a hedger will maximize his or hers expected utility based on a mix of cash sales and contracts within the future markets (Pennings and Leuthold, 2000). Telser (1981) supports the Liquidity Theory based on the fact that he believes that future markets are present because they offer a better-quality alternative than the informal forward contracts markets. For example, future markets have written rules that will decide judgment when the rules have been broken (Telser, 1981).

Pennings and Leuthold (2000) hypothesized that hedging between firms is a way to assist in the formation of long term "contractual relations". The futures market complements the cash transactions between firms by allowing firms with a biased agreement to transfer risk to a third party (Pennings and Leuthold, 2000). These transactions are deliberated daily between grain merchandisers who are key to the development of trade between firms. In essence the grain merchandiser is a firm's arbitrator of commodities.

This literature review establishes that there have been several studies encompassing the producer and some aspects of grain merchandisers but lack an overall understanding of the merchandiser. It is also apparent that the merchandiser plays a significant role in orchestrating a smooth flow of commodity products and adds value through the supply chain.

CHAPTER 3: SURVEY INSTRUMENT/METHODOLOGY

A survey was mailed to various grain merchandisers in the aforementioned states and Canada. The database that was compiled from the Grain Inspection & Warehousing Divisions of each state also contained the listings of trucking companies, and sharecrop farmers. State statutes require businesses who buy a predetermined amount of grain must be licensed. For example, in Missouri, a business/individual is required to be licensed if they purchase more than $100,000 worth of grain (Missouri Statute 276.401. 1.). Hence, other buyers were indistinguishable from their grain merchandising counterparts. Because of the manner in which the database of potential merchandisers was generated, respondents were asked to read a definition and to verify that they fit the "grain merchandiser" criteria. The definition used by the University of Arkansas Agriculture Department states:

> "*The term grain merchandiser encompasses all agribusiness firms involved in the procurement, handling, storing, and re-distribution and processing of grain. As such grain merchandisers include country grain elevators cooperatives and non-cooperatives, shippers and exporters, processors, and feeders."*

If respondents considered themselves grain merchandisers, they could proceed in completing the survey. If they did not fit the criteria they could check "Not a grain merchandiser" and return the survey. A large percentage of the respondents that returned

a survey as "Not a grain merchandiser" provided a name and address to be removed from the database.

Alreck and Settle (1995) explain that survey questions should be very easy to understand by the respondents and should be concise. Questions should also focus on the issue that the researcher desires to obtain and only one issue at a time should be presented (Alreck and Settle, 1995). In addition, Alreck and Settle (1995) point out that in some cases response bias can occur. To avoid this issue they recommend questions that conform to present social norms and questions that do not induce a threaten response. By doing this respondents will not be offended by the questions (Alreck and Settle, 1995). Alreck and Settle (1995) indicate the potential for *"Prestige Bias"* when asking respondents questions when dealing with age and income. To help overcome this issue the survey was made anonymous. The next potential bias is *"Yea-and Nay-saying"* in which a respondent selects only answers that are negative or positive. This is avoided by creating questions which have more than yes or no answers (Alreck and Settle, 1995). For instance, grain merchandisers were asked, in this survey, to indicate if they would have desired prior training but instead of allowing them to answer yes or no they were requested to indicate in which area they would have desired prior training. The fourth bias concerning survey research is *"Order Bias"* which can cause a degree of exhaustion while completing the survey (Alreck and Settle, 1995). It is recommended by Alreck and Settle (1995) to divide questions that require a simple answer such as multiple choice with thought provoking written responses. The final bias pertaining to a survey is *"Extremity Bias"*. This issue arises when a respondent is asked by the researcher to identify on a scale their particular feeling or recognition of a topic but the scale's range

too long (Alreck and Settle, 1995). To overcome this issue, this survey inquired that grain merchandisers select their particular feeling of importance for a topic on a scale of 1-5.

When a researcher is designing questions that require a numerical response Alreck and Settle (1995) advise to allow the respondent to write in a value instead of allowing them to select a value. This survey also makes use of the *"Forced Ranking Scale"* which helps determine the most important item for a respondent, the remaining importance for the rest of the items, and helps to determine the relationship between the items (Alreck and Settle, 1995). Furthermore, a variation of the *"Linear Numeric Scale"* was utilized so that respondents could select, on equivalent intervals, the importance placed on skill sets and personality traits. The scale combination type used was the *"Multiple-Rating Scale"*. This variation only differs by placing the scale selection next to each question asked to lesson the fatigue on the respondent (Alreck and Settle, 1995). Alreck and Settle (1995) explain that there is disagreement among researchers who use the *"Linear Numeric Scale"* whether to use a numerical scale or vocabulary scale. They recommend that it is not prudent to label the middle of the scale based on the fact that each respondent's definition of a word may vary (Alreck and Settle 1995). For a final point Alreck and Settle (1995) explain that the concluding items in the survey should not be intimidating. This survey concludes by asking respondents a non-intimidating question for their desire in furthering their education.

Survey Design

Questions were separated into three categories that were designed to gain a better understanding of the backgrounds of grain merchandisers, what information they find useful, and in what areas their knowledge is limited. A brief overview of survey sections and a sample of questions are listed in Table 3-1. Before sending the survey to the entire database a small group of University of Missouri Alumni that pursued careers in the grain merchandising field were selected to give feedback on possible modifications to the survey. Three individuals were selected and due to time constraints of all three, the survey was taken and only a small amount of feedback was given. This feedback included grammatical errors within the survey and the need for additional detail given to a minority of questions for clarification reasons. All felt that the survey was well designed and indicated varying degrees of interest for future educational programs. Even though feedback was limited it seemed that the survey would accomplish the goal of gaining a better understanding of grain merchandisers.

Career Experience Questions designed to ascertain years as a merchandising, skills sets and personality traits deemed necessary for a merchandising occupation.
Education Questions designed to determine average education and to gain an understanding of what merchandisers would have desired as prior education.
Business Practices Questions designed to establish what type of business practices where utilized as a merchandiser.
Compensation Questions designed to ascertain what an average annual income was for a merchandiser and what the components of that income where comprised of.
Information and Technology Questions designed to establish where merchandisers received their market information.
Comprehension and Networks Questions designed to determine if a post education training program would be deemed beneficial to merchandisers.

Table 3-1 Selected Survey Items

Category One: *Career/Education/Compensation*

Survey items 1-23 were used to inquire about the education level and job experience of each respondent. Within their experience level, merchandisers were asked about what types of training they have been involved in and the duration of the training. Next, respondents were asked what areas they wished they would have had more preparation. To determine what type of personality and skill sets merchandisers need, they were asked to rank the importance of several traits. Questions then moved into areas of products marketed, types of clients, and in what ways clients were contacted. Next, merchandisers were questioned about the design of their forward contracts such as, how far into the future they would contract. The last section of category one dealt with compensation of the merchandiser. These included what mixes of monetary compensation they received on an annual basis (salary, commission, etc.) and average annual income (See Appendix A for survey items 1-23).

Category Two: *Information and Technology*

The first part of this section, survey items 24-26, allowed the written entry to what types of information merchandisers subscribe to for accessing information. Survey items 27-32 were targeted to gain and understanding in which areas merchandisers felt they needed more/better information. These questions were also to ascertain interest in a new market publication aimed at areas merchandisers were able to select (See Appendix A for survey items 24-26).

Category Three: *Comprehension and Networks*

Survey items 33-39 posed questions about issues concerning today's grain merchandiser. These include types of contracts used, business being conducted outside of the United States, and interest in an accredited merchandising association (See Appendix A for survey items 33-39).

CHAPTER 4: DATA SOURCES - SUMMARY OF SURVEY RESPONDENTS

The grain merchandising database totaled around 4,000 different grain handling businesses but due to budget restraints 2,500 different businesses were selected. To obtain a diverse sample, at least one address was sampled from each zip code in the finished database. Due to survey issues, such as name replication, a total of 2485 surveys were mailed to potential grain merchandisers. Of these, 276 were post marked "Return to Sender" while 279 were returned from respondents. Forty-nine returned surveys (2.22%) were checked "Not a grain merchandiser, and were discarded. The remaining 230 response were deemed usable surveys which produces a 10.41% response rate. Henderson (1990) contends that a response rate of 20-30% is characteristic for a mail-out survey to a large sample of firms. Based on this information it is recognized that the response rate for this survey is low, but Baruch (1999) argues that there is no set norm for what is considered an appropriate response rate and that lower response rates may be realized with a mail survey.

Category One: *Career/Education/Compensation*

The mean of experience for the returned surveys was 16.38 years with the lower bound being less than one year of experience and the upper bound being 50 years of experience. Figure 4-1 presents the overall frequency of experience. One goal of this survey was to identify what a grain merchandiser would find beneficial in further education, it was important to recognize the extent of their formal academic education. About 0.44% had

completed the eighth grade only, 23.2% up to High School, 11.4% up to an Associate, 53.5% up to a Bachelor, and 11.4% had a Post Bachelor (Table 4-1). When education was coded from "0-4" with "0" representing K-8 and "4" representing a post bachelor, the mean level of education was 2.5. This indicates that almost half of the respondents have some type of associate degree or completed course work at a four year university (Table 4-2). Data was collected to indicate from which university, community college, high school, or grade school they had completed their highest degree. Overall there were seventy-one institutions listed. Of the top listed were Kansas State University, University of Missouri-Columbia, South Illinois University, University of Illinois, Iowa State University, and Western Illinois University.

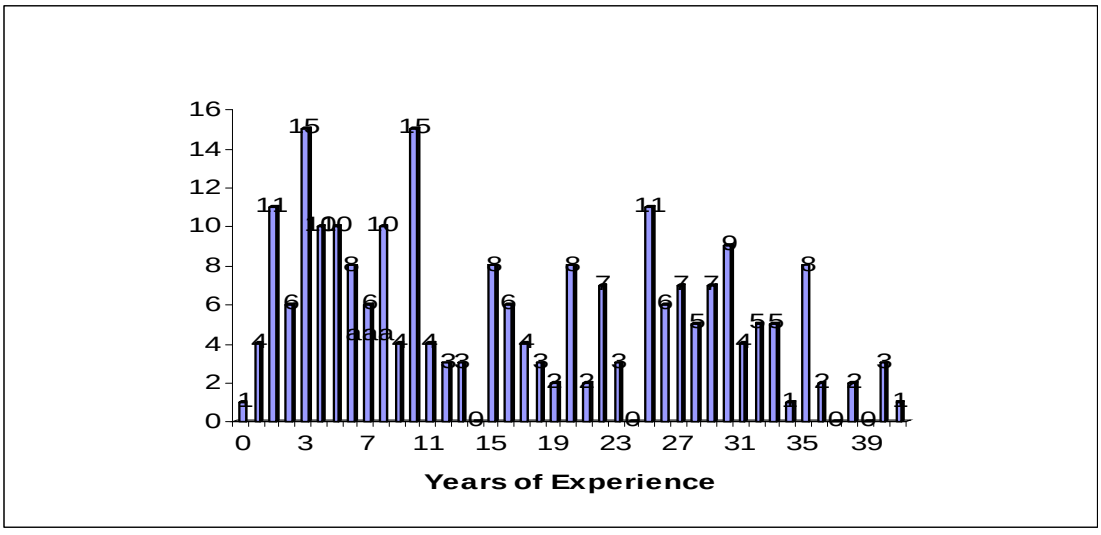

Figure 4-1 Frequency of Years of Experience

Academic Level	Frequency	Percentage of Total
K-8	1	0.4%
High School	53	23.2%
Associate	26	11.4%
Bachelor	122	53.5%
Post Bachelor	26	11.4%

Table 4-1 Grain Merchandiser Respondent Highest Education (228 Respondents)

Survey Question Description	N	Mean	Std Dev	Minimum	Maximum
Years of Experience	229	16.38428	11.64312	<1	50
Highest Degree Obtained [a.]	227	2.51542	0.98371	0	4
Received Formal Academic Training (1= Yes 0=No)	228	0.24561	0.4314	0	1
Received Nonacademic Training (1=Yes 0=No)	229	0.72489	0.44755	0	1
Average Annual Income	200	69048	29972	15000	151000
Locations Managed [b.]	228	1.75439	1.42391	1	6

[a.] Highest Degree Obtained was coded from "0-4" with "0" representing K-8 and "4" representing a post bachelor.

[b.] Locations managed was coded from "1-6" with "1" representing managing 1-3 locations and "6" representing 21 plus locations being managed.

Table 4-2 . Selected Summary Statistics of Respondents

On average, respondents revealed that they have held their current position for almost twelve years. Respondents were asked to signify how many prior positions they have held. If this was the only position the respondent had held the response was coded with a "0". Likewise an "1" if they had only one previous position and up to a "6" if they have held at least six prior positions. Overall, respondents seemed to exhibit job loyalty with a mean of prior positions held of 1.06. Most of the grain merchandisers (about 75%) did not receive formal academic training towards becoming grain merchandiser, however (Tables 4-2 and 4-3). Seventy-two percent of respondents did indicate that they had received non-academic training and those merchandisers, on average, indicated that they

had received their training over a period of weeks to months (Table 4-4). When asked to specify how long, in their opinion, it took to train a new grain merchandiser the majority of respondents indicated at least six months and up to two years. Merchandisers suggest that training, seminars, and college courses would have a great value prior to becoming a grain merchandiser (Figure 4-2).

