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Analysis of Farm Financing and Risk Management for North Dakota Farmers

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Abstract

Significant changes under the 1996 FAIR Act and recent trade agreements are occurring in the U.S. farm sector. The changes will affect both the source and the magnitude of the business and financial risks that farmers will be required to manage.

The objectives of this study were to investigate North Dakota farmers' plans regarding business expansion, timing of expansion, and expected financing of that business expansion and to analyze their risk management strategies.

The study was based on a statewide survey. The data were categorized into six groups for analysis: demographics, intergenerational transfer, debt characteristics, lender relationships, business expansion, and farmer expectations of their lenders. Statistical techniques were used to evaluate differences among farmers across regions of the state, types of farm businesses, and sizes of farm businesses.

Key Words: Farm credit, expansion plans, debt-to-asset ratio, farm demographics, financial tools, credit sources, financial services, non-traditional lending

Highlights

A survey was sent to North Dakota farmers to examine demographic and financial characteristics of farms in North Dakota.

About 22% of the producers indicated that they would be encouraged to retire due to changes in the government programs. The producers in the North West region viewed their retirement date earlier than the rest of the state, while those in the Central region viewed their retirement at a later date. The largest percentage of producers wanted to rent their farm to a family member. Producers felt that family help was important when starting a new operation. They also felt that buying and maintaining land to pass to the next generation was not important. About 41% of the producers responded that they would focus on earning a premium for their products due to the changes in government farm programs.

About 53% of the producers had a debt-to-asset ratio less than 25%, while 26% had a debt-to-asset ratio greater than 41%. Corporations' debt-to-asset ratios trended to be higher than either sole proprietorships or partnerships. About 43% of the producers felt that they do not have too much debt in their operation and at the same time agreed that taking on additional debt is not a good idea.

Producers felt that business management skills are more important than production skills, and felt that it was not important to include a panel of advisers for important business decisions.

Producers felt that farmland is not a good investment and renting land is better than buying. More than one-half of the producers felt good land at a reasonable price is not available in their area. Producers felt that increasing farm size would not lower their per unit cost of production.

More than one-half of the producers plan to expand production. The main reason to expand was to generate larger sales followed by capture of economies of scale.

Producers felt that a close personal relationship with a lender was important and that they would not be comfortable doing most of their banking by computer or telephone. They felt that they did not have a difficult time finding a lender who understood their vision for the future. They also felt that lenders were not competing against each other in interest rates, but now is a good time to lock in interest rates. Producers use local commercial banks more often for lending. The reason for the use of non-traditional lenders is lower interest rates, better repayment schedules, and discounts on purchases.

Producers in North Dakota responded to the questions similar to U.S. producers except for a few items. Producers in North Dakota were older than U.S. producers and they were going to retire sooner than average U.S. producers. The size of North Dakota farms was much smaller than in the United States. North Dakota producers believed that farming more acres was not the best way to reduce per-unit costs, while U.S. producers believed it. Only 2% of North Dakota producers have used manufacturers' credit while 27% of U.S. producers have used

manufacturers' credit. Because of the farm size, North Dakota producers would be comfortable with less additional debt than U.S. producers.

North Dakota producers' reactions to changes in government programs were different than U.S. producers. About 24% of North Dakota producers would be willing to diversify into new crops and livestock while only 1% of U.S. producers would be willing to diversify. About 55% of North Dakota producers would be more cautious of debt compared to 23% for U.S. producers. About 23% of North Dakota producers would use marketing tools compared to 40% for U.S. producers.

Analysis of Farm Financing and Risk Management for North Dakota Farmers

Won W. Koo, Marvin R. Duncan, and Richard D. Taylor*

Introduction

Significant changes are occurring in the U.S. farm sector. The changes are especially important for producers in the Northern Plains states because of the limited crop rotation alternatives. These changes will affect both the source and the magnitude of the business and financial risks that farmers are required to manage. Risks result from shifts in farm production patterns, globalization of farm commodity markets, narrowing profit margins in agricultural production, public policy changes that shift price and production risk away from government and toward farmers, and changes in macro economic policies that affect inflation in farm production costs and interest rates on credit to farmers. Farmers will be responsible for managing a greater proportion of business, commodity price, and production risk than at any time since the basic farm programs were put into place in the 1930s.

The overall objective of this study was to identify characteristics of farm business enterprises in terms of farm operation and financing and to analyze their business plans in the near future. Specific objectives were (1) to identify farm plans regarding business expansion, timing of expansion, and expected financing of that business expansion; (2) to determine the business structure used by the farmers, including the presence of multi-generation business partners; (3) to examine the financial services and risk management strategies used by farmers, including farmers' responses to changes in government programs; (4) to identify sources of borrowing by farmers and the preferred relationships of those farmers with their lenders; and (5) to identify primary business adjustment issues confronting farmers.

The data were collected from a stratified sample of North Dakota farmers. The survey was conducted by Rockwood Research and Marvin Duncan of North Dakota State University.

Statistical techniques were used to evaluate differences among farmers across regions of the state, types of farm businesses, and sizes of farm businesses. Differences in responses between a similar nationwide survey and the North Dakota survey were tested to determine if there were significant differences between the responses. Various test statistics were used to evaluate the data and to determine if differences exist in the frequencies of the responses.

The questions were analyzed in two ways. If the responses in individual groups were mutually exclusive (e.g., a respondent checks one box for each question) the responses in the groups were tested to see if they differed significantly from one another. If farmers could respond to multiple options to a question (e.g., a respondent picks multiple alternatives to each question) the test had to be limited to each separate category. In that case, questions were tested

*Koo is professor and director of the Northern Plains Trade and Policy Research Center, Duncan is professor, and Taylor is research associate in the Department of Agricultural Economics, North Dakota State University, Fargo.

for differences by developing a yes-no grid. The data were categorized into six groups for analysis: demographics, intergenerational transfer, debt characteristics, lender relationships, business expansion, and farmer expectations of their lenders.

North Dakota is divided into seven regions as shown in Figure 1. Region 1 (North West) consists of 36 farms located in Burke, Divide, Mountrail, Renville, Ward, and Williams county. Region 2 (North Central) consists of 32 farms located in Benson, Bottineau, McHenry, Pierce, Ramsey, and Rolette county. Region 3 (North East) consists of 78 farms located in Cavalier, Grand Forks, Nelson, Pembina, Towner, and Walsh county. Region 4 (Central) consists of 36 farms located in Eddy, Foster, Kidder, Sheridan, Stutsman, and Wells county. Region 5 (East Central) consists of 45 farms located in Barnes, Cass, Griggs, Steele, and Traill county. Region 6 (South East) consists of 47 farms located in Dickey, LaMoure, Logan, McIntosh, Ransom, Richland, and Sargent county. Region 7 (West River) consists of 64 farms located in Adams, Billings, Bowman, Burleigh, Dunn, Emmons, Golden Valley, Grant, Hettinger, McKenzie, Mercer, Morton, Oliver, Sioux, Slope, and Stark county.

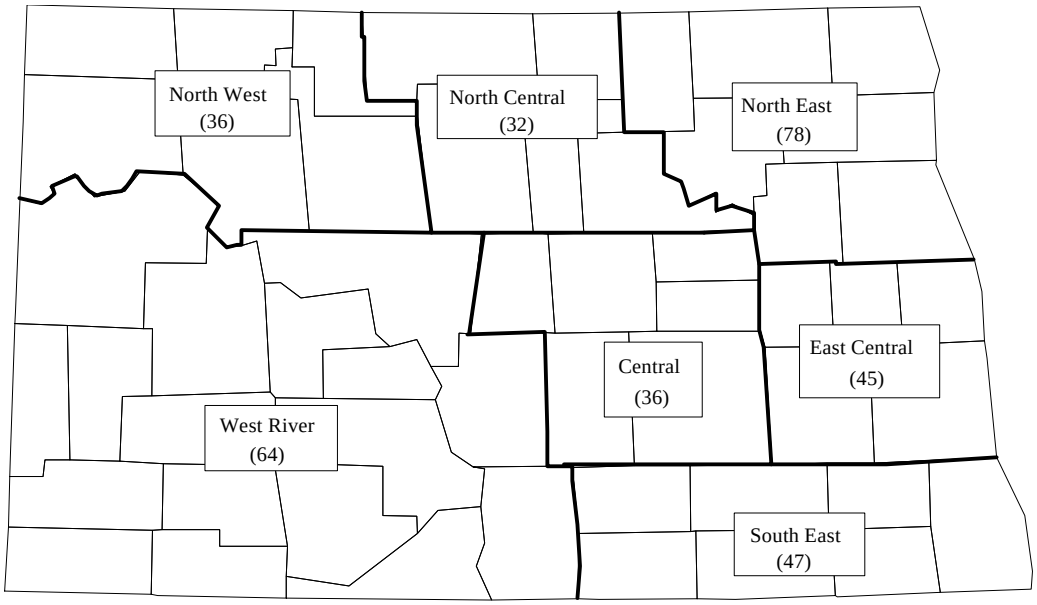

Figure 1. Regional Divisions of North Dakota

Demographic Characteristics

Farm Size

Figure 2 shows the average size of all 338 farms responding to the survey. The size is the average for producers involved in each enterprise. Producers have an average of 1,002 acres of wheat, 352 acres of barley, and 430 acres of corn. The 1999 averages are producers' future plans

for production in the year. Producers of corn, wheat, barley, milk, calf, backgrounding, and feeding plan to increase their production, while those of hogs plan to decrease production.

