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Commercial Grain Merchandisers: What Do They Need to Know?

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.

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. 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 curriculum development. 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.

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. 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. Factors influencing grain merchandiser profitability are also identified.

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 are~~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). 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. 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.

The remainder of this paper is organized as follows. The manner in which the survey was designed and implemented is discussed, followed by a detailed summary of survey responses based on returned percentages. Then regression analyses are presented to test hypotheses about certain factors' influences on merchandisers' annual ~~incopme~~income and interest in a certification process. The final two sections discuss possible implications of this research and the direction of future studies within the grain merchandising industry.

Methodology

Survey Design

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 state 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.

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 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.

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 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 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 for survey items 33-39).

Data Sources - Summary of Survey Respondents

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 contends that a response rate of 20-30% is characteristic for a mail-out survey to a large sample of firms (1990). Based on this information it is recognized that the response rate for this survey is low, but Baruch 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 (1999). 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 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 2). When education was coded from "0-4" with "0" representing K-8 and "4" representing a post bachelor the mean 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 3). 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. Most of the grain merchandisers (about 75%) did not receive formal academic training towards becoming grain merchandiser, however (Tables 3 and 4). Seventy-two percent of respondents did indicate that they had received non-academic training (Table 5). Merchandisers suggest that training, seminars, and college courses would have a great value prior to becoming a grain merchandiser (Figure 2).

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 the 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 3). Item 13 encompassed the personality traits of grain merchandisers. As shown in Figure 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 6 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.

Primary points of contacts for merchandisers include farmers, brokers, and other merchandisers. Question 16 inquired on the different methods used to contact these individuals and in what frequency (Table 7). Most merchandisers made phone calls and did so with great regularity. Personal and internet contact was indicated as a rarity (Table 8).

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.

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 3). Of particular interest, understanding of future and options markets are one of the top skills merchandisers would like to develop further. 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 9). 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 9 and 10). The highest ranked daily concern for respondents was basis with 55% ranking it as their primary concern (Table 11).

The last three 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 9). Of the survey recipients 40% would find a certification process valuable while 58% would not. Figure 5 represents the level of importance respondents place on having a certification process based on age (Table 9). 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. Because there is not a true academic degree program offered and most training is done in-house, new merchandisers may be interested in certification to set them apart from the competition. It is not apparent from this graph if age is linked to interest in a certification process and further analysis will be required.

Analytical Framework

Merchandisers' desire for 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. Academic training, publications received, and interest in annual conferences is hypothesized to have a positive effect, while membership in NGFA is expected ~~to have~~to have a negative effect. It is assumed that if a merchandiser is a member of the NGFA they would perceive less of a benefit from a certification process. Merchandisers' average annual income is hypothesized to 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. The variable experience would be positive, highest degree obtained would be positive up to a certain level peaking and then having a negative relationship. Locations would have a positive sign, and if a merchandiser was paid with a component of other than solely salary this to would be positive. Last, seeking to improve their skills would be positive.

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).

To explain average annual income among respondents a standard OLS model is used. OLS regression is appropriate because it is assumed that average annual income would be a linear function of a set of explanatory variables (Stone and Rasp 1991). The function of annual income among respondents is comprised of years of experience, education level, the number of locations being managed by the merchandiser, what components their income consisted of, and the desire to actively improve their skills. The dependent variable is in dollars based on an average range selected by respondents. Experience in the grain merchandising field is in years, and education is coded from "0-4" with "0" representing K-8 and "4" representing a post bachelor. The next five variables are dummy variables that indicate how many locations the respondent manages. To avoid any issues of a "dummy variable trap" the variable representing 1-3 locations managed is omitted for a base group (Wooldridge 2009). The subsequent two variables are dummy variables that represent the different components of income. The first is a salary and incentive component while the second is incentive only element. The base group is represented by only having a salary based. The final variable is a dummy variable in which respondents selected "Yes" if they actively seek to improve their merchandising skills and "No" if they do not. Again, the data is coded "1" for "Yes" and "0" for "No".