	Frequency	Percentage of Total
Yes	56	24.6%
No	172	75.4%

Table 4-3 Percentage of Formal Academic Training Obtained Towards A Grain Merchandising Career among Respondents (228 Respondents)

	Frequency	Percentage of Total
Yes	166	72.5%
No	63	27.5%

Table 4-4 Percentage of Non-Academic Training Obtained Towards A Grain Merchandising Career among Respondents (229 Respondents)

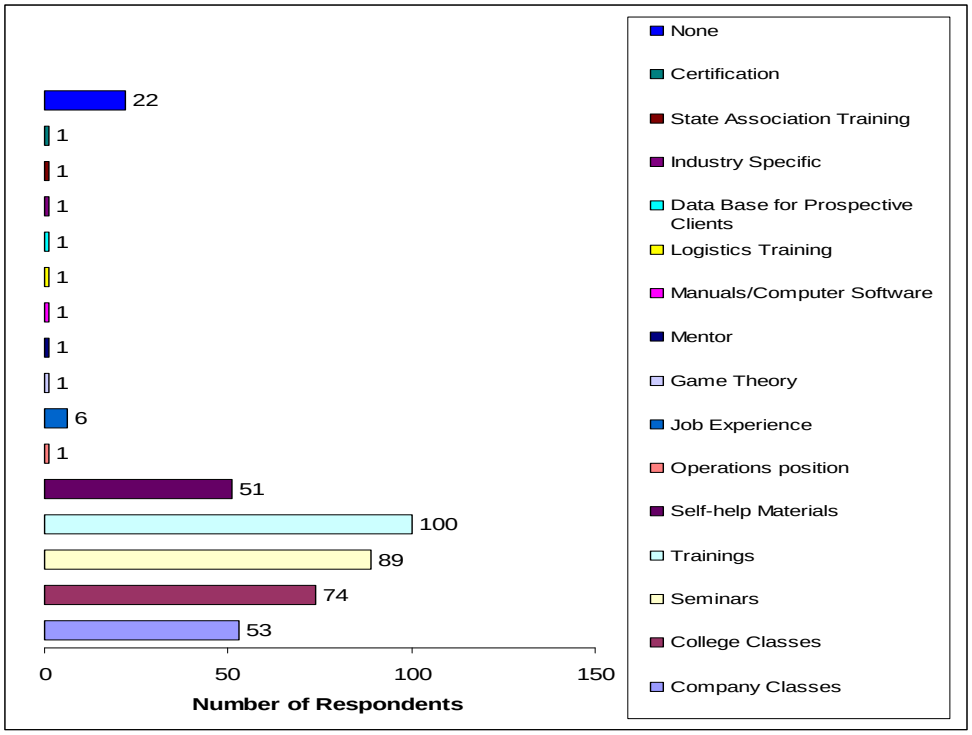

Figure 4-2 Desired Preparation Indicated by Respondents Prior to a Grain Merchandising Career

Item 12 on the survey was designed to inquire of the importance of certain skill sets that merchandisers should have. Of the numerous skills, oral communication, understanding futures markets, and understanding basis are considered very important skill sets by merchandiser. Seventy-four percent agreed that oral communication and understanding the futures markets were very important while 83% found understanding the basis was very important (Figure 4-3). Item 13 encompassed the personality traits of grain merchandisers. As shown in Figure 4-4, several respondents indicated that being a quick thinker is very important (45%) and valued a personality trait of risk tolerance as very important (48%), while over half found relationship building as very important (67%). Table 4-5 indicates the mean of importance placed on a set of personality and skill sets. Respondents were asked to indicate the importance of a personality or skill set

from “very important” to “least important”. The responses were then coded from “1-5” with “1” representing “very important” and “5” representing “least important”. From these results it is apparent that most of the respondents place these sets at a high level of importance.

Out of 225 respondents, 75% selected that they participate in the professional development opportunity of reading on line information. Sixty-four percent read popular press publication and 54% read subscription based information

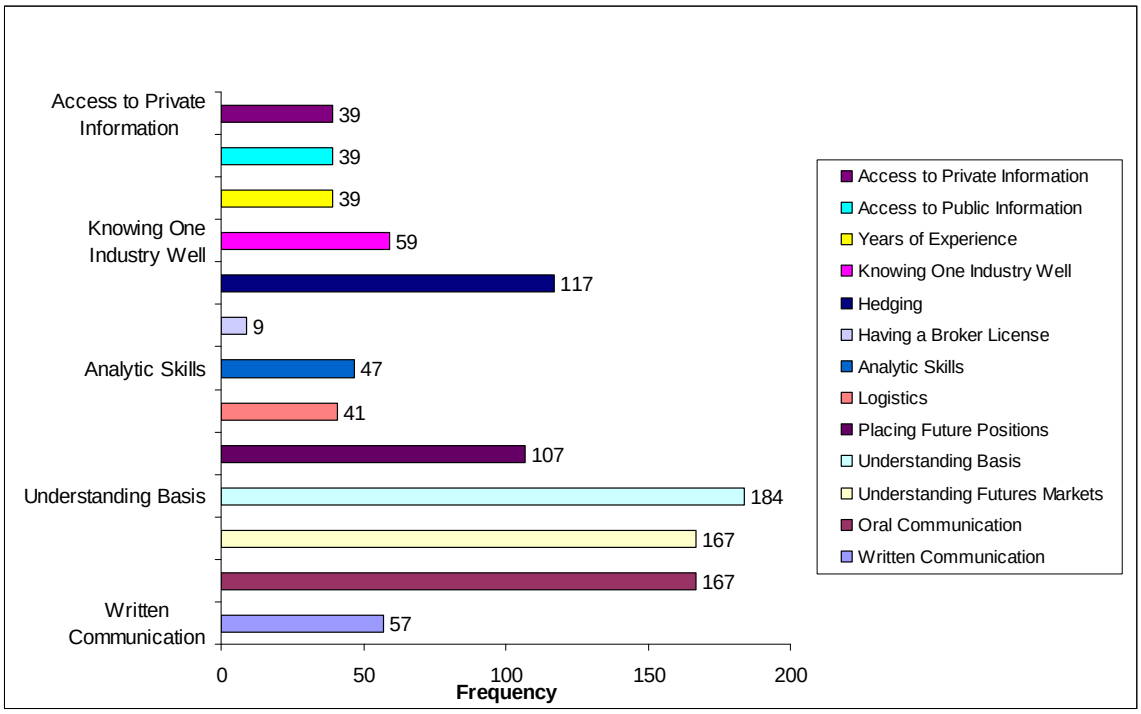

Figure 4-3 Skills Deemed Very Important by Respondents

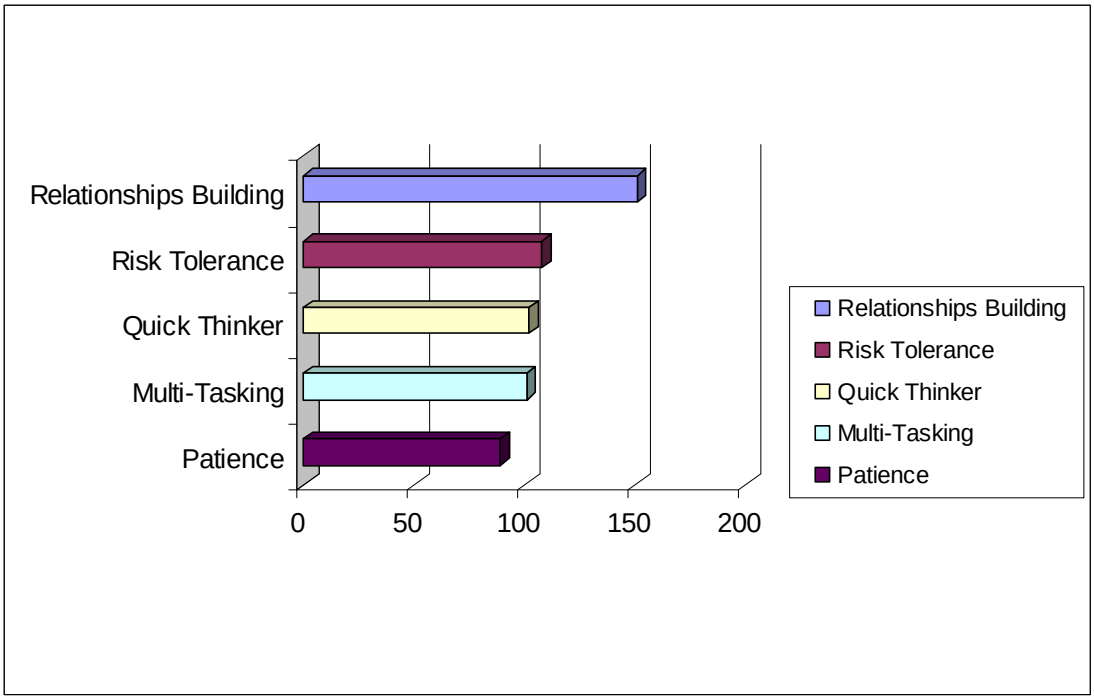

Figure 4-4 Frequency of Personality Traits Respondents Rank Very Important

Survey Question Description*	N	Mean	Std Dev	Minimum	Maximum
Oral Communication	225	1.33333	0.63387	1	5
Understanding Future markets	224	1.33036	0.66141	1	5
Understanding Basis	223	1.26457	0.71468	1	5
Being a Quick Thicker	225	1.68889	0.72031	1	4
Having Patience	225	1.77778	0.75855	1	5
Able to Multitask	224	1.71429	0.77435	1	5
Able to Deal with Risk	225	1.71111	0.84045	1	5
Able to Build Relationships	225	1.40889	0.67606	1	5
Able to Hedge Correctly	222	1.70721	0.92225	1	5

***** Respondents were asked to indicate the importance of a personality or skill set from "very important" to "least important". The responses were then coded from "1-5" with "1" representing "very important" and "5" representing "least important".

Table 4-5 Selected Summary Statistics of Personality and Skill Sets Exhibited by Respondents

Primary points of contacts for merchandisers include farmers, brokers, and other merchandisers. Item 16 inquired on the different methods used to contact these

individuals and in what frequency (Table 4-6). Most merchandisers made phone calls and did so with great regularity. Personal and internet contact was indicated as a rarity (Table 4-7).

Characteristic	Frequency	Percentage of Total
Some	9	3.9%
Lots	221	96.1%

Table 4-6 Respondents Indication of Using the Phone for Merchandising with Clients (230 Respondents)

Characteristic	Frequency	Percentage of Total
None	69	31.5%
Little	49	22.4%
Some	76	34.7%
Lots	25	11.4%

Table 4-7 Respondents Indication of using the Internet for Merchandising with Clients (219 Respondents)

For the purposes of determining if the survey had reached a commodity diverse sample, respondents selected the commodities that they market. The top three marketed commodities are corn with 216 respondents, soybeans with 195 respondents, and Chicago wheat with 115 respondents. The sample also included various commodities as hard red winter wheat, corn gluten meal, flax, cottonseed, millet, wet distiller's grain, edible beans, cereal, hominy, and elevator dust. Most merchandisers monitor basis daily, represented by 46%, and intra-daily, represented by 43%. To establish a typical respondent's work load survey recipients selected, within a range, of the total locations they managed and this information was then coded to establish a survey average. The

ranges included: 1-3, 4-6, 7-9, 10-15, 16-20, and 21 plus. Averages within each range were then taken. For example 1-3 was represented as a "2", 10-15 as "12.5" and 21 plus as "21". The mean of 4.65 indicates that most of the survey's respondents managed at least one location and up to six. An average cash buy/sell bid is offered from one month to a year out, represented by almost 48% of survey respondents. Annual income for grain merchandisers had a high percentage favoring a salary based pay scale with 68% of respondents. The second most prominent compensation program was, commissioned based, at 14%. The largest percentage of merchandisers (38%) had an average annual income between $51,000 and $75,000 (Table 4-1).

Category Two: *Information and Technology*

The top four popular press magazines that respondents read for information include Grain Journal, Feedstuffs, Wall Street Journal, and Feed and Grain. The top four professional marketing services respondents subscribed to are DTN, FC Stone, White Commercial, and Advance Trading Inc. Of particular interest, understanding of future and options markets are one of the top skills merchandisers would like to develop further. Other top skills mentioned by respondents for further development include understanding basis and spreads and being able to adequately communicate with customers.

Eighty-two percent of respondents specified they would be interested in receiving publications to help improve their marketing skills with a focus on new strategies and developments delivered electronically (Table 4-8). Merchandisers regularly sought to improve their marketing skills with 91.4% of respondents indicating they sought to improve their skills with only 8.5% not (Tables 4-8 and 4-9). Of a total of 216

respondents almost 19% received daily articles aimed at improving their skills, 21% received articles weekly, and 42% received articles monthly. When asked if these articles helped 81% said yes, 9% said no, and 9% said sometimes out of 204 respondents. The highest ranked daily concern for respondents was basis with 55% ranking it as their primary concern (Table 4-10).

Survey Question Description (1=Yes 0=No)	N	Mean	Std Dev	Minimum	Maximum
Has a Desire to Receive New Publications	230	0.81739	0.38719	0	1
Actively Seeks to Improve Skills	230	0.88261	0.32259	0	1
Desires a Certification Process	230	0.38696	0.48812	0	1
Would be Interested in Attending Yearly Conferences	230	0.64348	0.48002	0	1

Table 4-8 Selected Summary Statistics of a Respondents Desiring Personal Job Related Improvement

	Frequency	Percentage of Total
Yes	203	91.4%
No	19	8.6%

Table 4-9 Frequency of Respondents Actively Seeking to Improve Their Merchandising Skills (222 Respondents)

Survey Question Description*	N	Mean	Std Dev	Minimum	Maximum
Price	230	1.25217	1.64725	0	5
Transportation	230	1.62609	1.70517	0	5
Basis	230	1.50435	1.3695	0	5
Hedging [a.]	222	1.70721	0.92225	1	5
Futures	230	1.48696	1.72252	0	5
Crop Quality	230	1.56957	1.81501	0	5

***** Respondents were asked to rank "0-5" from the above list of concerns as a merchandiser with "1" being of high concern "5" of little concern and "0" being no concern at all.
[a.] This seems to be an important concern for all merchandisers with no respondent selecting "0".

Table 4-10 Summary Statistics of the Biggest Concern in Merchandising Among Respondents

Category Three: *Comprehension and Networks*

Respondents were also asked to select how sufficient their knowledge of accumulator contracts were on a scale from excellent to no knowledge at all. Responses were coded from "1" representing excellent to "5" representing no knowledge. The mean among respondents was 3.64. This indicates that most respondents have a fair to poor understanding of accumulator contracts. Seventy-nine percent of respondents said that they do not believe that they know enough about Mycotoxins, DDGs, Bioterrorism and trade with Mexico/Canada while 20% feel they do. Of 226 responses 9% signified that they were involved in trading internationally while 81% was currently not conducting business internationally and 8% felt that there was a high probability that they would be conducting international business in the future.