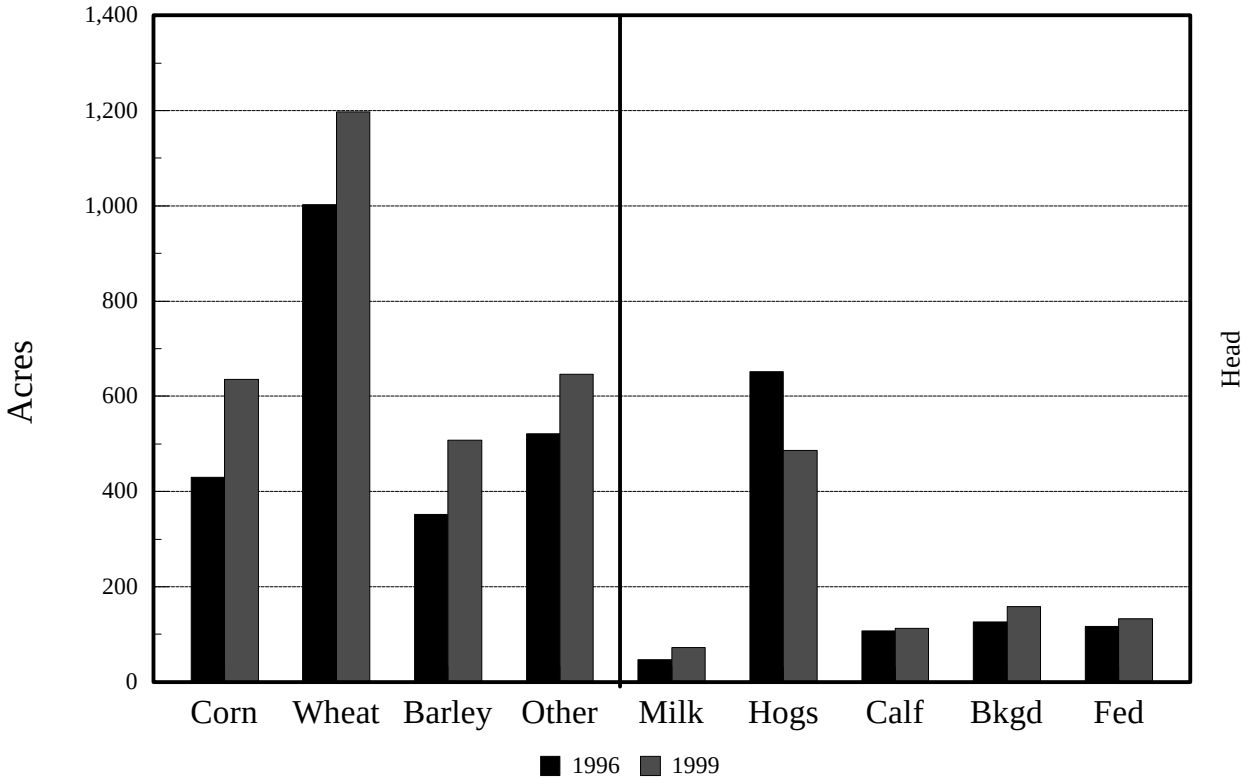

Figure 2. Average Size of North Dakota Farms, 1996 and 1999

The data also are sorted for farm size categorized by legal ownership type (Appendix Table 1). Sole proprietorships are smaller than either partnerships or corporations. Corporations are generally larger than either sole proprietorships or partnerships. Sole proprietorships plan to expand in corn, wheat, barley, milk, calf, backgrounding, and feeding production. Partnerships plan to expand in all enterprises, except for milk and hogs. Corporations plan to expand in all enterprises, except for hogs, calf, and backgrounding calves.

The data also are sorted by size of farm operation. Small farms, medium farms, and large farms plan to expand in all enterprises except for milk and hogs.

The farms are sorted by total units of production to calculate production size. The total units of production were estimated by adding the total acres of crops plus the number of head of milk cows, beef cows, backgrounded calves, and fed cattle, plus the number of hogs divided by five. Farms with less than 990 units were small farms, farms with between 991 and 1,950 units were medium farms, and farms with over 1,951 units were large farms.

Farms in the North West and West River regions are generally smaller than farms in other regions. Most regions plan on expansion in all enterprises except for hog production in the Central and East regions. Producers in the North Central region plan to increase barley acres substantially. Detailed statistics are presented in Appendix Table 1.

Age

Figure 3 shows the age distribution for producers. The differences in age distribution are not significant at the 95% or 90% confidence level when sorted by organization. Producers of small farms tend to be older than either producers of medium or large size farms (Appendix Table 2). Producers in the North Central region tend to be older than the rest of the state while producers in the Central region tend to be younger.

About 30% of the U.S. farmers are less than 35 years old compared to 7% of North Dakota farmers. About 41% of the U.S. farmers are between 35 and 54 years old compared to 59% of North Dakota farmers. About 29% of the U.S. farmers are older than 55 years old compared to 33% of North Dakota farmers. The age distribution of U.S. farmers came from a study by Koo et al.

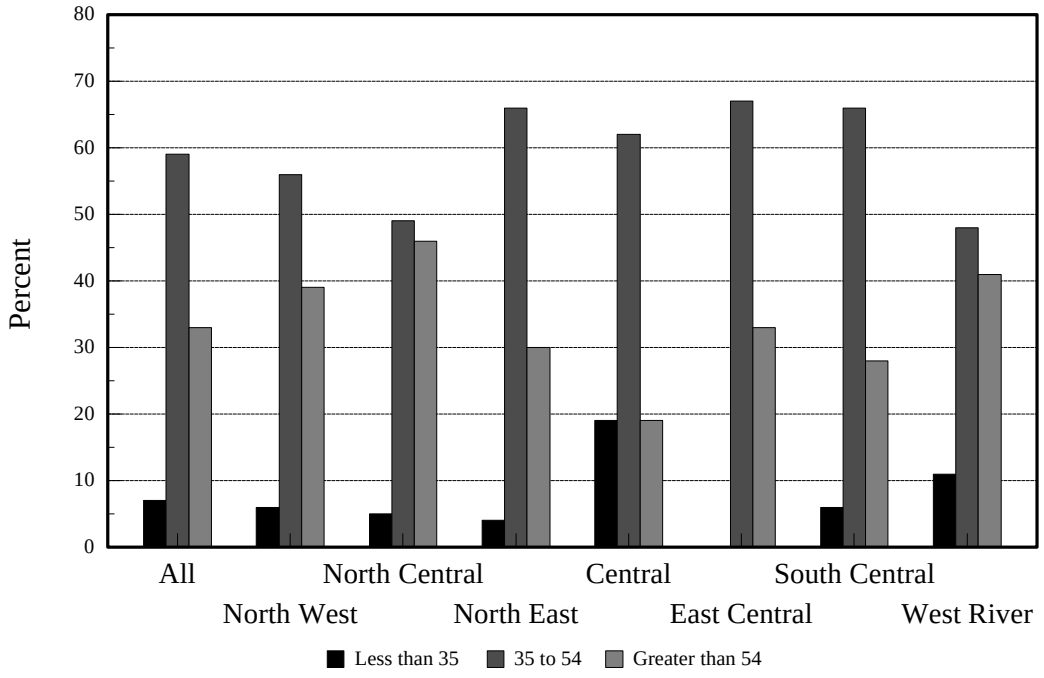

Figure 3. Age of North Dakota Farmers by Region, 1996

Education

Figure 4 shows the education level of producers responding to the survey. Among the producers, 33% of the producers received at least a high school degree, 9% a technical degree, and 21% a college degree. The education levels did differ significantly at the 95% confidence level when sorted by size of farm or region (Appendix Table 3). More producers of large farms have a college degree than either producers of small or medium size farms. More producers in the East Central region have a college degree than the rest of the state, while producers in the South East and West River regions have the fewest college graduates.

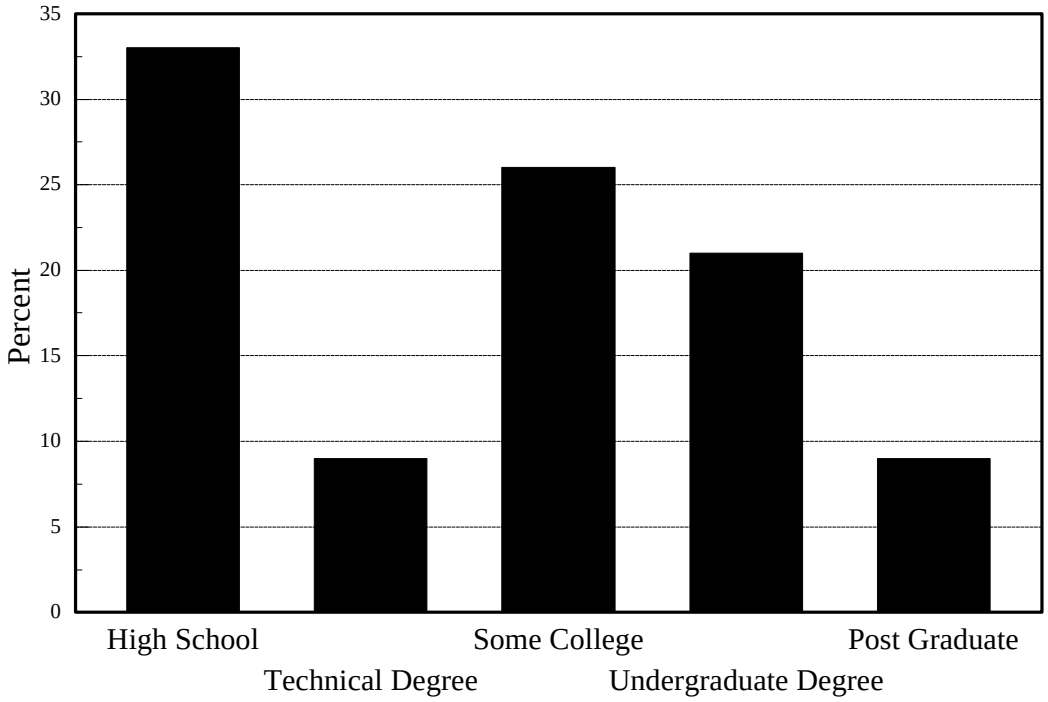

Figure 4. Education Level of North Dakota Farmers, 1996

Ownership

Figure 5 shows the legal ownership of the respondents. About 65% of the respondents indicated that they are sole proprietors, 26% are family partnerships, and 6% are corporations. The legal ownership did differ significantly at the 95% confidence level when sorted by size of farm or region (Appendix Table 4). About 46% of large farms were sole proprietorships, while 76% of small farms and 74% of medium farms were sole proprietorships. About 28% of small farms were family corporations, while 5% of medium and 9% of large farms were family corporations. About 47% of producers in the North Central region were sole proprietorships compared to 57% to 78% for the rest of the state. About 14% of the producers in the East Central region were family corporations compared with 2% to 9% for the rest of the state.