Model Results

Merchandiser desire for a certification process is modeled as a function of formal academic training, interest in new publications, membership in the NGFA, and if they would be interested in attending conferences designed for information dissemination (Table 12). Certification, formal training, receiving publications, NGFA, and conferences are all binary dummy variables with respondents answering "Yes" or "No". The data were coded "1" for "Yes" and "0" for "No". The overall Wald statistic was 33.0216 is significant at the 1% level with 228 observations. Formal training is positive with an estimate of 0.3417 and p-value of 0.1062. The variable for an inclination of receiving publications is positive with an estimate of 0.06386 and p-value of 0.03. Being a member of the NGFA is negatively related to a certification process with a negative estimate of 0.03332 and p-value of 0.0768. Desiring a yearly conference is positive with the largest estimate of 1.001 and p-value less than 0.0001. All signs agree with the original hypothesis. From these results, the most significant variable is the selection of yearly conferences being significant at the 1% level. Receiving publications and being a member of the NGFA are significant at the 10% while we would fail to reject the null at the 10% for the variable formal training. Conferences have the largest marginal effect by adding 34% to desiring certification. The interest in receiving publications have a marginal effect of adding 21% to a certification process. By being a member of the NGFA, decreases the likelihood of desiring a certification process by about 12%. Based on the model results, it would suggest that a merchandiser would be interested in a certification process if they have had formal academic training, desired to receive some form of a new publication, and finally if they are interested in attending a yearly conference. Conversely, if a merchandiser is already a member of the NGFA they would not desire a

certification process. From these results, if a certification process was created organizers of this certification process should focus on merchandisers that exhibit the above mentioned characteristics.

The OLS regression models merchandise income as a function of experience and formal education in years and a series of dummy variables for the number of locations managed, compensation methods (salary and incentive or strictly incentive), and whether the merchandiser actively seeks to improve their skills (Table 13). The model had a F-value of 5.93 with a p-value of less than .0001. The variables representing experience, managing 10-15 locations and 21 plus locations, all produced p-values significant at the 1% level. The variable representing 4-6 locations managed, had a p-values significant at the 5% level. The variable representing 16-20 locations managed has a p-value significant at the 10% level. The variable representing a respondent actively seeking to improve their skills is also nearly significant at the 10% level (p-value of 0.106). The remaining variables, education, managing 7-9 locations and having a salary and incentive based or incentive only annual income, are statistically insignificant at conventional levels.

Based on the OLS results, a beginning salary for a grain merchandiser managing 1-3 locations will start around $39,000. For every extra year of experience the merchandiser can gain $525. Though an additional year of formal education has an economically larger impact of $2,552 additional income on average, the effect is statistically not different from zero. Merchandisers will gain $12,284 by managing 4-6 locations, $45,162 for managing 10-15 locations, $28,652 for managing 16-20 locations, and $22,945 for managing 21 plus locations per year. Last, if they actively seek to improve their skills their income will increase by $9,977.

Implications for Future Research

The information in this survey indicates 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 and feel basis is a major daily concern. These merchandisers wish to improve their skills and would be interested in publications aimed at issues such as new developments and strategies. 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, John, E., Tannenbaum, Scott, I., Salas, Eduardo, Salas (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. 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).

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 question 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.

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Table 1. Selected Survey Items.

Career Experience
How long have you been a grain merchandiser?
Education
What skill sets define a grain merchandiser?[a]
Business Practices
How often do you monitor basis?[b]
Compensation
For calendar year 2007, what percentage of your income is comprised of salary and commission?[c]
Information and Technology
How often do you receive articles or info dealing with improving/modifying merchandising skills?[d]
Comprehension and Networks
Would you be interested in attending yearly conferences that focus on various aspects of merchandising, like trading, logistics, bio-terrorism, new developments, etc?[e]

[a.] Respondents are asked to rank skills, from very important to least important, such as communication, knowledge, and the understanding of logistics.

[b.] Respondents are required to select from intra-daily, daily, and or supply another number of times per week.

[c.] Respondents are requested to divulge what percentage of their income is made up of salary and commission.

[d.] Respondents are requested to select from a list of daily, weekly, and monthly.