The last two survey items ask the respondent to consider if annual conferences and a certification process would be valuable. Seventy percent would be interested in attending annual conferences designed to educate the attendee (Table 4-8). Of the survey recipients 40% would find a certification process valuable while 58% would not. Figure 4-5 represents the level of importance respondents place on having a certification process based on their years of experience (Table 4-8). Respondents were asked to rank a set of proposed curriculum if an annual conference became a reality. A ranking of 0 indicates no consideration while 1-2 signified little to no interest. A ranking of 3-4 signified some interest and 5 indicates a respondent that was very interested. One could theorize that years of experience would negatively correlate with the desire for a certification process. As the grain merchandiser increases in experience one could presume that merit would be placed on experience and knowledge of the business. The merchandiser may no longer

need another status symbol to place him/her above the competition. The opposite would be true for the inexperienced grain merchandiser. It is not apparent from this graph if age is linked to interest in a certification process and further analysis will be required.

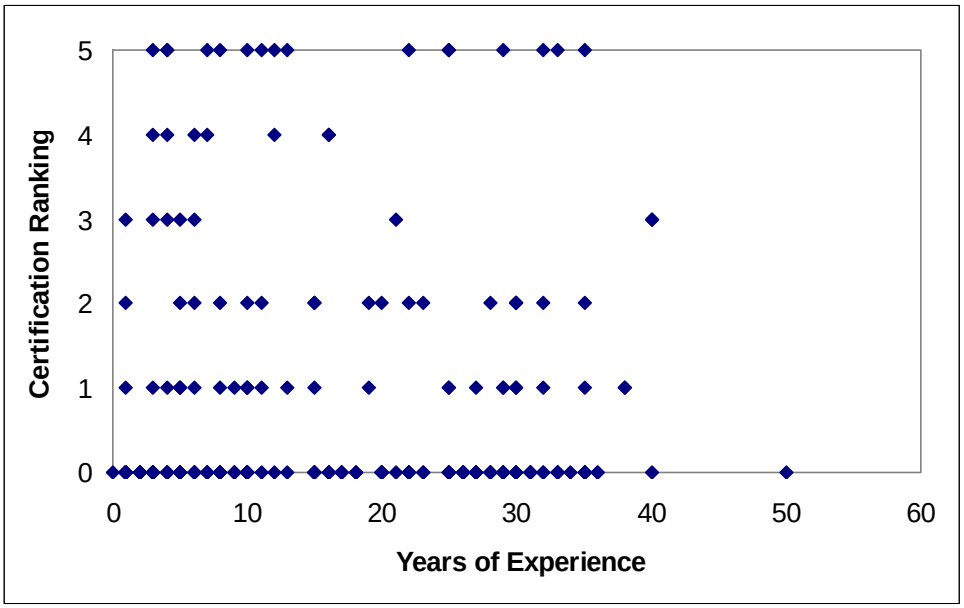

Figure 4-5 Respondent Ranking of Certification Based on Experience (1=Least Important 5=Very Important 0=No Consideration)

Furthermore, the items ranked with the largest frequency include skills, more networking, seminars, and certification. From these percentages respondents indicated that if there was a grain merchandising association skills should be the major focus of the association.

CHAPTER 5: EMPIRICAL MODEL/ANALYTICAL FRAMEWORK

Empirical Model Introduction

One main purpose of this research topic it to determine the interest in various post educational programs directed towards grain merchandisers. For example, would merchandisers find it beneficial for a certification process that would help to differentiate the various skill levels of individuals in the industry? What type of individual would perceive this as beneficial? Second, from the survey data is it evident that merchandisers would participate in yearly conferences aimed at teaching new skills, providing information on new developments, and creating new networking channels? Finally, are today's publications offering the required information for grain merchandisers? From survey data what type of merchandiser would deem a new publication valuable? To help answer these questions three probit models were designed and are listed below.

For the connotation of the signs +, -, and ? after each independent variable within every model represents the hypothesized correlation of each independent variable towards its dependent variable. For example, if a independent variable has a + following it this means that the hypothesized result is positive a negative hypothesized result if the variable if followed by -. In the case of the ? sign this indicates that the correlation could be negative or positive.

Probit Model: "Desire for a Certification Process"

Merchandisers' desire for a certification process is hypothesized to be related to their years of experience (+), formal education level (+), their annual income components (?),

formal academic training towards a grain merchandising career (-), a desire to attend company training classes (+), a desire to attend college classes (+), a desire to attend seminars (+), a desire to improve his or her skills (+), if they are involved in reading press releases (+), if they are involved in reading on-line information (+), if they are involved in reading subscription based information (+), a member of the National Grain and Futures Association (NGFA) (-), are the only merchandiser at their location (?), takes part in internal development activates (+), and has cross contact with other merchandisers within the business (+). Desiring a certification process is hypothesized to also be dependent on the ranking a merchandiser places on years of experience (+), access to public and private information (?), understanding future and option markets (+), understanding basis (+), and having good analytical skills (+).

It is assumed that merchandisers with more years of experience would find a certification process desirable for purposes in seeking new employment or seeking new employees. Merchandisers which have a higher level of formal education would see a positive benefit of a certification process but merchandisers that already have formal academic training towards a grain merchandising career would see no benefit. It could be inferred that merchandisers who wish to attend different forms of self improvement activities (i.e. attending company training classes, college classes, and seminars), obtaining new information through different sources (i.e. press releases, on line information, subscription based information, or internal development activities), and actively seeking to improve his or her skills would desire a certification process. If a merchandiser is a member of the NGFA he or she would not desire a certification process due to the fact that the NGFA may provide all the needs of the merchandiser. Having cross contact with

other merchandisers at the firm will have a positive impact on desiring a certification process based on the idea that merchandiser will be yearning for a way to make them look more economically attractive for advancement opportunities. The higher the ranking of years of experience will reflect a merchandiser's desire for a certification process because a certification process will reflect experience. This will also coincide with the ranking of understating future and options, understanding basis, and having good analytical skills based on the fact that a certification process will identify a merchandiser's ability. It is not apparent if different income components, being the only merchandiser at their location, and the ranking placed on access to public and private information would be negatively or positively correlated to desiring a certification process.

$$desire\ for\ a\ \ certification\ process = \beta_0 + \beta_1\ experience + \beta_2\ education + \beta_3\ salary + \beta_4\ salaryandincentive + \beta_5\ formaltraining + \beta_6\ companyclasses + \beta_7\ collegeclasses + \beta_8\ semionarsandtraining + \beta_9\ improveskills + \beta_{10}\ yearsofexp + \beta_{11}\ accesstopublic + \beta_{12}\ accesstoprivate + \beta_{13}\ readingpress + \beta_{14}\ readingonline + \beta_{15}\ subscriptionbase + \beta_{16}\ ngfa + \beta_{17}\ onecolocated + \beta_{18}\ internal + \beta_{19}\ understandingfuture + \beta_{20}\ understandingbasis + \beta_{21}\ analyticalskills + \beta_{22}\ crosscontanct + u$$

Probit Mode: "Desire for Yearly Conferences"

Merchandisers' desire for yearly conferences designed as a continuing educational program are hypothesized to be related to their years of experience (+), formal education level (+), their annual income components (?), formal academic training towards a grain

merchandising career (?), a desire to attend company training classes (+), a desire to attend college classes (+), a desire to attend seminars (+), a desire to improve his or her skills (+), if they are involved in reading press releases (+), if they are involved in reading on-line information (+), if they are involved in reading subscription based information (+), a member of the National Grain and Futures Association (NGFA) (?), are the only merchandiser at their location (+), takes part in internal development activates (+), and has cross contact with other merchandisers within the business (+). Desiring a yearly conference is hypothesized to also be dependent on the ranking a merchandiser places on years of experience (?), access to public and private information (+), understanding future and option markets (+), understanding basis (+), and having good analytical skills (+).

It is assumed that merchandisers with more years of experience would find yearly conferences desirable for purposes to improve their networking channels as well as merchandisers which have a higher level of formal education. It could be inferred that merchandisers who wish to attend different forms of self improvement activities (i.e. attending company training classes, college classes, and seminars), obtaining new information through different sources (i.e. press releases, on line information, subscription based information, or internal development activities), and actively seeking to improve his or her skills would desire a yearly conferences. Having cross contact with other merchandisers at the firm will have a positive impact on desiring a yearly conferences based on the idea that merchandiser will be interested in obtaining the latest information to train merchandisers at his or her location. The higher the ranking of understating future and options, understanding basis, and having good analytical skills will positively impact the desire for yearly conferences based on the fact that conferences

could address these areas. It is not apparent if a merchandiser's annual income components, their formal academic training towards a grain merchandising career, being a member of the National Grain and Futures Association, and the ranking placed on years of experience would be negatively or positively correlated to desiring yearly conferences.

$$desire\ for\ yearly\ conferences = \beta_0 + \beta_1\ experience + \beta_2\ education + \beta_3\ salary + \beta_4\ salaryandincentive + \beta_5\ formaltraining + \beta_6\ companyclasses + \beta_7\ collegeclasses + \beta_8\ semionarsandtraining + \beta_9\ improveskills + \beta_{10}\ yearsofexp + \beta_{11}\ accesstopublic + \beta_{12}\ accesstoprivate + \beta_{13}\ readingpress + \beta_{14}\ readingonline + \beta_{15}\ subscriptionbase + \beta_{16}\ ngfa + \beta_{17}\ onecolocated + \beta_{18}\ internal + \beta_{19}\ understandingfuture + \beta_{20}\ understandingbasis + \beta_{21}\ analyticalskills + \beta_{22}\ crosscontanct + u$$

Probit Mode: "Desire for New Publications"

Merchandisers' desire for receiving new publications designed to fill informational gap in current publications is hypothesized to be related to their years of experience (?), formal education level (+), their annual income components (+), formal academic training towards a grain merchandising career (+), a desire to attend company training classes (+), a desire to attend college classes (+), a desire to attend seminars (+), a desire to improve his or her skills (+), if they are involved in reading press releases (?), if they are involved in reading on-line information (?), if they are involved in reading subscription based information (?), a member of the National Grain and Futures Association (NGFA) (?), are the only merchandiser at their location (+), takes part in internal development activates (+), and has cross contact with other merchandisers within the business (+). Desiring

new publications is hypothesized to also be dependent on the ranking a merchandiser places on years of experience (?), access to public and private information (+), understanding future and option markets (+), understanding basis (+), and having good analytical skills (+).

Being a merchandiser who has a higher level of formal education is hypothesized to want to advance their careers through a new publication aimed at providing new information. Merchandisers that have income components that are based on reward (commission) not a set salary could be hypothesized to have a positive relationship for a new publications that would increase their profitability. It could be inferred that merchandisers who wish to attend different forms of self improvement activities (i.e. attending company training classes, college classes, and seminars), take part in internal development activities, being the only merchandiser at his or her location, and actively seeking to improve his or her skills would desire a new publication aimed at improving their skills. Having cross contact with other merchandisers at the firm will have a positive impact on desiring a yearly conferences based on the idea that merchandiser will be interested in obtaining the latest information to train merchandisers at his or her location. The higher the ranking of understating future and options, understanding basis, and having good analytical skills will positively impact the desire for a new publication based on the fact that this new publication could add a continuing aspect to merchandisers. It is not apparent if a merchandiser's years of experience, obtaining new information through different sources (i.e. press releases, on line information, or subscription based information), being a member of the National Grain and Futures

Association, and the ranking placed on years of experience would be negatively or positively correlated to desiring yearly conferences.

$$desire\ to\ receive\ new\ publications = \beta_0 + \beta_1\ experience + \beta_2\ education + \beta_3\ salary + \beta_4\ salaryandincentive + \beta_5\ formaltraining + \beta_6\ companyclasses + \beta_7\ collegeclasses + \beta_8\ semionarsandtraining + \beta_9\ improveskills + \beta_{10}\ yearsofexp + \beta_{11}\ accesstopublic + \beta_{12}\ accesstoprivate + \beta_{13}\ readingpress + \beta_{14}\ readingonline + \beta_{15}\ subscriptionbase + \beta_{16}\ ngfa + \beta_{17}\ onecolocated + \beta_{18}\ internal + \beta_{19}\ understandingfuture + \beta_{20}\ understandingbasis + \beta_{21}\ analyticalskills + \beta_{22}\ crosscontanct + u$$

Economic Specification

A binomial probit model is specified to investigate what characteristics influence whether a grain merchandiser desires a certification process. Following Hoetker (2007) a binomial probit model is appropriate when only two choices can occur (e.g., $y = 1$ if desire certification; $y = 0$ if not). Binomial probit procedures estimate the probability of the dependent variable y equaling one for individual i, given a vector of independent variables x, which is given by

$$P(y_i = 1|x_i) = \Phi(x_i'\beta),$$

where Φ is the cumulative density function for the standard normal, and β is a vector of coefficients. It is necessary to use a probit model instead of standard OLS, because under an OLS model the predicted probabilities of greater than one or less than zero will be of no consequence (Hanushek and Jackson 1977). In the case of this study the binary probit

model is a function of a set of binary variables called "dummy variables" in which no is signified by a "0" and yes is signified by a "1" (Wooldridge 2009). Wooldridge explains that the major benefit of using dummy variables in a probit model is that model outcomes are very easily understood. For instance, Wooldridge (2009) uses the example of one dummy variable to determine expected wage based on gender and education:

$$y=\beta_0 + \delta_o female + \beta_1 educ + u$$

$$\delta_o = E(wage \mid female,educ) - E(wage \mid male,educ)$$

In this example, through the use of a dummy variable, it is relatively simple to isolate wage differences based on gender holding education constant for a comparison. It is important to note that when dummy variables are used that a "base group" must be established as a method of comparison. By creating a "base group" this will insure that the issue of a "dummy variable trap" will be avoided (Wooldridge 2009).