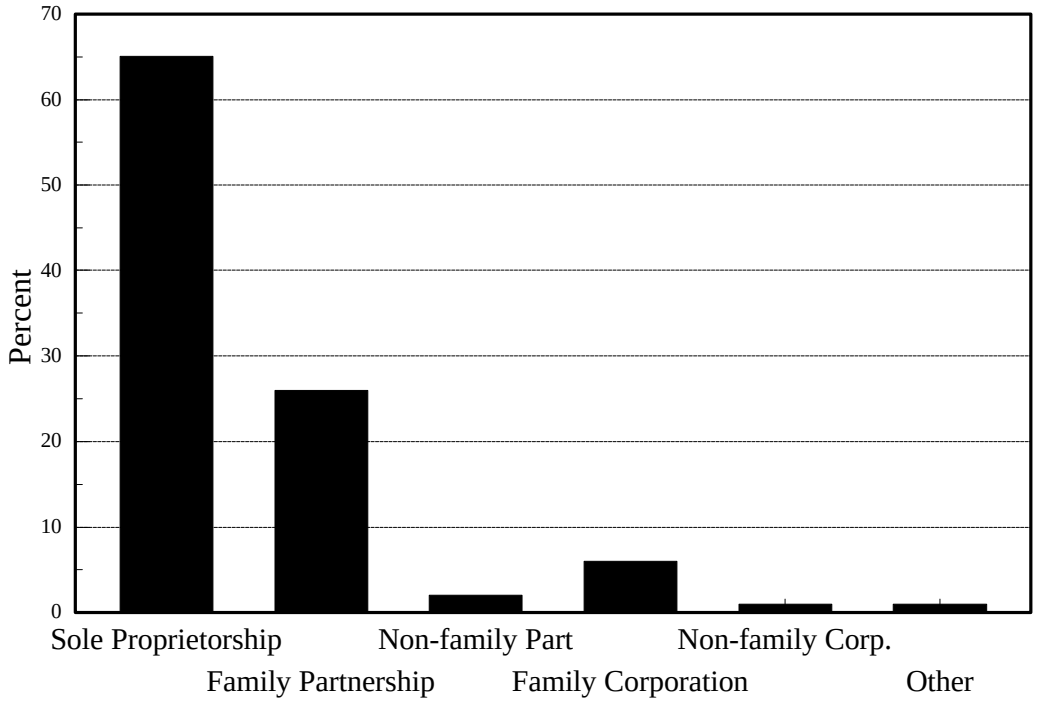

Figure 5. Ownership Characteristics of North Dakota Farmers, 1996

Intergenerational Transfer of Farm Business

Retirement Plans

Figure 6 shows the number of years producers plan to farm until retirement. The most frequent response (40%) was retiring within 10 years. The number of years until retirement did differ significantly at the 95% confidence level for respondents sorted by ownership type, size of farms, or region (Appendix Table 5). Producers in corporations are planning on farming longer than others, while those in sole proprietorships planned on retiring sooner. More producers in small farms are going to retire within 10 years than those of medium or large size farms. Large farms planned on farming longer than the rest of the producers. Farmers in the North West region planned on retiring sooner than those in the rest of the state. Producers in the Central region plan on farming longer than the rest of the state.

North Dakota farmers are not planning on farming as long as the U.S. farmers. About 24% of the U.S. farmers are planning to retire within 10 years compared to 40% of North Dakota farmers. About 25% of the U.S. farmers are planning to retire within 11 to 20 years compared to 33% of North Dakota farmers. About 36% of the U.S. farmers are planning to retire within 21 to 30 years compared to 22% of North Dakota farmers.

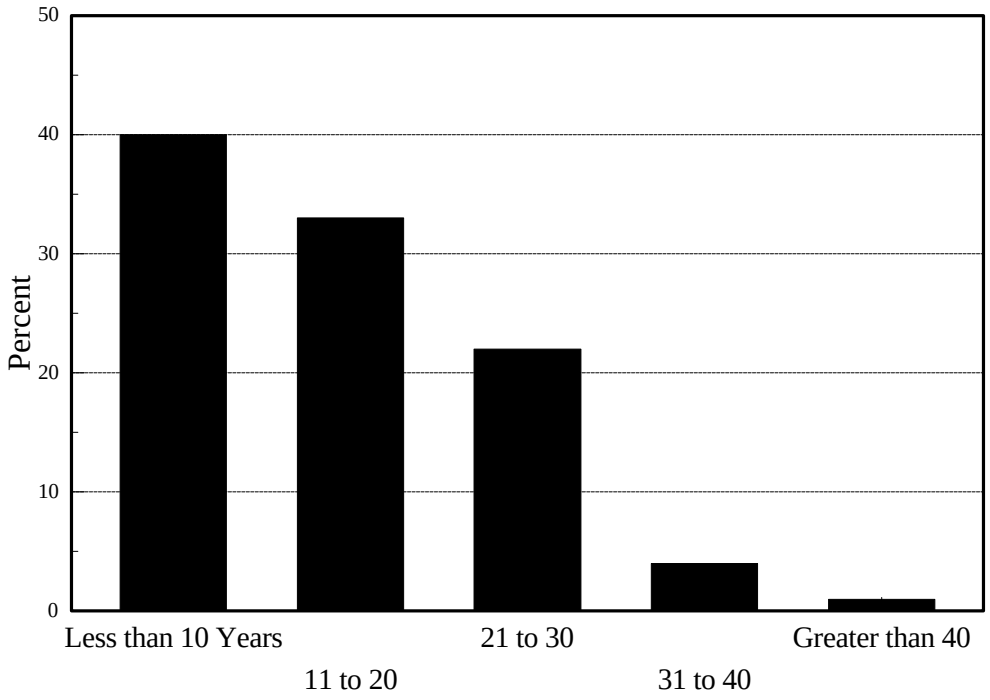

Figure 6. Number of Years to Retirement for North Dakota Farmers, 1996

The largest group of producers (32%) plan on renting their farms to family members (Figure 7). The second largest group of producers has no plans for their farms (30%). The next category are keeping farms in their family without a sale or renting the farm (13%) (Appendix Table 6).

The responses differ significantly at the 95% confidence level when sorted by type of ownership, size of farm, or region. More corporations are going to sell farms and have made plans for the deposition of their farms than the other types of ownerships. More producers of large farms are going to rent their farms to family members than producers of small or medium farms. More farmers in the East Central region are planning to sell their farms to family members than in the other regions. Producers in the North East region are least likely to sell their farms to family members. Producers in the West River region are least likely to rent their farms to family members when compared to the rest of the state. More producers in the Central, South East, and West River regions are undecided or not sure than the rest of the state.

The responses for North Dakota farmers were different from the responses for U.S. farmers. About 18% of U.S. farmers are planning on renting their farms to family members compared to 32% of North Dakota farmers. About 5% of U.S. farmers are planning on renting farms to non-family members compared to 10% of North Dakota farmers. About 30% of U.S. farmers are planning on keeping their farms in the family without sale or renting compared to 12% of North Dakota farmers.

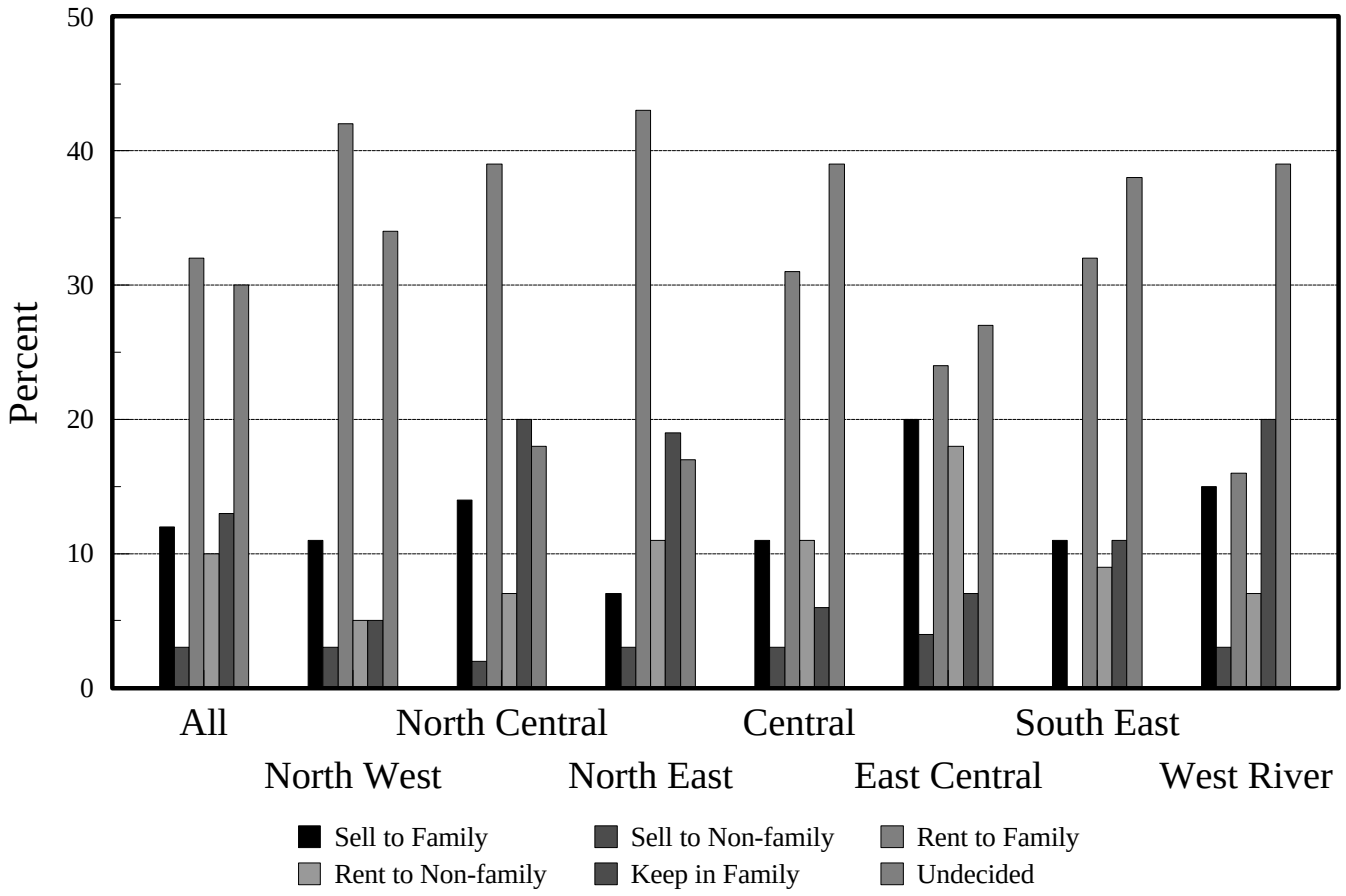

Figure 7. Producers' Alternative Plans for Farmland After Retirement by Region, 1996

Attitudes and Plans

Figure 8 shows the distribution of responses to " It is possible to build a successful farm business without financial assistance from your family." About 44.2% of the producers tended toward strongly disagree, while about 37.1% tended toward strongly agree. The remaining 19% of producers remained neutral. The responses for producers, when the data were sorted by size or region, do not differ significantly from each other at the 95% confidence level, but when sorted by organization, the responses differ significantly at the 95% confidence level (Appendix Table 7). For corporations, about 19% of producers indicated a trend toward strongly disagree, while about 33.3% indicated a trend toward strongly agree. For partnerships, about 29.7% indicated a trend toward strongly disagree, while 18.7% indicated a trend toward strongly agree. For sole proprietorship, about 24.3% indicated a trend toward strongly disagree, while about 15.7% indicated a trend toward strongly agree. The responses do not differ across regions of the state at the 90% and 95% confidence levels. However, most producers indicated a trend toward strongly disagree, indicating that they need financial support from family members.