[e.] To gain insight into whether or not yearly conferences would be beneficial we ask a simple yes or no.

Figure 1. Frequency of Years of Experience

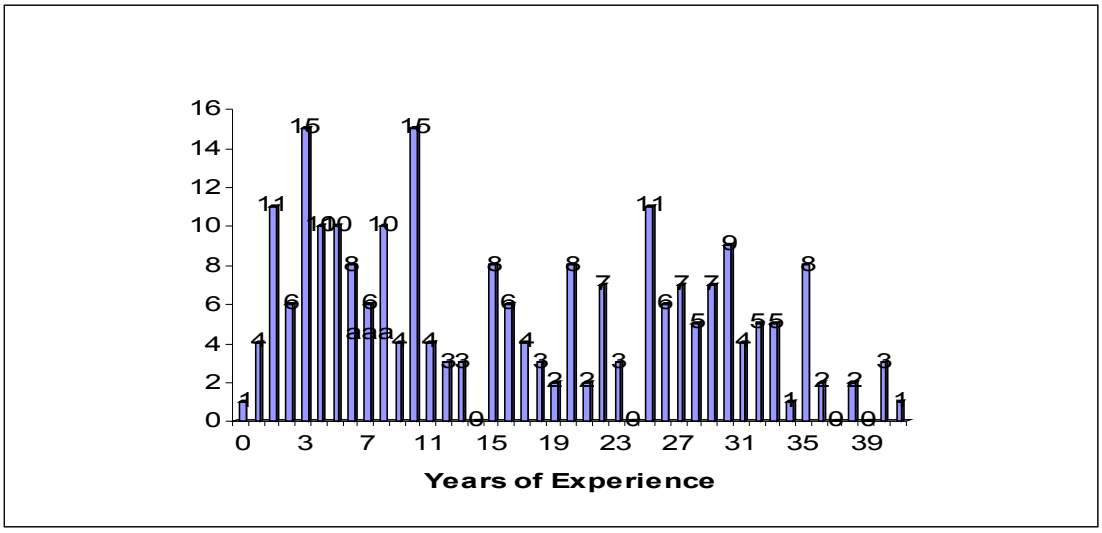

Table 2. Grain Merchandiser Respondent Highest Education (228 Respondents)

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 3. Selected Summary Statistics of 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. Percentage of Formal Academic Training Obtained Towards A Grain Merchandising Career among Respondents (228 Respondents)

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

Table 5. Percentage of Non-Academic Training Obtained Towards A Grain Merchandising Career among Respondents (229 Respondents)