Marginal effects of each independent variable on each dependent variable are essential for research to determine which variables impact the dependent variable the greatest and what way (i.e. negative or positive). Unlike an OLS model marginal effects of a probit model are not the coefficient estimates (Wooldridge 2009). Wooldridge (2009) explains that to derive these marginal effects researchers use what is called partial effect at the average (PEA). This method uses a scale factor such as the sample average of each independent variable. But this method will only work with continuous variables and will not work for discrete variables (Wooldridge 2009). For discrete values, such as 1 being female and 0 not female, it is estimated the likelihood of success for the

independent variable as “1” and “0” for all observations. Finally, all variations are averaged from the independent variable to determine the marginal effect (Wooldridge 2009).

CHAPTER 6: MODEL RESULTS

As previously discussed survey data has presented a very in-depth look into the various positions of grain merchandisers on numerous issues. From this information and the use of these three models this research will uncover if grain merchandisers value a certification process, desire yearly conferences, and if they require a new publication that provides information not currently offered.

Alreck and Settle (1995) also stated that two potential biases can occur while using a mail survey. These potential biases are called nonresponse bias and self-selection bias. Nonresponse bias occurs when a respondent answers the survey solely due to the fact that he or she is interested in the outcome or product of the survey. Respondents without any interest select not to complete the survey. Self-selection bias occurs when a respondent is allowed a choice to complete or not to complete the mail survey (Alreck and Settle 1995). Alreck and Settle (1995) recommend to overcome this issue respondent should be under the impression that survey completion is mandatory. For the current study, it is understood that the bias pertaining to this research and the methods used to collect this data will have the potential of nonresponse and self-selection bias (e.g., Alreck and Settle, 1995). But, one purpose of this research is aimed at determining the desire for continuing education among grain merchandisers and if a large enough portion of the sample desire this education further research will be beneficial even if these two biases are present. Thus, self-selection response bias is of minimal concern for the given study because this researcher is designed to learn what skills are needed from those interested.

Probit Model Results: "Desire for a Certification Process"

Years of experience was coded in actual years of experience. Ranking of years of experience, access to public information access to private information, understanding of the futures and options markets, understanding basis and having good analytical skills were coded "1-5" with a "1" indicating a ranking of least important and a "5" indicating a ranking of very important. The remaining independent variables were coded are binary with a "1" signifying yes and a "0" signifying no (i.e. years of experience, formal education level, their annual income components, formal academic training towards a grain merchandising career, a desire to attend company training classes, a desire to attend college classes, a desire to attend seminars, etc).

The overall Wald statistic was 35.25 and significant at the 5% level with 203 observations. Attending company training classes was positive with an estimate of 0.6054 and had a marginal effect of 0.19. Attending college classes was positive, with an estimate of 0.5469 and a marginal effect of 0.17. Attending seminars and trainings had an estimate of 0.4187 and a marginal effect of 0.12 and positive. A merchandiser taking an active role in improving their skills was positive and had an estimated at 0.2347 with a marginal effect of 0.30. A merchandiser participating in internal development activities was negative with an estimate of -0.4796 with a marginal effect of -0.14. All variables were significant at the 5% level. The sign accompanying the estimate representing a merchandiser participating in internal activities was contradictory to the hypothesis but could signify that merchandisers that are already involved in these activities may have no need for a certification process (Table 6-1 and 6-2).

Having a salary only income structure was positive with an estimate of 0.7806 and a marginal effect of 0.21. Having a salary and incentive structure was positive with a coefficient estimate of 0.9315 and a marginal effect of 0.27. Finally, reading press releases had estimate of 0.4409 and a marginal effect of 0.13. All variables were significant at the 10% level. Of the 5% and 10% set of significant variables a merchandiser actively seeking to improve his or her skills had the largest marginal effect of adding 30% to desiring a certification process while already being involved in internal development activities decreases this desire by 14% (Table 6-1 and 6-2).

From this model it could be inferred that a grain merchandiser who desires to attend company training classes would increase his or her desire to have a certification process by 19%. Likewise a merchandiser who desires to attend college classes would increase their desire for a certification process by 17%, merchandisers who desire to attend and seminars and trainings would increase their desire by 12%. A merchandiser who actively seeks to improve his or her skills would increase their desire for a certification process by 30%. Conversely, a merchandiser who participates in internal development activities would decrease their desire for a certification process by 14%. A merchandiser with a salary only income structure increased their desire by 21% while a merchandiser with a salary and incentive structure increased their desire 27%. Lastly, a merchandiser who takes part in reading press releases increased their desire for a certification process by 13%.

Variable Explanation	Variables	Estimate	p-value
	Intercept	-1.6313 (0.8937)	.0679
Years of Experience	experience	-0.00825 (000954)	0.3877
Education (=1 if at least Bachelor Degree)	education	0.0914 (0.2320)	0.6937
Annual Income is Comprised of a Salary Only Component (=1 if yes)	salary	0.7806 (0.4647)	0.093
Annual Income is Comprised of a Salary and Incentive Components (=1 if yes)	salaryandincentive	0.9315 (0.5066)	0.0659
Formal Academic Training (=1 if yes)	formaltraining	-0.00015 (0.2397)	0.9995
A Desire to Attend Company Training Classes (=1 if yes)	companyclasses	0.6054 (0.2523)	0.0164
A Desire to Attend College Classes (=1 if yes)	collegeclasses	0.5469 (0.2187)	0.0124
A Desire to Attend Seminars and Trainings (=1 if yes)	seminarsandtraining	0.4187 (0.2084)	0.0445
Desires to Improve Skills (=1 if yes)	improveskills	1.2347 (0.4871)	0.0112
Ranking Years of Experience (Least Important-Very Important)	yearsofexp	-0.0137 (0.1165)	0.9064
Ranking Access to Public Information (Least Important-Very Important)	accesstopublic	-0.1691 (0.1655)	0.3067
Ranking Access to Private Information (Least Important-Very Important)	accesstoprivate	0.06269 (0.1713)	0.7134
Reading Press Releases (=1 if yes)	readingpress	0.4409 (0.2334)	0.0589
Reading On-Line Information (=1 if yes)	readingonline	-0.1010 (0.2675)	0.7059
Reading Subscription Based Information (=1 if yes)	subscriptionbase	-0.1811 (0.2165)	0.4029
Member of the National Grain and Futures Association (=1 if yes)	ngfa	-0.2303 (0.2110)	0.2751
A Respondent is the Only Merchandiser at the Location (=1 if yes)	onecolocated	-0.1767 (0.2331)	0.4485
Respondent Takes part in Internal Development Activities (=1 if yes)	internal	-0.4796 (0.2356)	0.0417

Table 6-1 Probit Model: Y= Desire for a Certification Process (=1 if yes)

Variable Explanation	Variables	Estimate	p-value
Ranking Understanding Future and Option Markets (Least Important-Very Important)	understandingfuture	0.0195 (0.2191)	0.9291
Ranking Understanding Basis (Least Important-Very Important)	understandingbasis	-0.3699 (0.2629)	0.1594
Ranking Analytical Skills (Least Important-Very Important)	analyticalskills	-0.0842 (0.1240)	0.49678
Cross Contact with Merchandisers in the Firm (=1 if yes)	crosscontact	0.1155 (0.2354)	0.6238

Table 6-1 Probit Model: Y= Desire for a Certification Process (=1 if yes) (*Continued*)

Variable Explanation	Variables	Marginal Effect
Years of Experience	experience	-1.0254
Education (=1 if at least Bachelor Degree)	education	0.0275
Annual Income is Comprised of a Salary Only Component (=1 if yes)	salary	0.2159
Annual Income is Comprised of a Salary and Incentive Components (=1 if yes)	salaryandincentive	0.2760
Formal Academic Training (=1 if yes)	formaltraining	0.0000
A Desire to Attend Company Training Classes (=1 if yes)	companyclasses	0.1904
A Desire to Attend College Classes (=1 if yes)	collegeclasses	0.1733
A Desire to Attend Seminars and Trainings (=1 if yes)	seminarsandtraining	0.1261
Desires to Improve Skills (=1 if yes)	improveskills	0.3004
Ranking Years of Experience (Least Important-Very Important)	yearsofexp	-1.7028
Ranking Access to Public Information (Least Important-Very Important)	accesstopublic	-21.0181
Ranking Access to Private Information (Least Important-Very Important)	accesstoprivate	7.8181
Reading Press Releases (=1 if yes)	readingpress	0.1318
Reading On-Line Information (=1 if yes)	readingonline	-0.0306
Reading Subscription Based Information (=1 if yes)	subscriptionbase	-0.0548
Member of the National Grain and Futures Association (=1 if yes)	ngfa	-0.0693
A Respondent is the Only Merchandiser at the Location (=1 if yes)	onecolocated	-0.0537
Respondent Takes part in Internal Development Activities (=1 if yes)	internal	-0.1414
Ranking Understanding Future and Option Markets (Least Important-Very Important)	understandingfuture	2.4237
Ranking Understanding Basis (Least Important-Very Important)	understandingbasis	-45.9764
Ranking Analytical Skills (Least Important-Very Important)	analyticalskills	-10.4656
Cross Contact with Merchandisers in the Firm (=1 if yes)	crosscontact	0.0348

Table 6-2 Probit Model: Y= Desire for a Certification Process Marginal Effects

Probit Model Results: "Desire for Yearly Conferences"

Again variables were coded as follows: Years of experience represents actual years of experience as a grain merchandiser. Ranking of years of experience, access to public information access to private information, understanding of the futures and options markets, understanding basis and having good analytical skills were coded "1-5" with a "1" indicating a ranking of least important and a "5" indicating a ranking of very important. The remaining independent variables were coded are binary with a "1" signifying yes and a "0" signifying no (i.e. years of experience, formal education level, their annual income components, formal academic training towards a grain merchandising career, a desire to attend company training classes, a desire to attend college classes, a desire to attend seminars, etc).

The overall Wald statistic was 39.67 and significant at the 5% level with 203 observations. Years of experience was negative with an estimate of -0.0256 and had a marginal effect of -0.0211. A merchandiser having a salary and incentive based income structure had a coefficient estimate of 1.3356 with a marginal effect of 0.3198 and positive. These variables were all significant at the 1% level. Years of experience did not correspond with the hypothesized sign. This result could be interpreted as a merchandiser that has many years of experience would not gain a significant amount of utility from attending yearly conferences (Tables 6-3 and 6-4).

Having a salary only income component was estimated at 0.7692 with a marginal effect of 0.2243 and positive. Having prior formal academic training had an estimate of -0.5487 with a marginal effect of -0.1663. A desire to attend company training classes had a positive coefficient estimate of 0.6474 with a marginal effect of 0.1752. Finally,

being a member of the NGFA was positive with an estimate of 0.5382 and a marginal effect of 0.1591. The estimate for prior formal academic training did not agree with the hypothesized sign but this indicated that if a merchandiser had prior formal education towards a merchandising career from a university they may not desire a yearly conference. All coefficients were significant at the 5% level (Tables 6-3 and 6-4).

Actively seeking to improve their skills was estimated at 0.7169 with a marginal effect of 0.2232 and positive. Last, ranking years of experience was positive with a coefficient of 0.2344 and a marginal effect of 0.1935. All variables were significant at the 10% level. Of the 1%, 5%, and 10% set of significant variables, a merchandiser with a salary only income structure had the largest marginal effect of adding 32% to desiring a yearly conferences followed by actively seeking to improve their skills at 22%. The desire for attending conferences was negatively influenced if a merchandiser had prior formal academic training reducing the desire by 19% and having more years of experience lowered this desire by 2% (Tables 6-3 and 6-4).

This model would indicate that for every extra year of experience the desire for yearly conferences would decrease by 2%. Having a salary only income structure would increase the desire by 22% while having a salary and incentive income structure would increase the desire by 32%. If a merchandiser had prior formal academic training his or her wish for yearly conferences would decrease by 17% whereas a merchandiser having a desire to attend company training classes would increase their inclination for yearly conferences by 17%. Being a member of the NGFA would increase their desire by 16% and if they actively sought to improve their skills it would increase by 22%. Finally, for

every increase in rank a merchandiser placed on years of experience the desire for yearly conferences would add 19%.