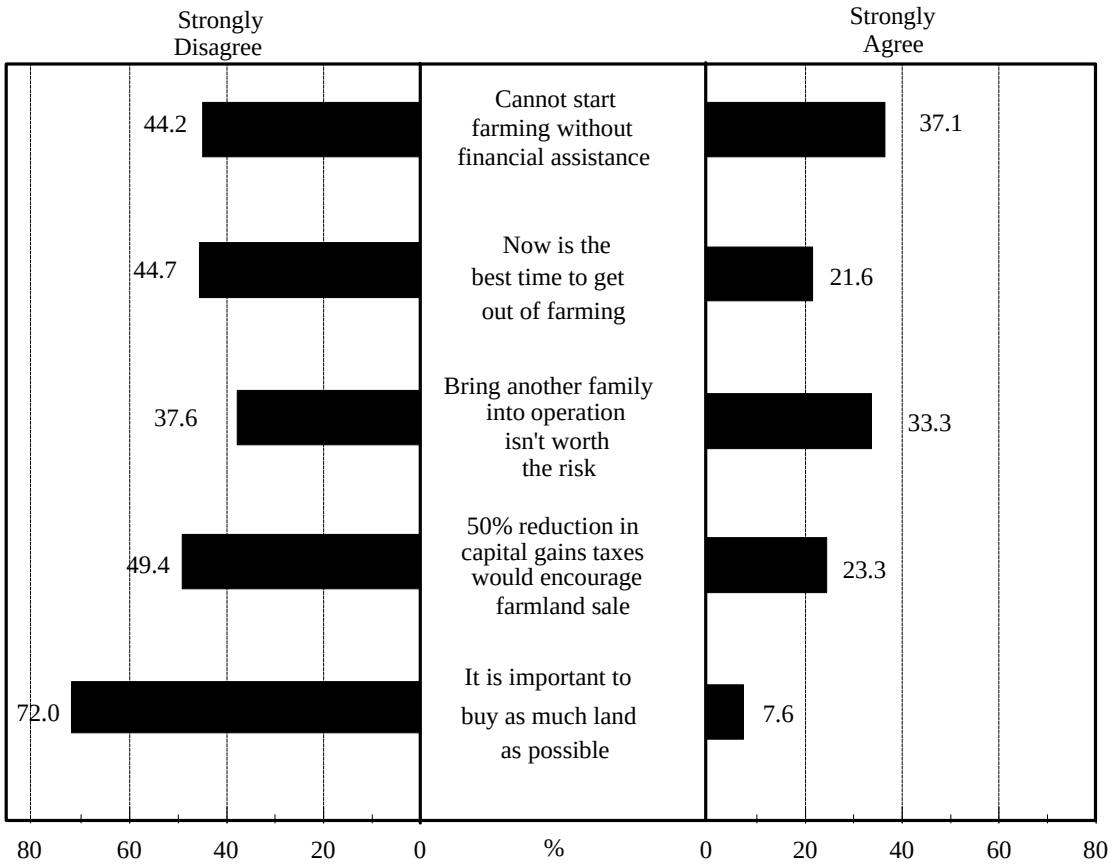

Figure 8. Farmers' Attitudes Toward Intergenerational Transfer of Farm Business, 1996

Responses to "Now is the best time to get out of farming that we will see in the next five years" indicated about 44.7% tended toward strongly disagree, while about 21.6% indicated a trend toward strongly agree (Figure 8). The remaining 34% of producers remained neutral. This implies that most farmers are not interested in being out of farming in the near future. The responses for producers, when the data were sorted by type of ownership or size, did not differ significantly from each other (Appendix Table 8). However, the responses did differ across regions. About 55.5% of responses in the Central region and 35.8% of responses in the North East region indicated a trend toward strongly disagree. About 22.9% of responses in the North East region and 29.4% of responses in the North West region indicated a trend toward strongly agree.

Responses to "Bringing another family member into the operation isn't worth the risk of taking on more debt" indicated about 37.6% tended toward strongly disagree while about 33.3% indicated a trend toward strongly agree (Figure 8). The remaining 29.1% of producers remained neutral. When sorted by type of ownership, 50.0% of corporations and 33.8% of sole proprietorships indicated a trend toward strongly disagree (Appendix Table 9). This implies that corporations are more optimistic about the future than sole proprietorships. When sorted by size, 43.5% of large farms and 28.7% of small farms indicated a trend toward strongly disagree. When sorted by region, 57.9% of farmers in the North Central region and 22.1% of farmers in the West River region indicated a trend toward strongly disagree.

Responses to "A fifty percent reduction in capital gains taxes would encourage me to sell farmland" indicated about 49.4% tended toward strongly disagree, while about 23.3% indicated a trend toward strongly agree (Figure 8). The remaining 27.3% of producers remained neutral. This implies that one-half of the producers would not consider selling farmland even if capital gains taxes were lowered. When sorted by type of ownership, 55.0% of corporations and 47.6% of sole proprietorships indicated a trend toward strongly disagree (Appendix Table 10). This indicates that lowering capital gains tax may not be the main reason for selling farmland. When sorted by size, 55.4% of medium farms and 48.0% of small farms indicated a trend toward strongly disagree. When sorted by region, 63.9% of farmers in the Central region and 44.1% in the West River region indicated a trend toward strongly disagree. This implies that producers in the Central region are less likely to sell farmland than the rest of the state even if capital gains taxes are lowered.

Responses to "It is important for me to buy as much land as possible to pass on to the next generation" indicated about 72.0% tended toward strongly disagree, while about 7.6% indicated a trend toward strongly agree (Figure 8). The remaining 20.4% of producers remained neutral. This implies that producers feel that it is not important to purchase land to pass on to the next generation. When sorted by type of ownership, 75.3% of sole proprietorships and 63.1% of partnerships indicated a trend toward strongly disagree (Appendix Table 11). When sorted by size, 80.1% of medium farms and about 61.8% of large farms indicated a trend toward strongly disagree. When sorted by region, 78.7% of farmers in the West River region and about 65.8% of farmers in the North Central region indicated a trend toward strongly disagree.

Debt Characteristics and Risk Management Strategies

Debt-to-asset Ratio

Figure 9 shows the debt-to-asset ratio for farmers responding to the survey. About 34.4% of the farmers had a debt-to-asset ratio of 15% or less compared to 42% for U.S. producers. About 26% of North Dakota farmers had a debt-to-asset ratio greater than 41% compared to 24% for U.S. producers.

Figure 9 also shows the debt-to-asset ratio of farmers when sorted by ownership types. The debt-to-asset ratios among ownership types differ significantly at the 95% confidence level. About 18% of sole proprietorships and 11% of partnerships have no debt. About 21% of corporations, 19% of partnerships, and 20% of sole proprietorships have debt-to-asset ratios between 26% and 40%. About 17% of partnerships, 20% of sole proprietorships, and 19% of corporations have debt-to-asset ratios between 41% and 60% (Appendix Table 12). This implies that the debt-to-asset ratios for the partnerships are lower than either the sole proprietorships or corporations. There are no significant differences among different size farms at the 95% or 90% confidence levels. When sorted by regions, the debt-to-asset ratios did differ significantly at the 95% confidence level. About 6% of farms in the Central region, 20% of farms in the North Central region, and 21% of farms in the West River region had no debt. About 16% of farms in the North East and South East regions had a debt-to-asset ratio between 26% and 40% while 25% of farms in the West River region had a debt-to-asset ratio between 26% and 40%. About 10% of farms in the North Central region, 11% in the West River region, and 33% of farms in the Central region had a debt-to-asset ratio between 41% and 60%.

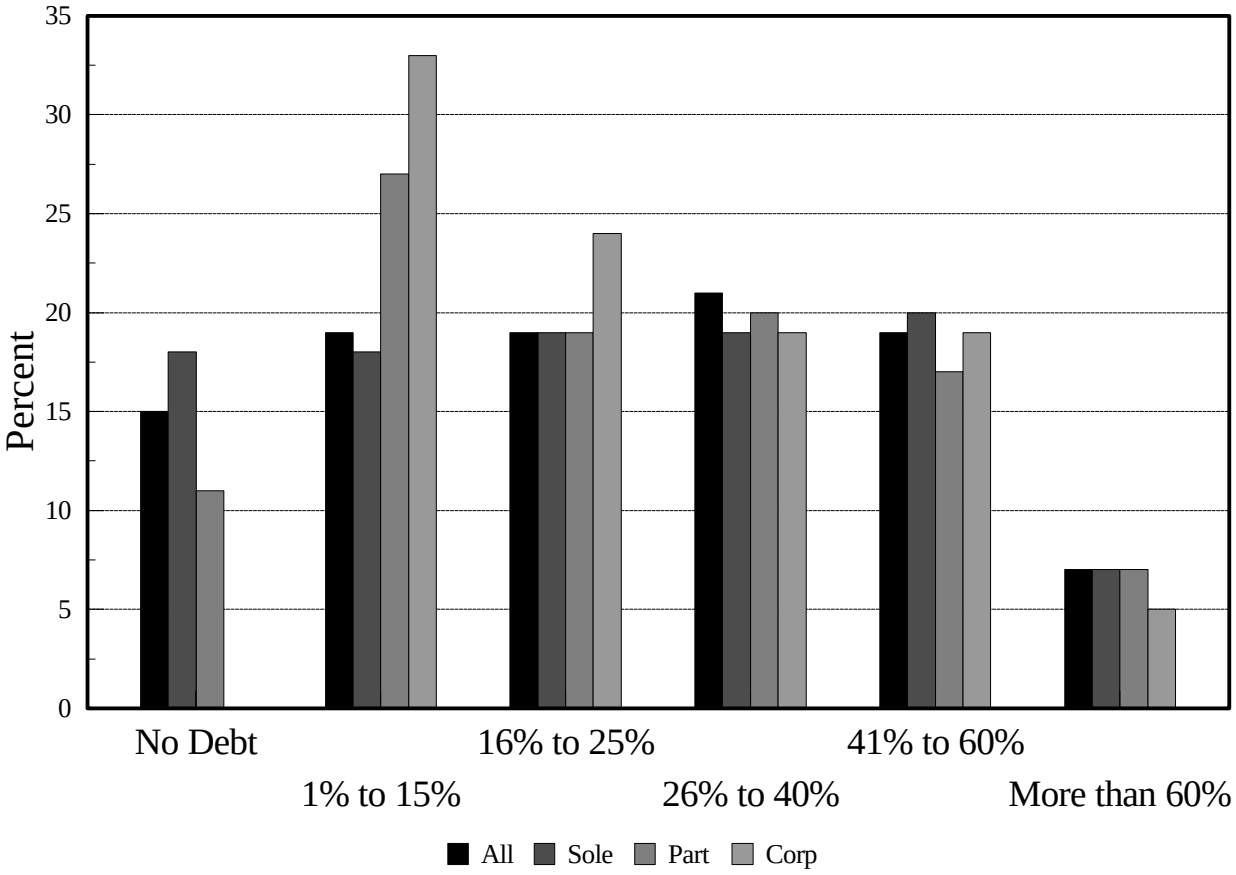

Figure 9. Debt-to-asset Ratio for North Dakota Farms by Ownership, 1996

Risk Management

Figure 10 shows the tools that are used by farmers to manage risk in their operation. Life, medical, and crop insurance are the most frequently used tools. Forward cash contracts (38%), tools that lock in interest rates (29%), and disability insurance (23%) also are used by about one-third of the farmers. When sorted by type of ownership, futures and forward cash contracts are used by more corporations than by either partnerships or sole proprietorships (Appendix Table 13b).