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

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

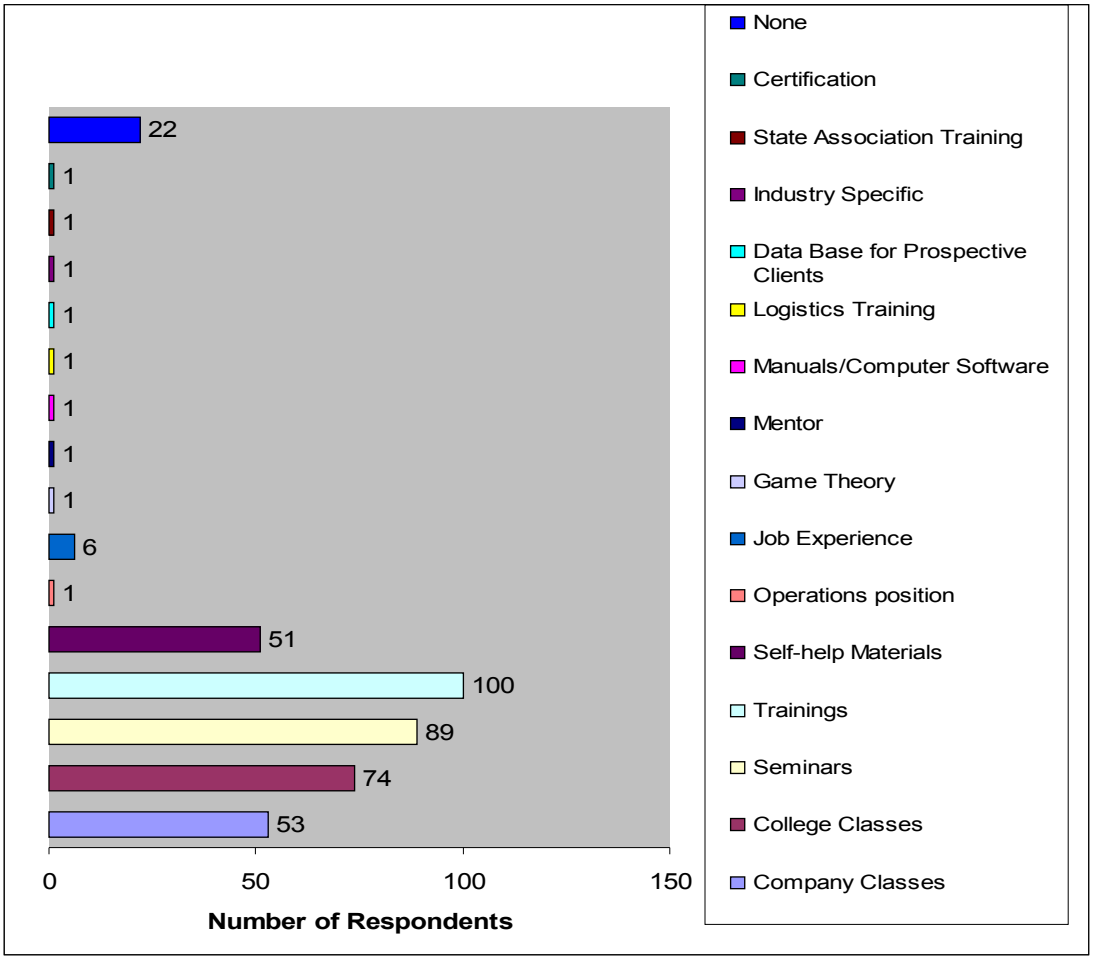

Figure 3. Skills Deemed Very Important by Respondents

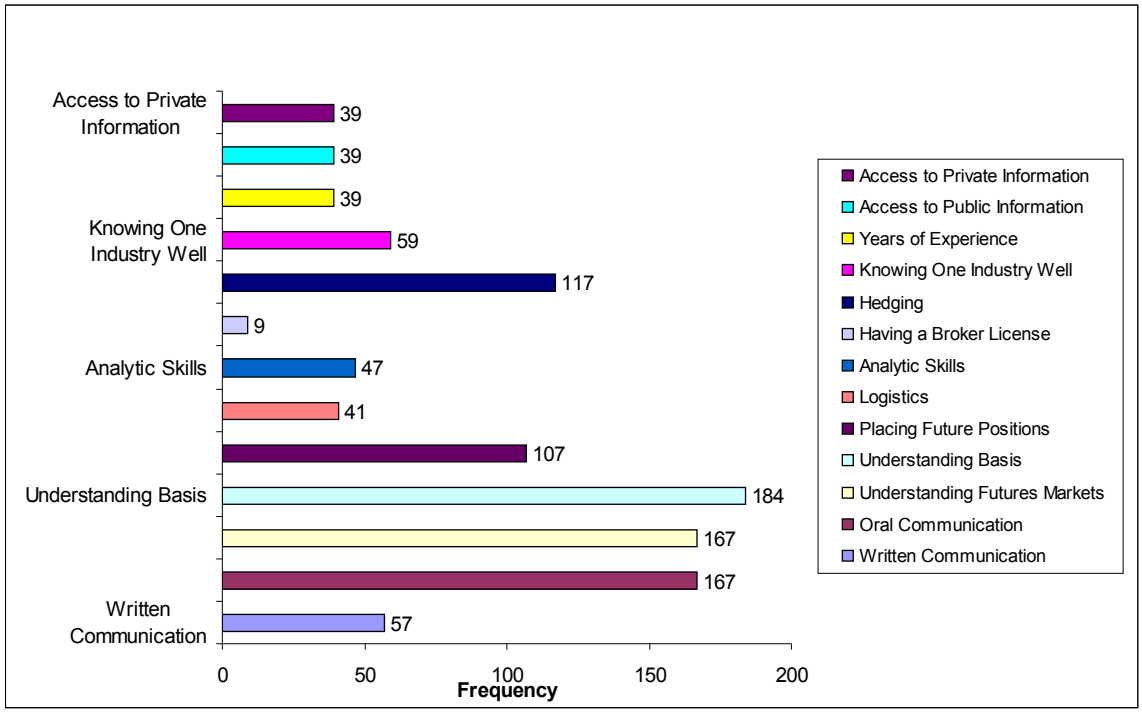

Figure 4. Frequency of Personality Traits Respondents Rank Very Important

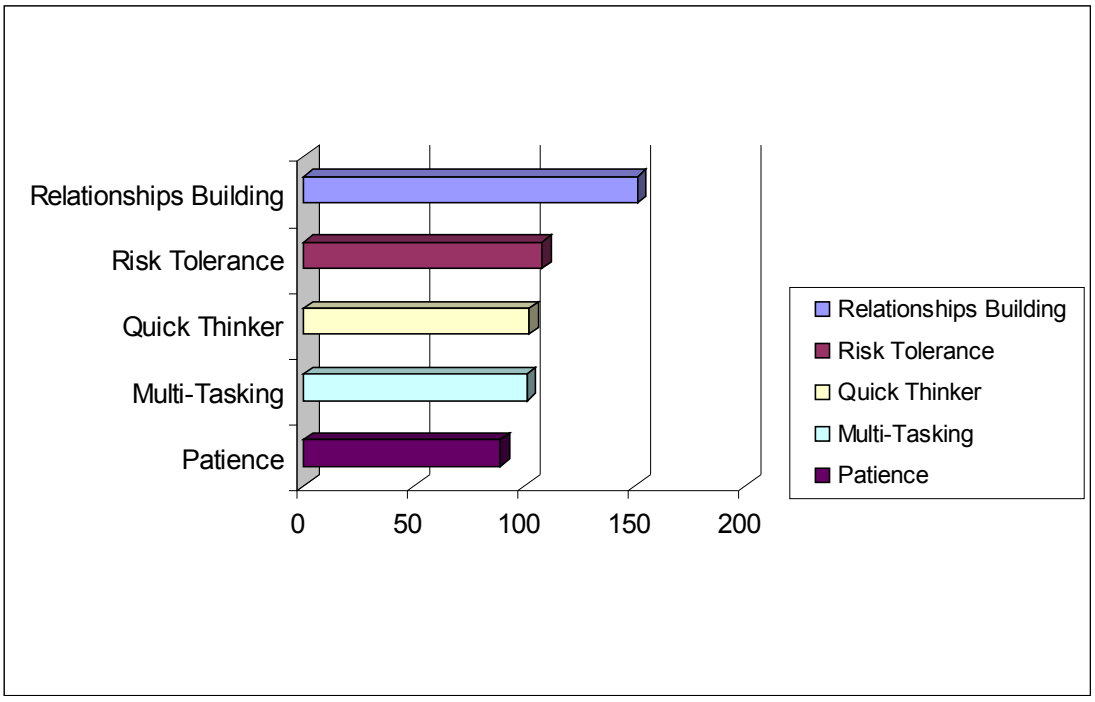

Table 6. Selected Summary Statistics of Personality and Skill Sets Exhibited by Respondents

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 7. Respondents Indication of Using the Phone for Merchandising with Clients (230 Respondents)

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

Table 8. Respondents Indication of using the Internet for Merchandising with Clients (219 Respondents)

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

Table 9. Selected Summary Statistics of a Respondents Desiring Personal Job Related Improvement

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 10. Frequency of Respondents Actively Seeking to Improve Their Merchandising Skills (222 Respondents)

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

Table 11. Summary Statistics of the Biggest Concern in Merchandising Among 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"