Variable Explanation	Variables	Estimate	p-value
	Intercept	-1.3529 (0.8301)	0.1031
Years of Experience	experience	-0.0256 (0.0099)	0.0098
Education (=1 if at least Bachelor Degree)	education	-0.1168 (0.2394)	0.6257
Annual Income is Comprised of a Salary Only Component (=1 if yes)	salary	0.7692 (0.3712)	0.0382
Annual Income is Comprised of a Salary and Incentive Components (=1 if yes)	salaryandincentive	1.3356 (0.4320)	0.002
Formal Academic Training (=1 if yes)	formaltraining	-0.5487 (0.2546)	0.0312
A Desire to Attend Company Training Classes (=1 if yes)	companyclasses	0.6474 (0.2854)	0.0233
A Desire to Attend College Classes (=1 if yes)	collegeclasses	0.00107 (0.2288)	0.9963
A Desire to Attend Seminars and Trainings (=1 if yes)	seminarsandtraining	0.1396 (0.2149)	0.516
Desires to Improve Skills (=1 if yes)	improveskills	0.7169 (0.3964)	0.0705
Ranking Years of Experience (Least Important-Very Important)	yearsofexp	0.2344 (0.1223)	0.0553
Ranking Access to Public Information (Least Important-Very Important)	accesstopublic	0.0543 (0.1668)	0.7448
Ranking Access to Private Information (Least Important-Very Important)	accesstoprivate	-0.2132 (0..1746)	0.2221
Reading Press Releases (=1 if yes)	readingpress	0.3132 (0.2334)	0.1824
Reading On-Line Information (=1 if yes)	readingonline	-0.0243 (0.2695)	0.9283
Reading Subscription Based Information (=1 if yes)	subscriptionbase	-0.0808 (0.2215)	0.7152
Member of the National Grain and Futures Association (=1 if yes)	ngfa	0.5382 (0.2175)	0.0133
A Respondent is the Only Merchandiser at the Location (=1 if yes)	onecolocated	0.3058 (0.2552)	0.2307
Respondent Takes part in Internal Development Activities (=1 if yes)	internal	-0.1439 (0.2420)	0.5522

Table 6-3 Probit Model: Y= Desire for Yearly Conferences (=1 if yes)

Variable Explanation	Variables	Estimate	p-value
Ranking Understanding Future and Option Markets (Least Important-Very Important)	understandingfuture	-0.2274 (0.2080)	0.2742
Ranking Understanding Basis (Least Important-Very Important)	understandingbasis	0.0586 (0.2022)	0.7718
Ranking Analytical Skills (Least Important-Very Important)	analyticalskills	0.00498 (0.1212)	0.9672
Cross Contact with Merchandisers in the Firm (=1 if yes)	crosscontact	0.3950 (0.2443)	0.1059

Table 6-3 Probit Model: Y= Desire for Yearly Conferences (=1 if yes) ***(Continued)***

Variable Explanation	Variables	Marginal Effect
Years of Experience	experience	-0.0211
Education (=1 if at least Bachelor Degree)	education	-0.0336
Annual Income is Comprised of a Salary Only Component (=1 if yes)	salary	0.2243
Annual Income is Comprised of a Salary and Incentive Components (=1 if yes)	salaryandincentive	0.3198
Formal Academic Training (=1 if yes)	formaltraining	-0.1633
A Desire to Attend Company Training Classes (=1 if yes)	companyclasses	0.1752
A Desire to Attend College Classes (=1 if yes)	collegeclasses	0.0003
A Desire to Attend Seminars and Trainings (=1 if yes)	seminarsandtraining	0.0406
Desires to Improve Skills (=1 if yes)	improveskills	0.2232
Ranking Years of Experience (Least Important-Very Important)	yearsofexp	0.1935
Ranking Access to Public Information (Least Important-Very Important)	accesstopublic	0.0448
Ranking Access to Private Information (Least Important-Very Important)	accesstoprivate	-0.1760
Reading Press Releases (=1 if yes)	readingpress	0.0931
Reading On-Line Information (=1 if yes)	readingonline	-0.0070
Reading Subscription Based Information (=1 if yes)	subscriptionbase	-0.0233
Member of the National Grain and Futures Association (=1 if yes)	ngfa	0.1591
A Respondent is the Only Merchandiser at the Location (=1 if yes)	onecolocated	0.0884
Respondent Takes part in Internal Development Activities (=1 if yes)	internal	-0.0418
Ranking Understanding Future and Option Markets (Least Important-Very Important)	understandingfuture	-0.1877
Ranking Understanding Basis (Least Important-Very Important)	understandingbasis	0.0484
Ranking Analytical Skills (Least Important-Very Important)	analyticalskills	0.0041
Cross Contact with Merchandisers in the Firm (=1 if yes)	crosscontact	0.1181

Table 6-4 Probit Model: Y= Desire for Yearly Conferences Marginal Effects

Probit Model Results: "Desire for New Publications"

Variables were coded as follows: Years of experience represents actual years of experience as a grain merchandiser. Ranking of years of experience, access to public information access to private information, understanding of the futures and options markets, understanding basis and having good analytical skills were coded "1-5" with a "1" indicating a ranking of least important and a "5" indicating a ranking of very important. The remaining independent variables were coded are binary with a "1" signifying yes and a "0" signifying no (i.e. years of experience, formal education level, their annual income components, formal academic training towards a grain merchandising career, a desire to attend company training classes, a desire to attend college classes, a desire to attend seminars, etc).

The overall Wald statistic was 26.969 and was not significant at the 10% level with 202 observations. Ranking of analytical skills was negative with a coefficient estimate of -0.3621, a marginal effect of -0.5812 and significant at the 1% level. This sign did not agree with the above mentioned hypothesis but it could be hypothesized that merchandisers that rank analytical skills high already immerse them selves in publications that provide all the information they require. The desire to attend seminars and trainings and reading press releases were significant at the 5% level. The desire to attend seminars and trainings was represented with an estimate of 0.5003 with a marginal effect of 0.1117. Reading press releases had a coefficient estimate of 0.5771 and a marginal effect of 0.1242. The desire to attend company training classes by merchandisers was significant at the 10% level. The desire the attend company training

classes was positive with an estimate of 0.6433 and a marginal effect of 0.1209 (Tables 6-5 and 6-6).

The results from this model indicate that a merchandiser who desires to attend company training classes would be 12% more likely to desire new publications. If a merchandiser reads press releases he or she would be 13% more likely to desire new publications and if they have a desire to attend seminars and trainings their desire would increase by 11%. While for every increase in rank a merchandiser placed on analytical skills they would be 58% less likely to desire a new publication.

It is acknowledged that many of the coefficients in these three models are not statically different from zero but it is the point of this research to demonstrate that these variables were controlled for.

Variable Explanation	Variables	Estimate	p-value
	Intercept	-0.1142 (0.9523)	0.9045
Years of Experience	experience	-0.0063 (0.0113)	0.5767
Education (=1 if at least Bachelor Degree)	education	0..0661 (0.266)	0.8039
Annual Income is Comprised of a Salary Only Component (=1 if yes)	salary	0.0374 (0.4247)	0.9299
Annual Income is Comprised of a Salary and Incentive Components (=1 if yes)	salaryandincentive	-0.183 (0.4748)	0.6999
Formal Academic Training (=1 if yes)	formaltraining	-0.3227 (0.2941)	0.2725
A Desire to Attend Company Training Classes (=1 if yes)	companyclasses	0.6433 (0.3463)	0.0632
A Desire to Attend College Classes (=1 if yes)	collegeclasses	0.402 (0.2822)	0.1544
A Desire to Attend Seminars and Trainings (=1 if yes)	seminarsandtraining	0.5003 (0.2491)	0.0446
Desires to Improve Skills (=1 if yes)	improveskills	0.3094 (0.4301)	0.4718
Ranking Years of Experience (Least Important-Very Important)	yearsofexp	0.0976 (0.131)	0.4561
Ranking Access to Public Information (Least Important-Very Important)	accesstopublic	0.2545 (0.1812)	0.1601
Ranking Access to Private Information (Least Important-Very Important)	accesstoprivate	-0.1325 (0.1828)	0.4687
Reading Press Releases (=1 if yes)	readingpress	0.5771 (0.2647)	0.0292
Reading On-Line Information (=1 if yes)	readingonline	0.3677 (0.2005)	0.2211
Reading Subscription Based Information (=1 if yes)	subscriptionbase	0.00411 (0.248)	0.9868
Member of the National Grain and Futures Association (=1 if yes)	ngfa	0.0249 (0.2462)	0.9195
A Respondent is the Only Merchandiser at the Location (=1 if yes)	onecolocated	0.0718 (0.2898)	0.8044
Respondent Takes part in Internal Development Activities (=1 if yes)	internal	-0.4018 (0.2738)	0.1422

Table 6-5 Probit Model: Y= Desire for New Publications (=1 if yes)

Variable Explanation	Variables	Estimate	p-value
Ranking Understanding Future and Option Markets (Least Important-Very Important)	understandingfuture	0.2952 (0.2287)	0.1967
Ranking Understanding Basis (Least Important-Very Important)	understandingbasis	-0.2711 (0.2121)	0.2012
Ranking Analytical Skills (Least Important-Very Important)	analyticalskills	-0.3621 (0.1393)	0.0093
Cross Contact with Merchandisers in the Firm (=1 if yes)	crosscontact	0.3202 (0.2776)	0.2487

Table 6-5 Probit Model: Y= Desire for Receiving New Publications (=1 if yes) (*Continued*)

Variable Explanation	Variables	Marginal Effect
Years of Experience	experience	-0.0101
Education (=1 if at least Bachelor Degree)	education	0.0145
Annual Income is Comprised of a Salary Only Component (=1 if yes)	salary	0.0082
Annual Income is Comprised of a Salary and Incentive Components (=1 if yes)	salaryandincentive	-0.0413
Formal Academic Training (=1 if yes)	formaltraining	-0.0739
A Desire to Attend Company Training Classes (=1 if yes)	companyclasses	0.1209
A Desire to Attend College Classes (=1 if yes)	collegeclasses	0.0829
A Desire to Attend Seminars and Trainings (=1 if yes)	seminarsandtraining	0.1117
Desires to Improve Skills (=1 if yes)	improveskills	0.0736
Ranking Years of Experience (Least Important-Very Important)	yearsofexp	0.1566
Ranking Access to Public Information (Least Important-Very Important)	accesstopublic	0.4085
Ranking Access to Private Information (Least Important-Very Important)	accesstoprivate	-0.2127
Reading Press Releases (=1 if yes)	readingpress	0.1342
Reading On-Line Information (=1 if yes)	readingonline	0.0861
Reading Subscription Based Information (=1 if yes)	subscriptionbase	0.0009
Member of the National Grain and Futures Association (=1 if yes)	ngfa	0.0054
A Respondent is the Only Merchandiser at the Location (=1 if yes)	onecolocated	0.0158
Respondent Takes part in Internal Development Activities (=1 if yes)	internal	-0.0904
Ranking Understanding Future and Option Markets (Least Important-Very Important)	understandingfuture	0.4738
Ranking Understanding Basis (Least Important-Very Important)	understandingbasis	-0.4351
Ranking Analytical Skills (Least Important-Very Important)	analyticalskills	-0.5812
Cross Contact with Merchandisers in the Firm (=1 if yes)	crosscontact	0.0714

Table 6-6 Probit Model: Y= Desire for New Publications Marginal Effects

CHAPTER 7: CONCLUSION

The information presented in this thesis indicated that grain merchandisers are a diverse group of individuals. On average, these individuals possess a Bachelor degree, but did not receive formal academic training with an emphasis in grain merchandising. It is apparent that it would be advantageous for college classes to be designed around grain merchandising. Survey responses suggest that a greater understanding of futures and options trading and basis comprehension is beneficial to grain merchandisers, and hence should be at least introduced in undergraduate Agriculture Economics classes. Ideally, higher level courses could be developed in these areas for interested individuals at the undergraduate level and for executive masters of grain merchandising programs. The decision to create a degree program or focus more heavily on issues that affect grain merchandisers would have the greatest effect on entering students wishing to focus on this particular career. This would also help the decision process of young minds when determining if this is the industry they wish to follow.

The second interesting finding is many merchandisers desire a greater understanding of the future and options market, feel basis and spreads are a major daily concern, and that being able to adequately communicate with customers is important. These merchandisers wish to improve their skills and would be interested in publications aimed at issues such as new developments and strategies. It is important to note that these above mentioned skills that were indicated for further development had low survey response rate. Out of 230 respondents only 117 selected some skill that they needed to develop further. For example of the 117 respondents 36%, 43, indicated the need for a

greater understanding of the futures and options market. Based on the average years of experience, educational material needs to be designed around a merchandiser that has a moderate skill level. It is not yet apparent if demand is adequate to warrant a certification process, but based on the data it is an option that should be given consideration and explored further. Overall, this survey has begun to fill the gap in the basic knowledge of a grain merchandiser and what information they would find helpful in their marketing activities.

The information presented in this survey can have positive economic impacts in the grain merchandising industry. It has been shown that a majority of employees participate in some form of training. A study by Mathieu, *et al.* (1992) found that as a company it is important that a training program is effective due to the expense of designing and maintaining one. They also found when a trainee desired to go to a seminar rather than being obligated, they responded more positively. Saari, *et al.* (1988) established, from a survey of 611 firms that were from small to large in size with the agriculture sector representing 5%, which one of the most significant reasons for the increase in management trainings is to keep employees up to date on the shifting skills required in all industries. NG and Feldman (2009) looked at the education level and its consequence on job performance. They deemed this significant due to the fact that current business institutions are hiring a work force that is more highly educated and if employers are unable to see a positive return then these employees become costly to businesses. Results from their study indicated that a more educated work force is beneficial to businesses and the extra cost to hiring an educated worker is warranted.

They also go on to say that the degree in which education influences output can affect the total amount businesses will support subsidies through the government for education.

With a better understanding of the needs of grain merchandisers, companies could develop more effective training programs. The industry may find it is beneficial to provide the upfront capital to implement a degree program in the event that the government would not be willing to support one at a public institute. Such programs have been developed by companies in the hospitality industry without the assistance of the government funds (Ingram, 1998).

Merchandisers who actively sought to improve his or her skills added 30% to their desire to have a certification process while if they took part in internal development activities they reduced their desire by 14%. Merchandisers highly valued yearly conferences if they had a salary only income structure, 30%, and actively sought to improve their skills, 22%. Respondents did not value yearly conferences the greater the years of experience they had obtained, -2%, and if they had prior formal academic training towards a grain merchandising career, -16%. Finally, a merchandiser desired new publications aimed at providing more information if they take part in reading press releases, 13%, and desire to attend company training classes, 12%. They do not value a new publication if they ranked highly having good analytical skills, -58%.

From the data collected by Fiscus (1965) some aspects of the grain merchandising industry has changed. For example, it seems that current average grain merchandisers have more years of experience than did the average elevator manager in the 1960s. The average education has also increased from 12.1 years of education to at least having an associate to bachelor's degree. It also seems that the advice given by Fiscus (1965) for

future curriculum development at the post high school level for skills such as understanding the process of crop marketing and understanding market information is still needed today. As well as teaching skills at the adult or continuing educational level that would help grain merchandisers understand the economic factors affecting the management of agriculture businesses.