Appendix Table 13c shows the tools used by different size farms to manage risk. Several categories differ significantly at the 95% confidence level. The table shows that large farms use forward cash contracts (52%), options (23%), and hedged-to-arrive contracts (16%) more than small or medium size farms. Large size farms also lock in interest rates (37%) more than small or medium size farms. This implies that the large farms are more active in financial risk management.

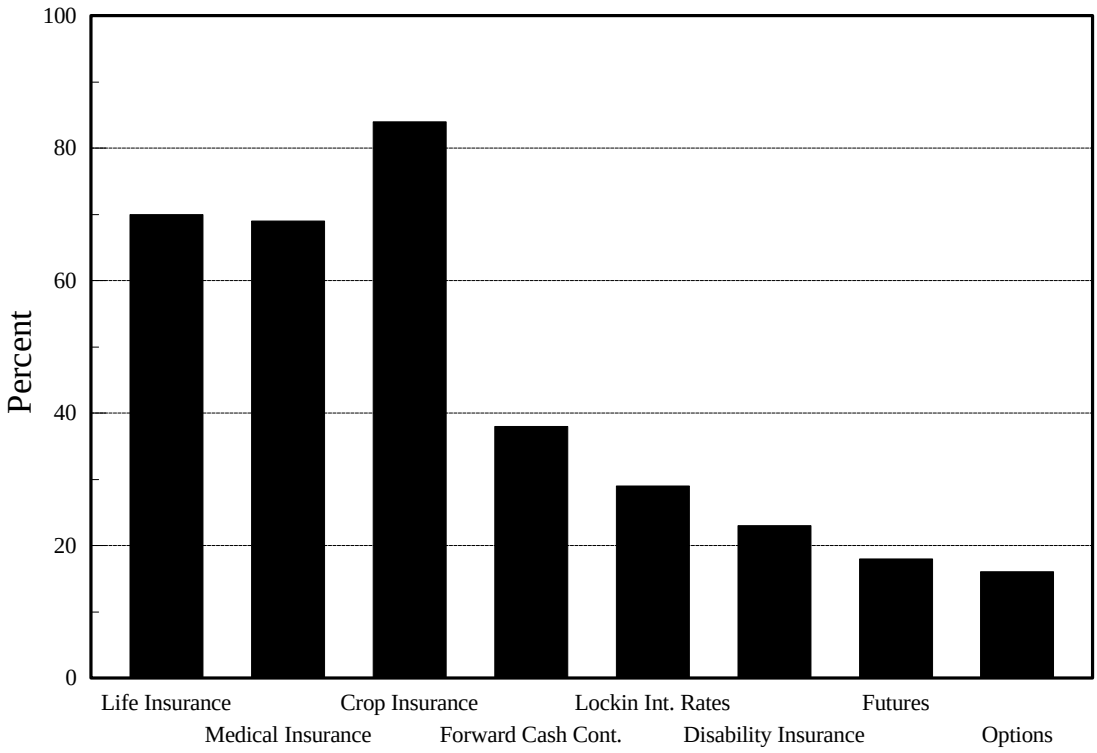

Figure 10. Use of Alternative Tools Used by North Dakota Farmers to Manage Financial Risks, 1996

Appendix Table 13d shows the regional differences in the use of tools to manage risk. Most categories differ significantly at the 95% confidence level. In the East Central region, 76% of farmers and 19% of farmers in the West River region use forward cash contracts. About 21% of farmers in the South East region use hedged-to-arrive contracts compared to none in the Central region. Twenty-four percent of farmers in the East Central and 23% of farmers in the South East regions use options, while 8% of farmers in the North West region use options. About 13% of farmers in the North Central region, and 3% of farmers in the North West and West River regions have signed joint ventures with processors.

Life insurance coverage varied among regions. Life insurance coverage in the South East, East Central, and Central regions was 89%, 73%, and 72%, respectively. In the North East region, 61% of the farmers carried life insurance. Disability insurance coverage also varied among regions. Disability insurance coverage in the South East, West River, East Central, and North West regions was 36%, 27%, 22%, and 16%, respectively. Medical insurance coverage also varied among regions. Medical insurance coverage in the South East, East Central, North Central, and Central regions was 77%, 76%, 75%, and 75%, respectively. In both the North West and North East regions, 57% of the farmers carried medical insurance. About 91% of the farmers in the East Central region and 71% of farmers in the North East region carry crop insurance.

Management, Finance, and Risk: Attitudes and Plans

Business Management

Figure 11 shows the distribution of responses to the statement "Farming today is more good business management than it is skilled crop or livestock production." About 43.0% indicated a trend toward strongly agree, while 21.0% tended toward strongly disagree (Appendix Table 14). The remaining 36.0% of producers remained neutral. This implies that farmers feel that good business management is more important than production practices.

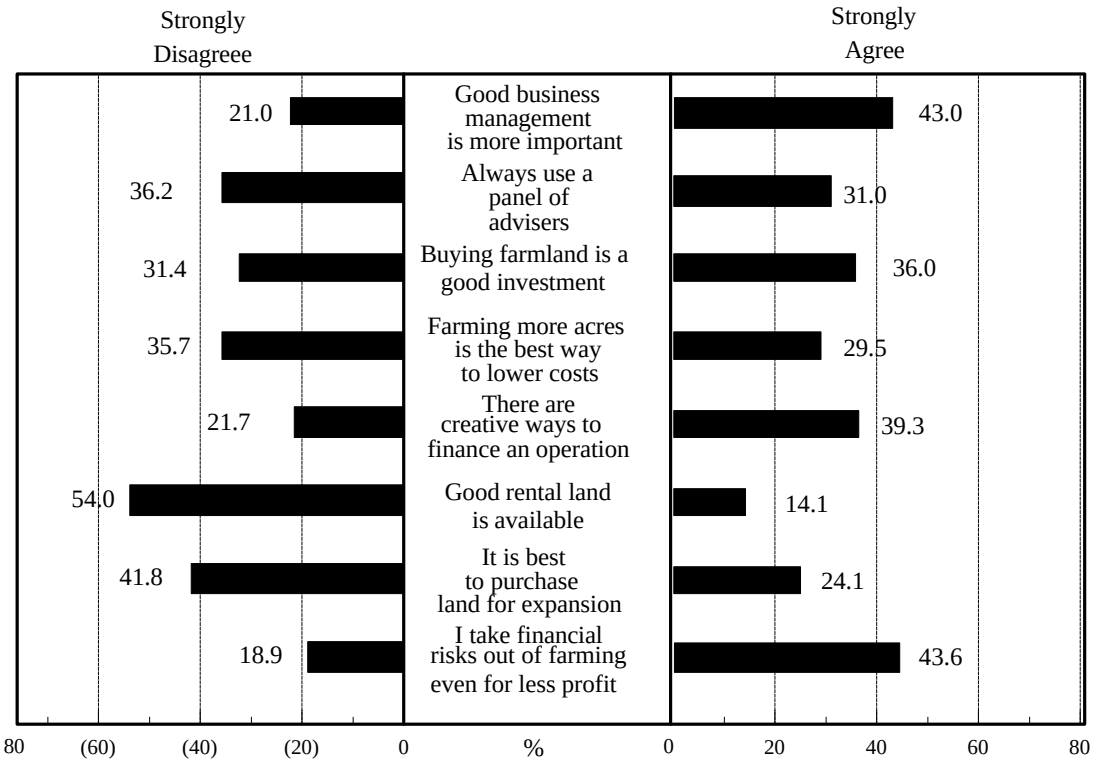

Figure 11. Farmers' Attitudes Toward Business Management, Investment, and Financial Services, 1996

When sorted by type of organization, 23.8% of sole proprietorships and 18.1% of corporations indicated a trend toward strongly disagree, while 59.1% of corporations and 41.4% of sole proprietorships indicated a trend toward strongly agree. This implies that corporations felt stronger that business management is more important than skilled crop production.

When sorted by size, 24.5% of small farms and 14.8% of large farms indicated a trend toward strongly disagree. About 41.2% of small farms and 48.7% of large farms indicated a trend toward strongly agree. This implies that large farms felt stronger than small and medium farms that business management is more important than the skilled crop production.

When sorted by region, 14.7% of farmers in the North West region and 26.3% of farmers in the West River region indicated a trend toward strongly disagree. About 49.2% of farmers in the West River region and 35.3% of farmers in the North West region indicated a trend toward strongly agree. This implies that farmers in the West River region felt stronger than those in the North West region that business management is more important than the skilled crop production.

Responses to "It makes good sense to use a panel of business advisers for important financial decisions affecting my operation" indicated about 36.2% tended toward strongly disagree, while about 31.0% indicated a trend toward strongly agree (Figure 11). The remaining 32.8% of producers remained neutral (Appendix Table 15). This implies that farmers feel that a panel of business advisers was not important for financial decisions. The responses, when the data were sorted by type of ownership or size, did not differ significantly from each other. When sorted by region, 41.7% of farmers in the Central region and 35.3% of farmers in the North West region indicated a trend toward strongly disagree. About 22.3% of farmers in the Central region and 38.2% of farmers in the North West region indicated a trend toward strongly agree. This implies that farmers in the Central region do not feel that the use of a panel of advisers is important when compared to farmers in the North West region.

Investment and Financial Services

Figure 11 shows the distribution of responses to " Buying farmland is a good investment for retirement." About 31.4% indicated a trend toward strongly disagree, while about 36.0% indicated a trend toward strongly agree. The remaining 32.6% of producers remained neutral (Appendix Table 16). This implies that farmers feel that buying farmland is a good investment for retirement. The responses, when the data were sorted by type of ownership or size, did not differ significantly from each other. When sorted by region, 36.4% of farmers in the East Central and 35.7% of farmers in the North East region indicated a trend toward strongly disagree, while 27.3% of farmers in the East Central region and 27.2% of farmers in the North East region indicated a trend toward strongly agree. This implies that unlike the rest of the state, farmers in the East Central and North East region do not think that farmland is a good investment for their retirement.