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

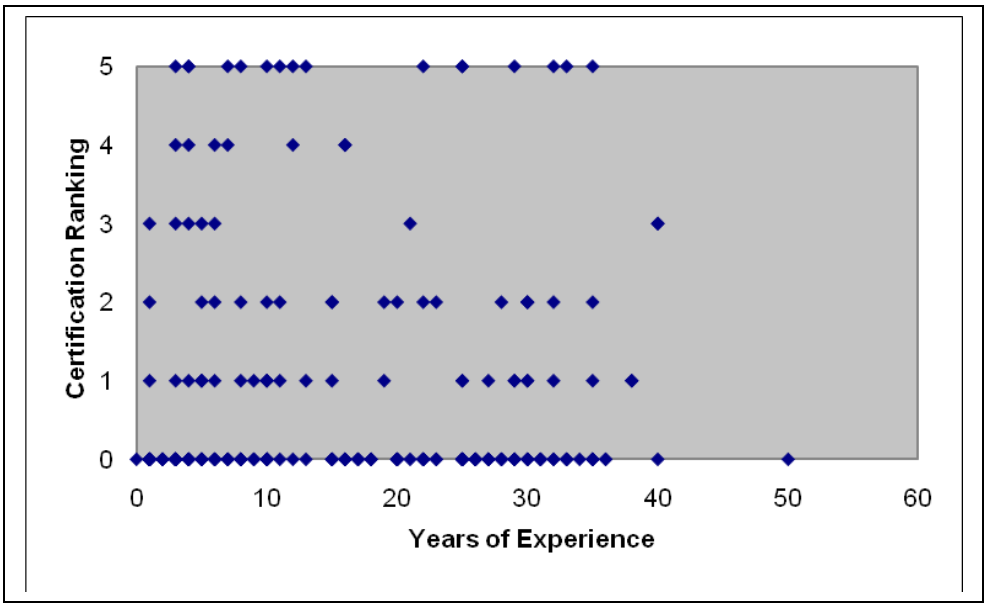

Table 12. Probit Model: Y= Desire for a Certification Process (=1 if yes)

Variable Explanation	Variables	Estimate	p-value
	Intercept	-1.4585 (0.2945)	<.0001
Formal Academic Training (=1 if yes)	formaltraining	0.3417 (0.2115)	0.1062
Interest in Receiving Publications (=1 if yes)	receivepub	0.6386 (0.2943)	0.0300
A Member of the NGFA (=1 if yes)	ngfa	-0.3332 (0.1883)	0.0768
Would be Interested Attending Yearly Conferences (=1 if yes)	conferences	1.0001 (0.2187)	<.0001

Variable Explanation	Variables	Marginal Effect	p-value
Formal Academic Training (=1 if yes)	formaltraining	0.1307 (0.0819)	0.111
Interest in Receiving Publications (=1 if yes)	receivepub	0.2143 (0.0843)	0.011
A Member of the NGFA (=1 if yes)	ngfa	-0.1237 0.0694	0.075
Would be Interested Attending Yearly Conferences (=1 if yes)	conferences	0.3405 (0.065)	<.0001

Table 13. OLS Model: Y= Annual Income

Variable Explanation	Variables	Estimate	t-value	p-value

	Intercept	39150.000 (8176.144)	4.79	<.0001
Years of Experience	experience	525.324 (164.678)	3.19	0.0017
Years of formal education	education	2551.977 (2022.915)	1.26	0.2087
4-6 Locations (n = 27)	fourtosix	12284.000 (5872.313)	2.09	0.0378
7-9 Locations (n = 12)	seventonine	-2910.559 (8730.193)	-0.33	0.7392
10-15 Locations (n = 13)	tentofifteen	45162.000 (8527.355)	5.3	<.0001
16-20 Locations (n = 3)	sixteentotwent	28652.000 (15545.000)	1.84	0.0669
21+ Locations (n = 14)	twentyoneplus	22945.000 (8372.522)	2.74	0.0067
Salary and Incentive (n = 54)	salaryandincentive	-8208.296 (7087.888)	-1.16	0.2483
Incentive Only (n = 14)	incentiveonly	1101.741 (7083.493)	0.16	0.8766
Actively Seeking to Improve Skills (=1 if yes)	improveskills	9977.189 (6146.324)	1.62	0.1062

Appendix

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