It is apparent that the response rate was relatively low and it would be very difficult to distinguish between a corporate location compared to a cooperative. In the future a survey could be sent requesting the business structure of the merchandising location and in which state or regions they are located. Due to a lack of this information in our dataset, there is a possibility that a difference might exist in areas such as compensation programs and types and length of training curriculum that is not distinguishable from this survey. Another issue is the survey was unable to capture the importance of the logistics skill set in item 12f due to a typographical error in the survey that limited responses to the extent that no definitive conclusions can be drawn. Future research may investigate whether greater understanding of logistical issues is desired by grain merchandisers. A third deficiency of the survey is that class levels exist within the merchandising/grain dealer community. For example, in the state of Missouri 5 different classes are present and each class has different regulatory limitations. These limitations include contracts offered to sellers, payment options, net worth requirements, and business operation hours (Table 7-1). For instance, a Class I grain dealer in Missouri can offer several different contracts, be licensed as a warehouseman, must carry enough net worth to cover 2% of purchased grain, has up to 180 days to fulfill payment, and must operate at least 6 hours a day between 8:00am and 6:00pm. While a Class IV grain

dealer cannot offer minimum price contracts or any type of credit sales contracts, is not a licensed warehouseman, and is not required to operate a set amount of business hours. They are also mandated to hold enough net worth to cover the greater of $10,000 or 5% of their total grain purchased if the grain purchased does not exceed $400,000. If the total grain purchased exceeds $400,000 the dealer must hold the greater of $20,000 or 1% of the grain purchased (Missouri Department of Agriculture 2009). Based on this information differences would exist among respondents based on classification in which this survey would be unable to distinguish (Table 7-1).

	Grain Dealer Class					
	I	II	III	IV[a]	V[b]	VI
Grain Can be Purchased From Others	yes	yes	yes	yes	no	yes
Payment to Sellers	within 180 days	within 180 days	within 30 days	within 30 days	~	within 30 days
Contracts Offered						
Cash Sales	yes	yes	yes	yes	no	yes
Forward Contracts	yes	no	no	no	no	no
Minimum Price Contracts	yes	no	no	no	no	no
Delayed Price Contracts	yes	no	no	no	no	no
Deferred Payment contracts	yes	no	no	no	no	no
Licensed Warehouseman	yes	yes	no	no	no	no
Minimum Net Worth Requirements						
$50,000 or 2% of Grain Purchased	yes	~	~	~	~	~
If Grain Purchased < $400,000 Greater of $10,000 or 5% of Grain Purchased	~	yes	yes	yes	yes	yes
If Grain Purchased > $400,000 Greater of $20,000 or 1% of Grain Purchased	~	yes	yes	yes	yes	yes
Required Business Hours Between 8:00am-6:00pm						
At Least 6 Hours	yes	yes	yes	~	~	~

[a.] Businesses that comprise this class are typically trucking or transportation business.
[b.] Grain transactions in this class are only comprised of sales of grain from their own farming operations.
[*] Source: Missouri Department of Agriculture Grain Database

Table 7-1 Differences Among Missouri's Grain Dealer Classes

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APPENDIX A

Survey of Grain Merchandisers

Important

The term grain merchandiser encompasses all agribusiness firms involved in the procurement, handling, storing, and re-distribution and processing of grain. As such grain merchandisers include country grain elevators cooperatives and non-cooperatives, shippers and exporters, processors, and feeders. If you do not fit the criteria of this above mentioned definition please check "Not a grain merchandiser" and mail back. Thank you.

Not a grain merchandiser:_____

In the event that multiple merchandisers are located at this address, in the interest of this research project, please make copies and distribute to all merchandisers.

Please complete and return by October 6, 2008

Thank you

Career/Education/Compensation

1. I have been a grain merchandiser for _____years.

2. What is the highest degree you have obtained? (circle only one)

   a. high school
   b. associate
   c. bachelor
   d. post bachelor

3. If you received a degree please list the highest_____ and from what institution_____?

4. How many years have you been in your current merchandising position?_____

5. How many prior grain merchandiser positions have you held with different companies?

1 2 3 4 5 6+ my current position is my only position

6. How many merchandisers are co-located at your location (include yourself)? _____

7. Did you obtain formal academic training in grain merchandising? Yes No

8. Did you receive non-academic training in grain merchandising? Yes No

9. If you received non-academic training in grain merchandising, then how long was your training program? Please select both the type of period and number of periods

Years Months Weeks

1 2 3 4 5 6+

10. In your opinion how long does it take to train a new merchandiser?

1-2 months 3-5 months 6-12 months 1-2 years 3+ years

11. What preparation do you wish you would have had available before you started as a grain merchandiser?

a. Company Classes
b. College Classes
c. Seminars
d. Trainings
e. Self-help materials (e.g. book)
f. Other Please List:_____
g. None

12. What skill sets define a grain merchandiser (circle the ranking that best describes the level of importance of each task)

		Very important				Least Important
a.	Written Communication	1	2	3	4	5
b.	Oral Communication	1	2	3	4	5
c.	Understanding futures markets	1	2	3	4	5
d.	Understanding basis	1	2	3	4	5
e.	Placing futures positions	1	2	3	4	5
f.	Logistics					
g.	Analytic skills (spreadsheets, statistics)	1	2	3	4	5
h.	Having a broker license	1	2	3	4	5
i.	Hedging	1	2	3	4	5
j.	Knowing one industry well	1	2	3	4	5
k.	Years of experience	1	2	3	4	5
l.	Access to public information	1	2	3	4	5
m.	Access to private information	1	2	3	4	5

13. What personality traits define a grain merchandiser (circle the ranking that best describes the level of importance of each task)

		Very important				Least Important
a.	Quick thinker	1	2	3	4	5
b.	Patience	1	2	3	4	5
c.	Multi-tasking	1	2	3	4	5
d.	Ability to deal with risk	1	2	3	4	5
e.	Relationships building	1	2	3	4	5

14. What types of professional development opportunities do you take part in? (circle all that apply)

a. Internal company training programs
b. Third-party training programs
c. Reading popular press publications
d. Reading on-line information
e. Reading subscription based information
f. Other Please List:_____

15. My primary points of contact are with (circle all that apply)
a. Farmers
b. Brokers
c. Processors
d. Other elevators
e. Other Merchandisers
f. Other Please List:_____

16. How much of your merchandising is done via (circle most applicable for each item)

a.	Phone?	None	Little	Some	Lots
b.	Internet?	None	Little	Some	Lots
c.	In person?	None	Little	Some	Lots
d.	Other_____	None	Little	Some	Lots

17. What commodities do you merchandise? (circle all that apply)

a. Corn
b. Soybean
c. HRW wheat
d. HRS wheat
e. SRW wheat
f. Durum
g. Canola
h. Sunflower
j. Barley
j. Sorghum
k. Distillers Dried Grains
l. Soybean meal
m. Soybean oil
n. Rice and rice co-products (e.g., hulls are a co-product)
o. Cottonseed hulls
p. Other Please List:_____

18. How often do you monitor basis for your buying and selling points?

a. Intra-daily
b. Daily
c. Four + times a week
d. Three times a week
e. Twice a week
f. Other Please Explain:_____

19. How many locations do you originate supply for?

1-3 4-6 7-9 10-15 16-20 21+

20. How far into the future do you typically offer cash buy/sell bids?

Cash only: 1-3 months 1-6 months 1-12 months 1-2 years
2-3 years 3+ years

21. What is your annual income based on?

a. Salary
b. Commission
c. Salary and Commission
d. Other Please List:_____

22. Based on question 21 please list, for calendar year 2007, the percentage that each section of your income makes up. For example, Salary 75% and Commission 25%.

a. Salary:_____

b. Commission:_____

c. Other:_____

23. What was your average annual income as a grain merchandiser in calendar year 2007?

a. $0-$30,000
b. $31,000-$50,000
c. $51,000-$75,000
d. $76,000-$100,000
e. $101,000-$150,000
f. $151,000+

Information and Technology

24. What popular press magazines do you read for information? Please list up to five. For example Milling and Baking News, Feedstuffs and the Wall Street Journal.

a. _____
b. _____
c. _____
d. _____
e. _____
f. _____

25. What professional marketing services do you, or your firm, subscribe to. Please up to your top five.

a. _____

b. _____

c. _____

d. _____

e. _____

26. Please provide a list of merchandising skills you feel which you would like to develop further.

a._____

b._____

c._____

27. Would you be interested in receiving publications aimed at improving merchandising skills, as well as market information? Yes No

If so, what types of market information (circle all that apply).

a. New Developments
b. New Strategies
c. International prices
d. Truck Rates
e. Barge Rates
f. Rail Rates

If so, how often?

a. Weekly
b. Bi-weekly
c. Monthly
d. Other Please Explain:_____

In which form would you prefer this information be delivered?

a. Hard copy
b. Electronic

28. Do you actively seek to improve your merchandising skills? Yes No

29. How often do you receive articles or info dealing with improving/modifying merchandising skills?

a. Daily
b. Weekly
c. Monthly
d. Other Please Explain:_____

30. Do these articles help? Yes No

31. How much contact/cross training do you have with other merchandisers in your firm?

None Some A lot

32. What is your biggest worry/concern in merchandising? Rank up to five.

____ Quantity

____Price

____Transportation availability (cost)

____Basis

____Hedging

____Futures

____Crop quality

____Other Please List:_____

Comprehension and Networks

33. How sufficient is your knowledge with accumulator contracts?

a) Excellent
b) Good
c) Fair
d) Poor
e) None

34. Do you believe that you know enough about Mycotoxins, DDGs, Bioterrorism and trade with Mexico/Canada? Yes No

35. Are you personally involved with merchandising internationally?

Yes No No, but likely in the future

36. Are you a member of the National Grain and Feed Association? Yes No

37. Would you be interested in attending yearly conferences that focus on various aspects of merchandising, like trading, logistics, bio-terrorism, new developments, etc.

Yes No

38. Would it be valuable to have a certification process to distinguish different skill levels of merchandisers? Yes No

39. If there were a merchandisers association, what would be most important to you? Rank up to five

___Certification

___New developments

___Skills

___Seminars

___More networking with other merchandisers

___Better trained newcomers

___Other (Please List)

APPENDIX B

Summary of Survey Statistics

Career/Education/Compensation

1. I have been a grain merchandiser for _____years.

N	Mean	Std Dev	Minimum	Maximum
229	16.38428	11.64312	<1	50

2. What is the highest degree you have obtained? (circle only one)[a]

   a. high school
   b. associate
   c. bachelor
   d. post bachelor

N	Mean	Std Dev	Minimum	Maximum
227	2.51542	0.98	0	4

[a] Highest Degree Obtained was coded from "0-4" with "0" representing K-8 and "4" representing a post bachelor.

3. If you received a degree please list the highest_____ and from what institution_____?

University	N	Percentage of Respondents (151 Respondents)
University of Arkansas	2	1.32%
Arkansas State University - Jonesboro	1	0.66%
University of Wisconsin	1	0.66%
University of Illinois at Urbana-Champaign	3	1.99%
Western Illinois University	7	4.64%
Wichita State University	1	0.66%
University of Central Missouri - Warrensburg	3	1.99%
Missouri State University	4	2.65%
Iowa State University	6	3.97%
Southeast Missouri State University	1	0.66%
Southwest Missouri State University	1	0.66%
Northwest Missouri State University	2	1.32%
Missouri State University-West Plains	1	0.66%
Brigham Young University Provo, Utah	1	0.66%
University of Illinois	8	5.30%
Illinois State University	7	4.64%
Kankakee Community College	1	0.66%
Joliet Junior College	1	0.66%
Purdue University	5	3.31%
University of Missouri-Columbia	8	5.30%
University of South Dakota	2	1.32%
South Dakota State University	3	1.99%
Kansas State University	12	7.95%
Hastings College	1	0.66%
Ohio State University	4	2.65%
University of Nebraska–Lincoln	3	1.99%
Texas A&M University	2	1.32%
Quincy University, Quincy	1	0.66%
University Of Wisconsin-River Falls River	1	0.66%
Northwest State Community College-Ohio	1	0.66%
The University of Tennessee - Knoxville	3	1.99%
California State University	1	0.66%
California State Polytechnic University, Pomona	1	0.66%
Texas Tech University	2	1.32%
Miami University	2	1.32%
East Tennessee State University	1	0.66%
University of Wisconsin, Platteville	2	1.32%
Pittsburg State University	1	0.66%

University	N	Percentage of Respondents (151 Respondents)
University of Detroit	1	0.66%
Illinois College	3	1.99%
Bradley University	1	0.66%
College of the Ozarks	1	0.66%
Mid-State Technical College	1	0.66%
Middle Tennessee State University	1	0.66%
Fort Hays State University	1	0.66%
Southern Illinois University	7	4.64%
University of Nebraska at Omaha	2	1.32%
Michigan State University	1	0.66%
University of Minnesota	2	1.32%
University of Wisconsin - Whitewater	1	0.66%
Jefferson College	1	0.66%
Platte Junior College	2	1.32%
Chippewa Valley Technical College	1	0.66%
Muscatine Community College	1	0.66%
Ball State University	1	0.66%
Parkland College	1	0.66%
North Dakota State University	1	0.66%
Northcentral Technical College	1	0.66%
Creighton University	1	0.66%
Washburn University	1	0.66%
Troy University	1	0.66%
Bowling Green State University	1	0.66%
Nebraska College of Technical Agriculture - Curtis	1	0.66%
Southwestern Oklahoma State University	1	0.66%
Lima Technical College	1	0.66%
Mississippi State University	1	0.66%
Middle Tennessee State University	1	0.66%
Goshen College	1	0.66%
University of Mississippi	1	0.66%
Pepperdine University	1	0.66%
New York University	1	0.66%

4. How many years have you been in your current merchandising position?_____

N	Mean	Std Dev	Minimum	Maximum
225	11.63	10.31	1	38

5. How many prior grain merchandiser positions have you held with different companies? [a.]

1 2 3 4 5 6+ my current position is my only position

N	Mean	Std Dev	Minimum	Maximum
222	1.06	1.53	0	6

[a.] Prior positions held was coded from "0-6" with "0" representing "my current position is my only position" and "6" representing "6+".