Figure 11 also shows the distribution of responses to "Farming more acres is the best way to drive down your per-unit production costs." About 35.7% indicated a trend toward strongly disagree, while about 29.5% indicated a trend toward strongly agree. The remaining 34.8% of producers remained neutral (Appendix Table 17). This implies that farmers feel that farming more acres is not the best way to drive down per-unit production costs. The responses, when the data were sorted by type of ownership, did not differ significantly from each other at the 95% confidence level. When the data were sorted by size, about 40.5% of the small farms and about 26.3% of the large farms indicated a trend toward strongly disagree. This implies that large farms felt that farming more acres is the best way to drive down per-unit production costs. When the data were sorted by region, about 27.8% of farmers in the Central region and 37.9% of farmers in the West River region indicated a trend toward strongly agree, while 22.3% of farmers in the Central region and 29.3% of farmers in the West River region indicated a trend toward strongly disagree. This implies that these two regions, unlike the rest of the state, felt that farming more acres is the best way to drive down per-unit production costs.

Responses to "There are creative ways for financing an operation if you're willing to hunt for them" indicated about 39.3% tended toward strongly agree, while about 21.7% indicated a trend toward strongly disagree (Figure 11). The remaining 39.0% of producers remained neutral (Appendix Table 18). This implies that the producers feel that there are different ways to finance an operation. When sorted by type of ownership, about 41% of corporations indicated a trend toward strongly disagree, while 32% indicated a trend toward strongly agree. This implies that unlike the other ownership types, corporations do not feel there are creative ways to finance an operation. When sorted by size, 30.7% of small farms indicated a trend toward strongly disagree, while 23.7% of small farms indicated a trend toward strongly agree. This implies that small farms feel that there are not creative ways to finance an operation. When sorted by region, 25.9% of farmers in the West River region indicated a trend toward strongly disagree, while 27.6% of farmers in the West River region indicated a trend toward strongly agree.

Responses to "Good rental land is available for a fair price in my area" indicated about 54.0% tended toward strongly disagree, while about 14.1% indicated a trend toward strongly agree (Figure 11). The remaining 31.9% of producers remained neutral (Appendix Table 19). This implies that the producers feel that good rental land is not available for a fair price in the area. The responses, when the data were sorted by type of ownership or size, did not differ significantly from each other at the 95% confidence level. The responses, when sorted by region, did differ significantly. About 67.6% of farmers in the North West region indicated a trend toward strongly disagree and about 45.7%, 51.1%, 51.5%, and 51.1% of farmers in the Central, East Central, North East, and South East regions, respectively, indicated a trend toward strongly disagree. This indicates that farmers in the North West region feel stronger than the rest of the state.

Responses to "It is best to purchase land for expansion rather than renting land" indicated about 41.8% tended toward strongly disagree, while about 24.1% indicated a trend toward strongly agree (Figure 11). The remaining 34.1% of producers remained neutral (Appendix Table 20). This implies that producers felt that renting land is better than purchasing it. When sorted by ownership type, 27.5% of partnerships indicated a trend toward strongly disagree while 35.2% indicated a trend toward strongly agree. This implies that unlike the other types of ownership, partnerships felt that buying land was better than renting it. The responses for producers, when the data were sorted by size, did not differ significantly from each other. When sorted by region, farmers in the North Central region were neutral in their response.

Responses to "I do everything I can to take the financial risks out of farming, even if it increases my production costs" indicated about 43.6% tended toward strongly agree, while about 18.9% indicated a trend toward strongly disagree (Figure 11). The remaining 37.5% of producers remained neutral (Appendix Table 21). When sorted by size, 44.1% of medium farms and 43.0% of large farms indicated a trend toward strongly agree. When sorted by region, 51.3% of farmers in the North Central region, 39.0% of farmers in the North East region, 40.0% of farmers in the East Central and South East regions indicated a trend toward strongly agree. This implies that farmers in the North Central region feel stronger than farmers in the North East, East Central, or South East regions.

Equipment

Figure 12 shows the distribution of responses to "It makes more sense to lease new farm equipment rather than to buy." About 33.3% indicated a trend toward strongly disagree, while about 23.2% indicated a trend toward strongly agree. The remaining 43.5% of producers remained neutral (Appendix Table 22). This implies that producers feel that buying farm equipment makes more sense than leasing it. When sorted by type of ownership, 40.9% of corporations and 31.9% of sole proprietorships indicated a trend toward strongly disagree. When sorted by size, 31.3% of large farms and 32.4% of small farms indicated a trend toward strongly disagree. When sorted by region, 26.4% of farmers in the North Central region indicated a trend toward strongly disagree, while 36.9% of farmers in the North Central region indicated a trend toward strongly agree. This implies that unlike the rest of the state, farmers in the North Central region feel that it is better to lease farm equipment than buy it.

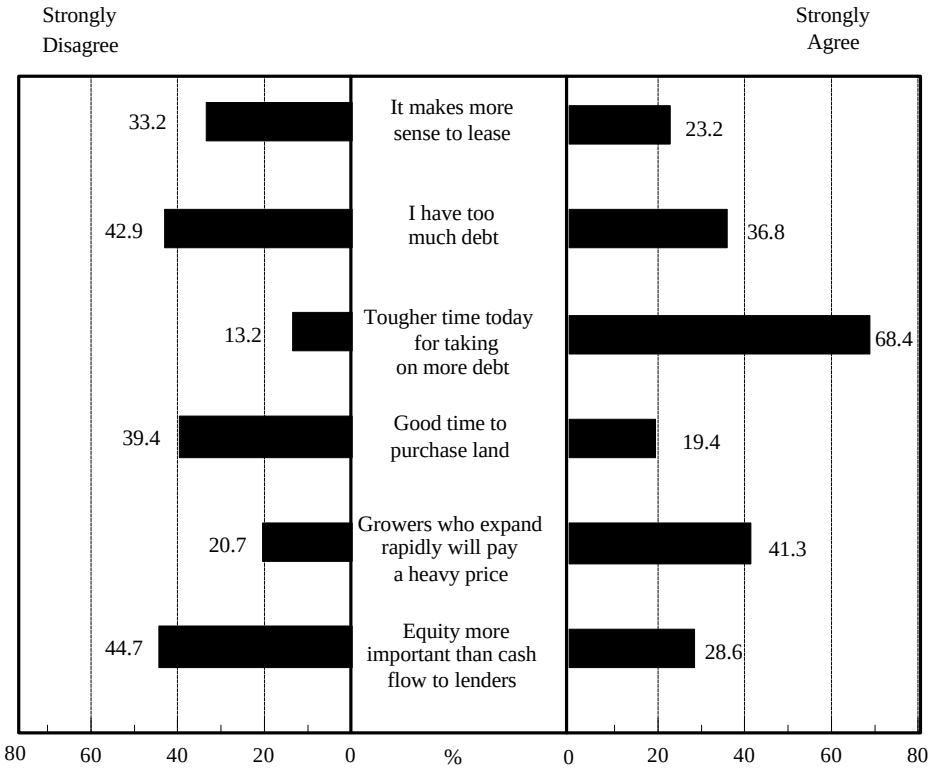

Figure 12. Farmers' Attitudes Toward Equipnent, Debt, and Financial Credit, 1996

Debt

Figure 12 shows the distribution of responses to " I have too much debt in my operation." About 42.9% indicated a trend toward strongly disagree, while about 36.8% indicated a trend toward strongly agree. The remaining 20.3% of producers remained neutral (Appendix Table 23). This implies that producers feel that they do not have too much debt in their operation. When sorted by size, 40.5% of medium farms indicated a trend toward strongly disagree, while 38.7% of medium size farms indicated a trend toward strongly agree. This indicates that medium

farms are almost neutral for the response to the statement. However, most small and large farms indicated a trend toward strongly agree. When sorted by region, the farmers in the North East, Central, and East Central regions felt that they did have too much debt in their operation, unlike the rest of the state.

Figure 12 also shows the distribution of responses to "Growers today will have a tougher time taking on more debt load than they did five years ago." About 68.4% indicated a trend toward strongly agree, while about 13.2% indicated a trend toward strongly disagree. The remaining 18.4% of producers remained neutral (Appendix Table 24). This implies that producers do not want to have additional debt in their farm operation. The responses, when the data were sorted by type of ownership or size, did not differ significantly from each other. When sorted by region, 76.2% of farmers in the West River region and 58.8% of farmers in the North West region indicated a trend toward strongly agree. This implies that farmers in the West River region feel much stronger than do farmers in the North West region that additional debt will be much more difficult to handle than five years ago.

Investment

Figure 12 shows the distribution of responses to "The next two or three years will be a good time to purchase more land." About 39.4% indicated a trend toward strongly disagree, while about 19.4% indicated a trend toward strongly agree. The remaining 41.2% of producers remained neutral (Appendix Table 25). This implies that producers felt that now is not a good time to purchase farmland or they do not have any opinion on purchasing more land. The responses for producers, when the data were sorted by type of ownership or size, did not differ significantly from each other at the 95% confidence level. When sorted by region, about 44.3% of farmers in the North West region and 28.5% of farmers in the North Central region indicated a trend toward strongly disagree. This indicates that farmers in the North West region feel stronger than farmers in the North Central region that the next two or three years will not be a good time to purchase more land.

Figure 12 also shows the distribution of responses to "Growers who expand rapidly now will pay a heavy price in the future." About 41.3% indicated a trend toward strongly agree, while about 20.7% indicated a trend toward strongly disagree. The remaining 38.0% of producers remained neutral (Appendix Table 26). When sorted by type of ownership, 44.6% of partnerships, 39.3% of sole proprietorships, and 40.9% of corporations indicated a trend toward strongly agree. This indicates that partnerships feel stronger than either sole proprietorships or corporations that growers who expand rapidly now will pay a heavy price in the future. When sorted by size, 53.4% of small farms, 36.0% of medium farms, and 35.7% of large farms indicated a trend toward strongly agree. This indicates the small farms feel stronger than either medium or large size farms that growers who expand rapidly now will pay a heavy price in the future. When sorted by region, 40.0% of farmers in the East Central region indicated a trend toward strongly disagree, while 26.7% of farmers in the East Central region indicated a trend toward strongly agree. This implies that farmers in the East Central region, unlike the rest of the state, feel that now is a good time to expand their operation.