6. How many merchandisers are co-located at your location (include yourself)? _____

N	Mean	Std Dev	Minimum	Maximum
227	1.93	2.34	1	22

7. Did you obtain formal academic training in grain merchandising? Yes No

N	Mean	Std Dev	Minimum	Maximum
228	0.24561	0.43	0	1

8. Did you receive non-academic training in grain merchandising? Yes No

N	Mean	Std Dev	Minimum	Maximum
229	0.72489	0.45	0	1

9. If you received non-academic training in grain merchandising, then how long was your training program? Please select both the type of period and number of periods

Years Months Weeks

1 2 3 4 5 6+

Training Period	N	Percentage of Respondents (147 Respondents)
One Day	1	0.73%
Five Days	1	0.73%
One Week	22	16.06%
Two Weeks	13	9.49%
Three Weeks	8	5.84%
Four Weeks	7	5.11%
Five Weeks	3	2.19%
Six Plus Weeks	10	7.30%
One Month	8	5.84%
Two Months	11	8.03%
Three Months	16	11.68%
Four Months	4	2.92%
Five Months	1	0.73%
Six Plus Months	3	2.19%
One Year	13	9.49%
Two Years	11	8.03%
Three Years	2	1.46%
Four Years	2	1.46%
Five Years	1	0.73%
Six Plus Years	2	1.46%
Ongoing	8	5.84%

10. In your opinion how long does it take to train a new merchandiser?

1-2 months 3-5 months 6-12 months 1-2 years 3+ years

Training Period	N	Percentage of Respondents (214 Respondents)
One-Two Months	7	3.27%
Three-Five Months	25	11.68%
Six-Twelve Months	71	33.18%
One-Two Years	83	38.79%
Three Plus Years	28	13.08%

11. What preparation do you wish you would have had available before you started as a grain merchandiser?

a. Company Classes
b. College Classes
c. Seminars
d. Trainings
e. Self-help materials (e.g. book)
f. Other Please List:_____
g. None

Prior Preparation	N	Percentage of Respondents (220 Respondents)
Company Classes	53	24.09%
College Classes	74	33.64%
Seminars	89	40.45%
Trainings	100	45.45%
Self-help Materials	51	23.18%
Operations position	1	0.45%
Job Experience	6	2.73%
Game Theory	1	0.45%
Mentor	1	0.45%
Manuals/Computer Software	1	0.45%
Logistics Training	1	0.45%
Data Base for Prospective Clients	1	0.45%
Industry Specific	1	0.45%
State Association Training	1	0.45%
Certification	1	0.45%
None	22	10.00%

12. What skill sets define a grain merchandiser (circle the ranking that best describes the level of importance of each task)

	Very important				Least Important
a. Written Communication	1	2	3	4	5
b. Oral Communication	1	2	3	4	5
c. Understanding futures markets	1	2	3	4	5
d. Understanding basis	1	2	3	4	5
e. Placing futures positions	1	2	3	4	5
f. Logistics					
g. Analytic skills (spreadsheets, statistics)	1	2	3	4	5
h. Having a broker license	1	2	3	4	5
i. Hedging	1	2	3	4	5
j. Knowing one industry well	1	2	3	4	5
k. Years of experience	1	2	3	4	5
l. Access to public information	1	2	3	4	5
m. Access to private information	1	2	3	4	5

Skills Set	N	Not Important	Least Important	Somewhat Important	Important	Very Important
Written Communication	221	0.45%	9.05%	32.58%	32.13%	25.79%
Oral Communication	225	0.44%	0.00%	6.22%	19.11%	74.22%
Understanding Futures Markets	224	0.89%	0.45%	4.02%	20.09%	74.55%
Understanding Basis	223	2.24%	0.00%	2.24%	13.00%	82.51%
Placing Future Positions	221	1.36%	2.26%	12.67%	35.29%	48.42%
Logistics	98	2.04%	4.08%	21.43%	30.61%	41.84%
Analytic Skills	220	1.36%	5.91%	35.91%	35.45%	21.36%
Having a Broker License	222	27.93%	29.28%	30.63%	8.11%	4.05%
Hedging	222	1.80%	3.15%	11.71%	30.63%	52.70%
Knowing One Industry Well	221	1.81%	6.33%	31.22%	33.94%	26.70%
Years of Experience	225	3.11%	11.11%	35.11%	33.33%	17.33%
Access to Public Information	220	1.82%	12.27%	40.45%	27.73%	17.73%
Access to Private Information	221	1.81%	12.67%	36.20%	31.67%	17.65%

13. What personality traits define a grain merchandiser (circle the ranking that best describes the level of importance of each task)

	Very important				Least Important
a. Quick thinker	1	2	3	4	5
b. Patience	1	2	3	4	5
c. Multi-tasking	1	2	3	4	5
d. Ability to deal with risk	1	2	3	4	5
e. Relationships building	1	2	3	4	5

Personality Trait	N	Not Important	Least Important	Somewhat Important	Important	Very Important
Quick Thinker	225	0.00%	0.89%	12.44%	41.33%	45.33%
Patience	225	0.44%	1.33%	13.33%	45.33%	39.56%
Multi-Tasking	224	0.89%	0.45%	12.95%	40.63%	45.09%
Risk Tolerance	225	1.33%	1.78%	11.56%	37.33%	48.00%
Relationships Building	225	0.89%	0.00%	5.33%	26.67%	67.11%

14. What types of professional development opportunities do you take part in? (circle all that apply)

f. Internal company training programs
g. Third-party training programs
h. Reading popular press publications
i. Reading on-line information
j. Reading subscription based information
e. Other Please List:_____

Professional Development Opportunities	N	Percentage of Respondents (225 Respondents)
Internal Company Training Programs	87	38.67%
Third-Party Training Programs	114	50.67%
Reading Popular Press Publications	146	64.89%
Reading On-Line Information	169	75.11%
Reading Subscription Based Information	123	54.67%
Brokerage Information Meetings	2	0.89%
Communication With River Terminal Grain Merchandisers	1	0.44%
Communication With Other Merchandisers	2	0.89%
Trade Industry Meetings	2	0.89%
None	1	0.44%
TV	1	0.44%
Industry Food Publications	1	0.44%
Internal Research	1	0.44%
Industry Conferences	1	0.44%
In House Meetings	1	0.44%

15. My primary points of contact are with (circle all that apply)
    a. Farmers
    b. Brokers
    c. Processors
    d. Other elevators
    e. Other Merchandisers
    f. Other Please List:_____

Professional Development Opportunities	N	Percentage of Respondents (230 Respondents)
Farmers	211	91.74%
Brokers	144	62.61%
Processors	135	58.70%
Other Elevators	121	52.61%
Other Merchandisers	135	58.70%
River Terminals	2	0.87%
Truckers	2	0.87%
Logistics Companies	1	0.43%
Vendors	3	1.30%
Employees	1	0.43%

16. How much of your merchandising is done via (circle most applicable for each item)

a. Phone?	None	Little	Some	Lots
b. Internet?	None	Little	Some	Lots
c. In person?	None	Little	Some	Lots
e. Other_____	None	Little	Some	Lots

Merchandising Through the Phone	N	Percentage of Respondents (230 Respondents)
None	0	0.00%
Little	0	0.00%
Some	9	3.91%
Lots	221	96.09%

Merchandising Through the Internet	N	Percentage of Respondents (219 Respondents)
None	69	31.51%
Little	49	22.37%
Some	76	34.70%
Lots	25	11.42%

Merchandising In Person	N	Percentage of Respondents (224 Respondents)
None	24	10.71%
Little	70	31.25%
Some	78	34.82%
Lots	52	23.21%

17. What commodities do you merchandise? (circle all that apply)

a. Corn
b. Soybean
c. HRW wheat
d. HRS wheat
e. SRW wheat
f. Durum
g. Canola
h. Sunflower
j. Barley
j. Sorghum
k. Distillers Dried Grains
l. Soybean meal
m. Soybean oil
n. Rice and rice co-products (e.g., hulls are a co-product)
o. Cottonseed hulls
p. Other Please List:_____

Crops Merchandised	N	Percentage of Respondents (230 Respondents)
Corn	216	93.91%
Soybean	195	84.78%
HRW	64	27.83%
HRS	24	10.43%
SRW	115	50.00%
Durum	1	0.43%
Canola	7	3.04%
Sunflower	21	9.13%
Barley	6	2.61%
Sorghum	70	30.43%
Distillers Dried Grains	47	20.43%
Soybean Meal	55	23.91%
Soybean Oil	12	5.22%
Rice/Rice Co-Products	5	2.17%
Cottonseed Hulls	9	3.91%
Oats	19	8.26%
Soybean Hulls	4	1.74%
Natural Gas	1	0.43%
Gasoline	1	0.43%
Non GMO Corn	4	1.74%
Non GMO Beans	1	0.43%
White Corn	1	0.43%
Food Grade Corn	1	0.43%
Millet	3	1.30%
Feed Ingredients	2	0.87%
Wet Distillers Grain	1	0.43%
Soft White Winter Wheat	2	0.87%
Corn Gluten Meal	4	1.74%
Corn Gluten Feed	1	0.43%
Flax	1	0.43%
Cottonseed	2	0.87%
Wheat Middling's	3	1.30%
Dry Gluten	1	0.43%
Extruded Soybeans	1	0.43%
Grain By-Products	1	0.43%
Edible Beans	1	0.43%
Elevator Dust	1	0.43%

Crops Merchandised	N	Percentage of Respondents (230 Respondents)
Cereal By-Products	1	0.43%
Cottonseed Meal	1	0.43%
Cereal	1	0.43%
Hominy	1	0.43%

18. How often do you monitor basis for your buying and selling points?

a. Intra-daily
b. Daily
c. Four + times a week
d. Three times a week
e. Twice a week
f. Other Please Explain:_____

Monitoring Basis	N	Percentage of Respondents (229 Respondents)
Intra-Daily	99	43.04%
Daily	107	465.22%
Four Plus Times Week	8	34.78%
Three Times Week	8	34.78%
Twice Week	7	30.43%
Do Not	1	4.35%
Prior to Sale	4	17.39%
During Wide Swings in Futures	2	8.70%
Very Little	1	4.35%

19. How many locations do you originate supply for? [a]

1-3 4-6 7-9 10-15 16-20 21+

N	Mean	Std Dev	Minimum	Maximum
228	1.75439	1.42	1	6

[a.] Locations managed was coded from "1-6" with "1" representing managing "1-3" locations and "6" representing "21 plus" locations being managed.

20. How far into the future do you typically offer cash buy/sell bids?

Cash only: 1-3 months 1-6 months 1-12 months 1-2 years

2-3 years 3+ years

Bid Offering	N	Percentage of Respondents (226 Respondents)
Cash Only	9	3.98%
One to Three Months	17	7.52%
One to Six Months	25	11.06%
One to Twelve Months	108	47.79%
One to Two Years	62	27.43%
Two to Three Years	10	4.42%
Three Plus Years	1	0.44%

21. What is your annual income based on? [a.]

a. Salary
b. Commission
c. Salary and Commission
d. Other Please List:_____

N	Mean	Std Dev	Minimum	Maximum
222	1.36	1.25	1	3

[a.] Annual income was coded "1" for salary only "2" for a salary and incentive and "3" for incentive only annual income scheme.

22. Based on question 21 please list, for calendar year 2007, the percentage that each section of your income makes up. For example, Salary 75% and Commission 25%.

a. Salary:_____

b. Commission:_____

c. Other:_____

Average Income Salary Percentage	N	Percentage of Respondents (220 Respondents)
0%-25%	2	0.91%
26%-50%	4	1.82%
51%-75%	11	5.00%
76%-100%	189	85.91%

Average Income Commission Percentage	N	Percentage of Respondents (220 Respondents)
0%-25%	23	10.45%
26%-50%	7	3.18%
51%-75%	1	0.45%
76%-100%	3	1.36%

Average Income Bonus Percentage	N	Percentage of Respondents (220 Respondents)
0%-25%	14	6.36%
26%-50%	0	0.00%
51%-75%	0	0.00%
76%-100%	0	0.00%

Average Income Dividends Percentage	N	Percentage of Respondents (220 Respondents)
0%-25%	1	0.45%
26%-50%	1	0.45%
51%-75%	0	0.00%
76%-100%	0	0.00%

Average Income Sales Percentage	N	Percentage of Respondents (220 Respondents)
0%-25%	0	0.00%
26%-50%	0	0.00%
51%-75%	0	0.00%
76%-100%	5	2.27%

Average Income Profitability Percentage	N	Percentage of Respondents (220 Respondents)
0%-25%	4	1.82%
26%-50%	2	0.91%
51%-75%	0	0.00%
76%-100%	7	3.18%

Average Income Hourly Percentage	N	Percentage of Respondents (220 Respondents)
0%-25%	0	0.00%
26%-50%	0	0.00%
51%-75%	0	0.00%
76%-100%	2	0.91%

23. What was your average annual income as a grain merchandiser in calendar year 2007?

a. $0-$30,000
b. $31,000-$50,000
c. $51,000-$75,000
d. $76,000-$100,000
e. $101,000-$150,000
f. $151,000+

Average Annual Income	N	Percentage of Respondents (175 Respondents)
$0-$30,000	8	4.57%
$31,000-$50,000	46	26.29%
$51,000-$75,000	84	48.00%
$76,000-$100,000	38	21.71%
$101,000-$150,000	17	9.71%
$151,000 Plus	7	4.00%

24. What popular press magazines do you read for information? Please list up to five. For example Milling and Baking News, Feedstuffs and the Wall Street Journal.

e. _____
f. _____
g. _____
h. _____
i. _____
j. _____

Press Magazine	N	Percentage of Respondents (141 Respondents)
Wall Street Journal	37	26.24%
DTN	4	2.84%
Grain Journal	59	41.84%
Feedstuffs	58	41.13%
Successful Farming	15	10.64%
Corn and Soybean Digest	7	4.96%
Feed and Grain	23	16.31%
MSNBC	1	0.71%
CNN	3	2.13%
Farm Futures	3	2.13%
Grain Service	2	1.42%
World Grain	6	4.26%
Bloomberg	3	2.13%
Milling and Baking News	9	6.38%
USA Today	1	0.71%
Farm Management	1	0.71%
Grain Industry	1	0.71%
Ag Resource	2	1.42%
Cattle Fax	1	0.71%
Grain Net	2	1.42%
Soy-tech	1	0.71%
Investors Business Daily	1	0.71%
Active Trader	1	0.71%
CBOT	2	1.42%
Headline News	1	0.71%
Money Market	1	0.71%
Farm Journal	7	4.96%

Press Magazine	N	Percentage of Respondents (141 Respondents)
Missouri Soybean Association	1	0.71%
Futures Magazine	2	1.42%
Hoards Dairyman	1	0.71%
Wallace Farmer	1	0.71%
Progressive Farmer	6	4.26%
Pro Farmer	8	5.67%
Bio Fuel Journal	4	2.84%
Bio Fuel Business	1	0.71%
Gartman Letter	1	0.71%
High Plains Journal	1	0.71%
Farm Industry News	2	1.42%
Agrinews	6	4.26%
Farm World	1	0.71%
Poultry News	2	1.42%
FC Stone	1	0.71%
Ethanol Producers	2	1.42%
News Week	1	0.71%
US News and World Report	1	0.71%
Financial Times	1	0.71%
Business Week	1	0.71%
Creed Rice Report	1	0.71%
JP Grain Report	1	0.71%
Delta Farm Press	2	1.42%
Ag Advantage	1	0.71%
Farm Week	2	1.42%
Distiller Grain Quarterly	1	0.71%
FYI Grain News	1	0.71%
Grain News	2	1.42%
Grain and Feed Mill Management	3	2.13%
Doanes	2	1.42%
Brock	1	0.71%
Dairy Profit Magazine	1	0.71%
Ag Day	1	0.71%
National Grain & Feed Newsletter	4	2.84%
Grain and Feed Manager	9	6.38%
High Plains Farm Journal	1	0.71%
Pioneer Growing Point	1	0.71%
Beef	1	0.71%
Feedlot	1	0.71%
Top Producer	1	0.71%

Press Magazine	N	Percentage of Respondents (141 Respondents)
USA Today	1	0.71%
Hedging	1	0.71%
Ag Pro	1	0.71%
Indiana Prairie Farmer	1	0.71%
Prairie Farmer	1	0.71%
Economist	1	0.71%
Rural Co-ops	1	0.71%
Trends on Futures	1	0.71%
Feed Management	1	0.71%
Commodity Now	1	0.71%
New York Times	1	0.71%
Reuters	1	0.71%
St. Louis Post Dispatch	1	0.71%
Chicago Tribune	1	0.71%
KC Star	1	0.71%

25. What professional marketing services do you, or your firm, subscribe to. Please up to your top five.

a. _____
b. _____
c. _____
d. _____
e. _____

Professional Marketing Services	N	Percentage of Respondents (105 Respondents)
Internet	1	0.95%
Grain Journal	2	1.90%
Informa	10	9.52%
Advance Trading	11	10.48%
NGFA Newsletters	2	1.90%
White Commercial	13	12.38%
FC Stone	22	20.95%
Brock	4	3.81%
Iowa Grain	1	0.95%
DTN	32	30.48%
John Roach Grain Service	2	1.90%
Agri Trader	1	0.95%
Midco	6	5.71%
Grain Net	1	0.95%
Grain Service Corporation Newsletter	5	4.76%
Ag Resource	11	10.48%
BCQI	1	0.95%
Hightower	2	1.90%
Country Hedging	3	2.86%
Grain Service Corporation	3	2.86%
Doanes	3	2.86%
MFA	1	0.95%
Board of Trade (CBOT)	1	0.95%
Farm Futures Daily	1	0.95%
Tenco	1	0.95%
Pro Exporter	4	3.81%
Ag Resources	1	0.95%
Newedge	2	1.90%
ADMIS	9	8.57%
Kiplinger	1	0.95%
Benson-Quinn	3	2.86%
CME News	1	0.95%
Decision Commodities	1	0.95%
Bunge	1	0.95%
NIK	2	1.90%
Pro Farmer	5	4.76%
Cargill	1	0.95%
The Linn Group Inc.	1	0.95%

Professional Marketing Services	N	Percentage of Respondents (105 Respondents)
Bob Utterback	1	0.95%
RJO'Brien	2	1.90%
OPISNet.com	1	0.95%
MF Global	1	0.95%
Prophet X	2	1.90%
Future Source	1	0.95%
Com Stock	3	2.86%
Prudential	1	0.95%
Risk Management Magazine	2	1.90%
Man Financial	1	0.95%
Jerry Gulke Strategic Marketing Services, Inc.	1	0.95%
Fimat	1	0.95%
Steve Freed-ADM	1	0.95%
Bower Trading -	1	0.95%
Ag Web	1	0.95%
Farmers Grain Dealers Inc	1	0.95%
Poultry Publications	1	0.95%
World Perspectives Inc	1	0.95%
Green Markets	1	0.95%
Missouri Extensions	1	0.95%
FSA-USDA	1	0.95%

26. Please provide a list of merchandising skills you feel which you would like to develop further.

a._____

b._____

c._____

Merchandising Skills	N	Percentage of Respondents (113 Respondents)
Communication with customers	12	10.62%
People Management	1	0.88%
Financial Management	7	6.19%
Borrowing Needs	1	0.88%
Hedging Cost	2	1.77%
People Skills	3	2.65%
CBOT delivery Process	1	0.88%
Merchandising grain without putting it through my facility	1	0.88%
Spread Positioning	1	0.88%
Time Management	3	2.65%
Understanding the basis/skills	21	18.58%
Spread Management	5	4.42%
Using Futures and Options	43	38.05%
Understanding other markets and how they influence the markets I trade	3	2.65%
Lack of convergence and why it is happening	1	0.88%
Series 3 License	1	0.88%
Spreads	15	13.27%
Cross country merchandising	2	1.77%
Rail Markets	4	3.54%
Quality issues	2	1.77%
Closing the deal with customers	1	0.88%
Trends	1	0.88%
Technical Analysis	7	6.19%
Organizing grain from farm storage	1	0.88%
Transferring Risk	1	0.88%
Compete with large firms	1	0.88%
Provide market for farmers	1	0.88%
Teach farmers to understand the industry	2	1.77%
Swaps	1	0.88%
Logistics	2	1.77%
Everything	1	0.88%
Marketing	4	3.54%
Resource Allocation	1	0.88%
Recognizing relative values	1	0.88%
Risk Management	5	4.42%

Merchandising Skills	N	Percentage of Respondents (113 Respondents)
R&D	1	0.88%
Grain Processing	1	0.88%
Forward Contracts	1	0.88%
Origination	4	3.54%
New Contracts	4	3.54%
Margin Calls	1	0.88%
Space Management	2	1.77%
Farmer Risk Tolerance Assessment	1	0.88%
Hedge To Arrive Contracts	2	1.77%
Exports	2	1.77%
Over counter contracts	2	1.77%
Computer skills	1	0.88%
Data management	1	0.88%
Delivery System	1	0.88%
Personal discipline	1	0.88%
Freight Spreads	1	0.88%
Option Spreads	1	0.88%
Fund Direction	1	0.88%
Delivery Mechanisms	1	0.88%
Fertilizer	1	0.88%
Flour Milling process	1	0.88%
CIF Paper Trading	1	0.88%
Barge Freight Trading	1	0.88%

27. Would you be interested in receiving publications aimed at improving merchandising skills, as well as market information? Yes No

Desire Publications Aimed at Improving Skills	N	Percentage of Respondents (228 Respondents)
Yes	189	82.89%
No	39	17.11%

If so, what types of market information (circle all that apply).

a. New Developments
b. New Strategies
c. International prices
d. Truck Rates
e. Barge Rates
f. Rail Rates

Publications Aimed at Improving Skills	N	Percentage of Respondents (190 Respondents)
New Developments	156	82.11%
New Strategies	161	84.74%
International Prices	54	28.42%
Truck Rates	104	54.74%
Barge Rates	45	23.68%
Rail Rates	78	41.05%

If so, how often?

a. Weekly
b. Bi-weekly
c. Monthly
d. Other Please Explain:_____

Desire Publications Aimed at Improving Skills Delivery	N	Percentage of Respondents (187 Respondents)
Weekly	63	33.69%
Bi-Weekly	45	24.06%
Monthly	80	42.78%
Any	2	1.07%
Depends	2	1.07%

In which form would you prefer this information be delivered?

c. Hard copy
a. Electronic

Publication Form Aimed at Improving Skills Delivery	N	Percentage of Respondents (187 Respondents)
Hard Copy	59	31.55%
Electronic	125	66.84%
Either	5	2.67%

28. Do you actively seek to improve your merchandising skills? Yes No

Actively Seeks to Improve Skills	N	Percentage of Respondents (222 Respondents)
Yes	203	91.44%
No	19	8.56%

29. How often do you receive articles or info dealing with improving/modifying merchandising skills?

f. Daily
g. Weekly
h. Monthly
i. Other Please Explain:_____

Articles Dealing With Improving Skills	N	Percentage of Respondents (216 Respondents)
Daily	41	18.98%
Weekly	50	23.15%
Monthly	97	44.91%
Sometimes	8	3.70%
Rarely	6	2.78%
Quarterly	2	0.93%
Never	12	5.56%
When I need It	2	0.93%

30. Do these articles help? Yes No

Do Respondents Find These Articles Helpful	N	Percentage of Respondents (204 Respondents)
Yes	167	81.86%
No	19	9.31%
Sometimes	18	8.82%

31. How much contact/cross training do you have with other merchandisers in your firm?[a.]

None Some A lot

N	Mean	Std Dev	Minimum	Maximum
221	1.86	0.89	1	3

[a.] Contact between merchandisers was coded from "1-3" with "1" representing "None" and "3" representing "A lot".

32. What is your biggest worry/concern in merchandising? Rank up to five.

____ Quantity

____Price

____Transportation availability (cost)

____Basis

____Hedging

____Futures

____Crop quality

____Other Please List:_____

Biggest Concern In Merchandising	N	1 Ranking	2 Ranking	3 Ranking	4 Ranking	5 Ranking
Quantity	120	19.17%	15.83%	20.83%	17.50%	26.67%
Price	120	48.33%	7.50%	13.33%	16.67%	14.17%
Transportation	139	25.18%	23.74%	17.99%	20.14%	12.95%
Basis	176	55.11%	14.20%	15.91%	9.66%	5.11%
Hedging	119	26.89%	23.53%	23.53%	12.61%	13.45%
Futures	124	25.81%	21.77%	17.74%	20.16%	14.52%
Crop Quality	128	32.03%	16.41%	13.28%	17.97%	20.31%
Hedging	1	100.00%	0.00%	0.00%	0.00%	0.00%
Economy	1	100.00%	0.00%	0.00%	0.00%	0.00%
What I don't know	1	100.00%	0.00%	0.00%	0.00%	0.00%
Available Capital	7	42.86%	0.00%	14.29%	14.29%	28.57%
Margin and risk	4	100.00%	0.00%	0.00%	0.00%	0.00%
Futures Volatility	3	100.00%	0.00%	0.00%	0.00%	0.00%
Futures Cash/Basis Convergence	3	100.00%	0.00%	0.00%	0.00%	0.00%
Space	1	0.00%	100.00%	0.00%	0.00%	0.00%
Customer Satisfaction	1	0.00%	0.00%	0.00%	0.00%	100.00%
Credit of Customer	1	100.00%	0.00%	0.00%	0.00%	0.00%
Crop Quality In-Store	1	100.00%	0.00%	0.00%	0.00%	0.00%
Embezzlement on Theft of Product	1	0.00%	100.00%	0.00%	0.00%	0.00%

33. How sufficient is your knowledge with accumulator contracts?[a.]

a. Excellent
b. Good
c. Fair
d. Poor
e. None

N	Mean	Std Dev	Minimum	Maximum
223	3.62	1.15	0	5

[a.] Knowledge was coded "0" for "Excellent" and "5" for "None".

34. Do you believe that you know enough about Mycotoxins, DDGs, Bioterrorism and trade with Mexico/Canada? Yes No

Do Respondents Feel They Know Enough about Mycotoxins etc	N	Percentage of Respondents (222 Respondents)
Yes	45	20.27%
No	117	52.70%

35. Are you personally involved with merchandising internationally?

Yes No No, but likely in the future

A Respondents Involvement in International Trade	N	Percentage of Respondents (222 Respondents)
Yes	22	9.91%
No	185	83.33%
No, future	19	8.56%

36. Are you a member of the National Grain and Feed Association? Yes No

Member of NGFA	N	Percentage of Respondents (225 Respondents)
Yes	109	48.44%
No	116	51.56%

37. Would you be interested in attending yearly conferences that focus on various aspects of merchandising, like trading, logistics, bio-terrorism, new developments, etc.

Yes No

A Respondents Interest in Attending Conferences	N	Percentage of Respondents (222 Respondents)
Yes	148	66.67%
No	66	29.73%
Maybe	8	3.60%

38. Would it be valuable to have a certification process to distinguish different skill levels of merchandisers? Yes No

A Respondents Interest in a Certification Process	N	Percentage of Respondents (219 Respondents)
Yes	89	40.64%
No	128	58.45%
Maybe	2	0.91%

39. If there were a merchandisers association, what would be most important to you? Rank up to five

___Certification

___New developments

___Skills

___Seminars

___More networking with other merchandisers

___Better trained newcomers

___Other (Please List)_____

What is Most Important to Respondents in an Association	N	1 Ranking	2 Ranking	3 Ranking	4 Ranking	5 Ranking
Certification	76	21.05%	9.21%	10.53%	23.68%	35.53%
New Developments	165	42.42%	21.21%	20.00%	9.09%	7.27%
Skills	162	46.91%	22.22%	17.28%	12.35%	1.23%
Seminars	154	26.62%	15.58%	26.62%	17.53%	13.64%
More Networking	147	31.97%	24.49%	12.93%	18.37%	12.24%
Better trained newcomers	87	26.44%	11.49%	17.24%	17.24%	27.59%
Retention of good merchandisers	1	0.00%	100.00%	0.00%	0.00%	0.00%
Free flowing information	1	100.00%	0.00%	0.00%	0.00%	0.00%
Online "Bulletin Board"	1	0.00%	0.00%	0.00%	100.00%	0.00%