Responses to "Equity is more important than cash flow to lenders" indicated about 44.7% tended toward strongly disagree, while about 28.6% indicated a trend toward strongly agree (Figure 12). The remaining 26.7% of producers remained neutral (Appendix Table 27). When sorted by type of ownership, 36.3% of corporations indicated a trend toward strongly disagree, while 31.8% of corporations indicated a trend toward strongly agree. This implies that corporations are almost neutral in response. When sorted by region, 32.1% of farmers in the North Central region and 32.4% of farmers in the North East region indicated a trend toward strongly disagree, while 36.8% of farmers in the North Central region and 35.3% of farmers in the North East region indicated a trend toward strongly agree. This implies that unlike the rest of the state, farmers in the North Central and North East regions feel that equity is more important than cash flow.

Farm Credit

Figure 13 shows the sources of credit that the farmers responding to the survey use. Traditional sources are used the most. Local commercial banks (62%), self-financed from earnings (39%), Farm Credit System (35%), and non-local commercial banks (31%), were among the sources most used. The second most used credit sources include insurance company (10%), input suppliers (9%), and grain or feed dealer (9%). Least used credit sources are family loans (4%), unrelated individuals (3%), Farm Service Agency (3%), and manufacturer of farm machinery (2%).

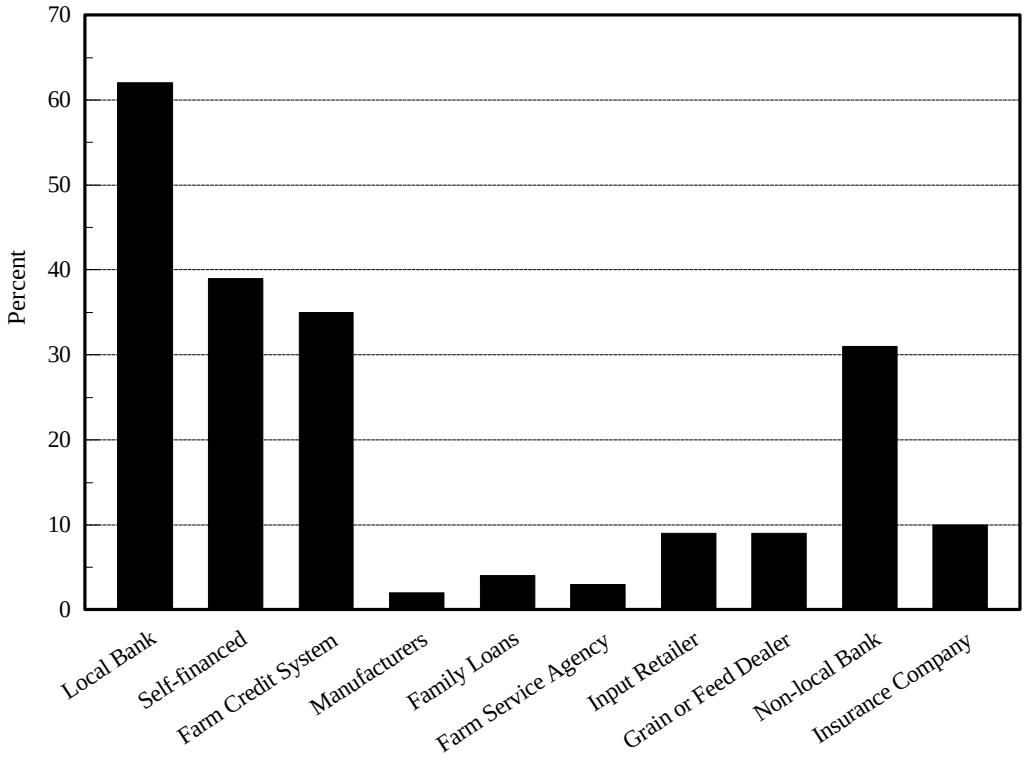

Figure 13. Sources of Farm Credit Used by North Dakota Farmers, 1996

When sorted by ownership types, most categories do not differ significantly at the 95% confidence level (Appendix Table 28b). About 78% of corporations have used local commercial banks compared to 59% for sole proprietorships and 66% for partnerships. About 22% of corporations use input retailer credit, compared to 7% for sole proprietorships, and 12% for partnerships.

When sorted by size, about 38% of medium farms have used local commercial banks, compared to 50% of small farms, and 66% of large farms (Appendix Table 28c). About 48% of the large farms have used the Farm Credit System, while 24% of the small farms, and 32% of the medium farms use the Farm Credit System. About 43% of the large farms have used the non-local commercial banks, while 20% of the small farms, and 30% of the medium farms use non-local commercial banks.

When sorted by regions, most categories differ significantly at the 95% confidence level (Appendix Table 28d). The most frequently used sources of credit are local commercial banks followed by self-financed, Farm Credit System, and non-local commercial banks. About 49% and 50% of farmers in the North West and North Central regions, respectively, have used self-financed, compared to 31% of farmers in the Central region. Farmers in the South East region have used local commercial banks 72% compared to 48% of farmers in the West River region. Farmers in the East Central region have used Farm Credit System 47% compared to 25% of farmers in the North Central region. Farmers in the North Central and Central regions have used non-local commercial banks 40% and 39%, respectively, compared to 24% of farmers in the North West and West River regions.

The responses for North Dakota farmers differ from the responses for U.S. farmers. About 27% of U.S. farmers have used the Farm Credit Service compared to 35% of North Dakota farmers. About 14% of U.S. farmers have used family credit compared to 4% of North Dakota farmers. About 4% of U.S. farmers have used non-local commercial banks compared to 31% of North Dakota farmers. About 27% of U.S. farmers have used manufacturer credit compared to 2% of North Dakota farmers. About 3% of U.S. farmers have used insurance company credit compared to 10% of North Dakota farmers. About 11% of U.S. farmers have used the Farm Service Agency compared to 3% of North Dakota farmers.

Appendix Table 29a shows the weighted average of response to reasons to use non-traditional lenders. The most important reason is lower interest rates, followed by the ability to fix interest rates, a repayment schedule that meets cash flow, and faster decisions. The least important reasons for the use of non-traditional lenders are that credit needs are too big for local lenders, followed by location and flexibility in event of repayment problems. When sorted by organization, partnerships felt that the requirement of financial information was more important than did either sole proprietorships or corporations (Appendix Table 29b). When sorted by size, small farms felt that location was more important than did medium or large farms (Appendix Table 29c).

Appendix Table 29d shows the weighted average of response to reasons for the use of non-traditional lenders for farmers in the different regions. The responses did not differ significantly across regions at either the 90% or 95% confidence levels.

Financial Services

Figure 14 shows the financial services used by farmers. The greatest use was insurance services (31%), followed by tax accounting services (23%), investment services and estate planning and trust services (14%). The lowest use was short-term equipment rental and market advisory services (9%), followed by business management consulting (11%), equipment leasing (11%), and wire transfer of funds (12%).

When sorted by ownership types, partnerships used short-term equipment leasing (15%) more than either corporations (4%) or sole proprietorships (6%) (Appendix Table 30b). When sorted by size, small farms used insurance services less (21%) than either medium (34%) or large (37%) farms (Appendix Table 30c).

The financial services used by farmers differ between regions (Appendix Table 30d). The East Central region producers have used a wider range of services than the rest of the state. Producers in the North West and West River regions have used financial services less than the rest of the state.

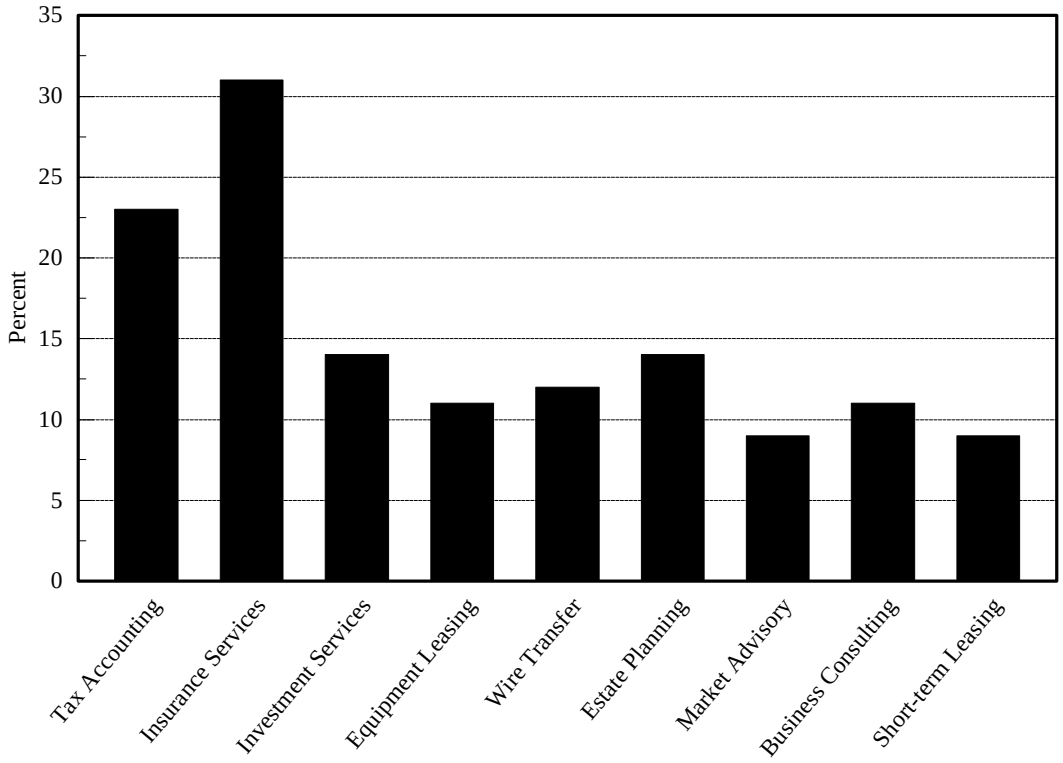

Figure 14. Financial Services Used by North Dakota Farmers, 1996

Financial Institutions

Figure 15 shows the distribution of responses to “It makes good sense to use the dealer and manufacturer credit that is available.” About 49.1% indicated a trend toward strongly agree, while about 13.8% indicated a trend toward strongly disagree. The remaining 37.1% of producers remained neutral (Appendix Table 31). This implies that almost one-half of the producers felt that it was a good idea to use input supplier credit. When sorted by type of organization, 53.9% of partnerships, 45.4% of corporations, and 48.4% of sole proprietorships indicated a trend toward strongly agree. This implies that partnerships feel stronger that it is a good idea to use dealer and manufacturer credit. When sorted by region, 58.3% of farmers in the Central region, 57.9% of farmers in the North Central region, and 37.8% of farmers in the South East region indicated a trend toward strongly agree. This implies that dealer and manufacturer credit is more acceptable for farmers in the North Central and Central regions than farmers in the South East region.

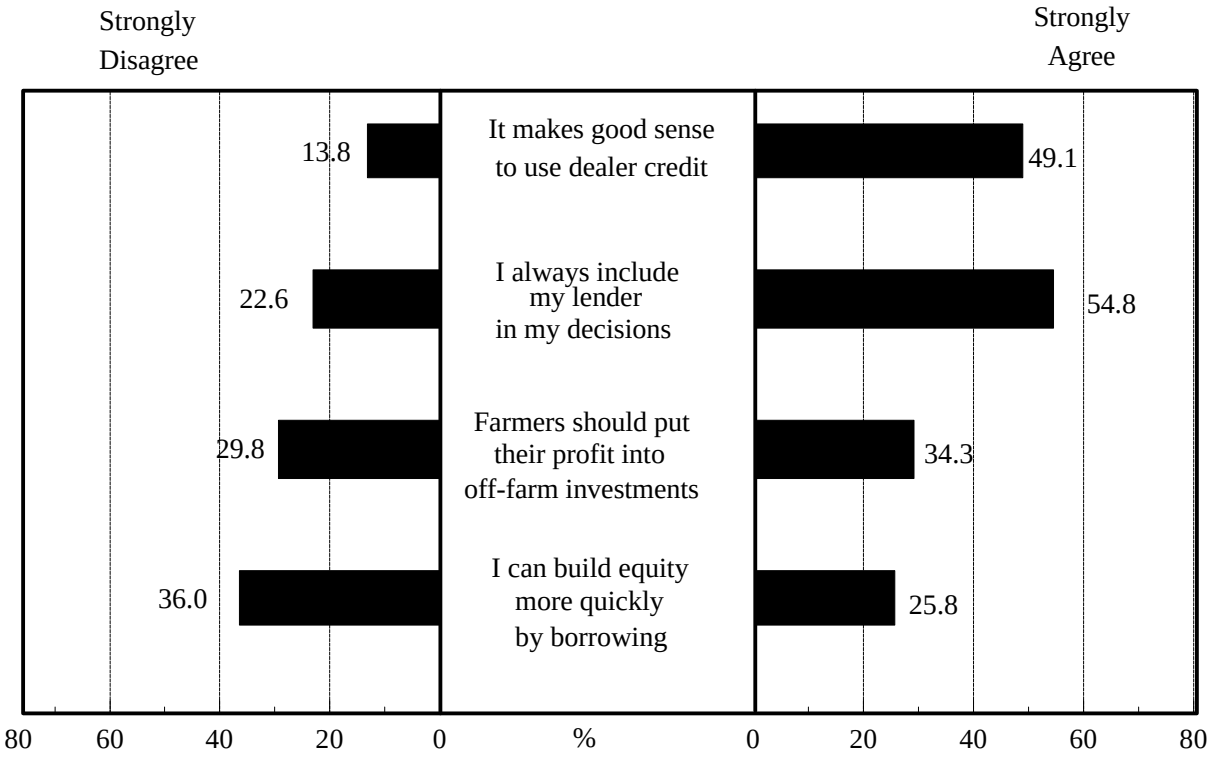

Figure 15. Farmers' Attitudes Toward the Use of Credit Services, 1996

Figure 15 also shows the distribution of responses to “I always include my lender in discussions about important business decisions I am considering.” About 54.8% indicated a trend toward strongly agree, while about 22.6% indicated a trend toward strongly disagree. The remaining 22.6% of producers remained neutral (Appendix Table 32). This implies that more producers include their lenders in their important business decisions. When sorted by type of ownership, about 46.8% of partnerships, 59.2% of sole proprietorships, and 52.3% of corporations include their lenders in their important business decisions. When sorted by region,

about 61.4% of farmers in the East Central region, 58.4% of farmers in the Central region, 47.0% of farmers in the North East region, and 51.1% of farmers in the South East region always include their lender in their important business decisions.

Figure 16 shows the amount of additional debt with which farmers would be comfortable borrowing for future expansion. About 46% of farmers would borrow less than $50,000, while 13% would borrow more than $250,000 (Appendix Table 33).

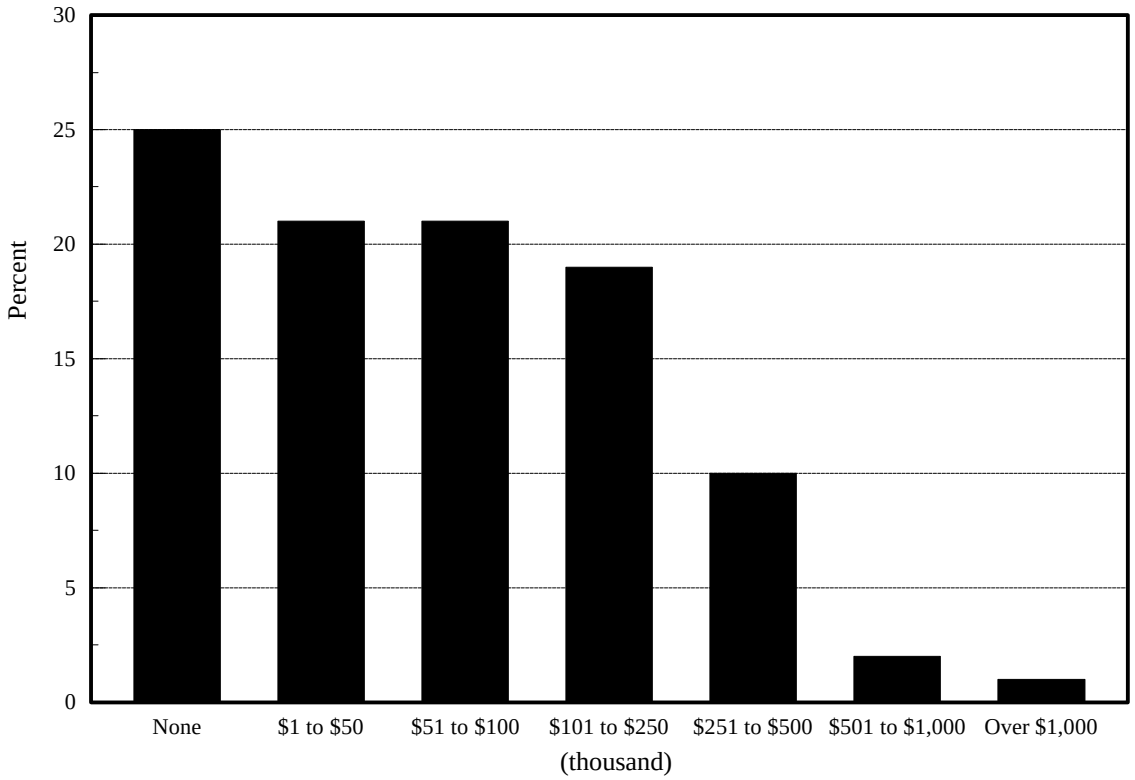

Figure 16. Additional Debt That Would be Comfortable for North Dakota Farmers, 1996

When sorted by ownership type, amount of debt differs significantly at the 95% confidence level. Sole proprietorships tended to be more comfortable with a lower level of debt expansion than do partnerships or corporations. About 75% of sole proprietorships would be comfortable with less than $100,000 of additional debt, while 57% of partnerships and about 59% of corporations would be comfortable with less than $100,000 of additional debt. About 19% of sole proprietorships, 21% of partnerships, and 23% corporations would be comfortable with an additional debt between $101,000 and $250,000.

When sorted by size, the amount of debt differs significantly at the 95% confidence level. Small farms tended to be comfortable with a lower level of debt expansion when compared to medium or large farms. About 89% of small farms, 72% of medium farms, and about 41% of

large farms would be comfortable with less than $100,000 of additional debt. About 7% of small farms, 16% of medium farms, and 35% of large farms would be comfortable with additional debt between $101,000 and $250,000. When sorted by region, 77% of farmers in the West River region and 52% of farmers in the North Central region would be comfortable with less than $100,000 of additional debt. About 23% of farmers in the North Central and South East regions, 13% of farmers in the East Central region, and 15% of farmers in the West River region would be comfortable with additional debt between $101,000 and $250,000.

The responses for North Dakota farmers were significantly different at the 95% confidence level than the responses for U.S. farmers. About 7% of U.S. farmers would be comfortable with additional debt of $51,000 to $100,000 compared to 21% of North Dakota farmers. About 2% of U.S. farmers would be comfortable with additional debt of $101,000 to $250,000 compared to 19% of North Dakota farmers. About 22% of U.S. farmers would be comfortable with additional debt of $251,000 to $500,000 compared to 10% of North Dakota farmers. About 19% of U.S. farmers would be comfortable with additional debt of $501,000 to $1,000,000 compared to 2% of North Dakota farmers.

Appendix Table 34a shows the farmers' reasons for future expansion of their operation. About 46% of the respondents indicated that they had no plans to expand, while 38% indicated that their reason for expansion was to generate larger sales and 22% wanted to capture economies of scale. About 14% indicated their reason to expand was to include a family member in the operation. When sorted by size, 36% of large farms, 22% of medium farms, and 8% of small farms wanted to expand to capture economies of scale. About 18% of large, 5% of medium, and 3% of small farms wanted to expand to obtain more favorable marketing contracts. When sorted by region, 54% of farmers in the North West region and 35% of farmers in the North Central region were not going to expand. About 28% of farmers in the North Central region and 8% of farmers in the Central region were going to expand to accommodate a family member. About 34% of farmers in the South East region and 15% of farmers in the West River region were going to expand to capture economies of scale.

Figure 15 shows the distribution of responses to "Farmers need to put their profits into off farm investments." About 29.8% indicated a trend toward strongly disagree, while about 34.3% indicated a trend toward strongly agree. The remaining 35.9% of producers remained neutral (Appendix Table 35). This indicates that no real trend was indicated. The responses for producers, when the data were sorted by type of ownership or size, did not differ significantly.

Responses to "I can build equity more quickly by borrowing" indicated about 36.0% tended toward strongly disagree, while about 25.8% indicated a trend toward strongly agree (Figure 15). The remaining 38.2% of producers remained neutral (Appendix Table 36). This implies that more producers feel that you cannot build equity more quickly by borrowing. The responses for producers, when the data were sorted by type of ownership or size, did not differ significantly from each other. When sorted by region, 33.4% of farmers in the Central region and 37.7% of farmers in the East Central region indicated a trend toward strongly agree, while about 30.6% of farmers in the Central region and 26.7% of farmers in the East Central region indicated a trend toward strongly disagree. This implies that farmers in the Central and East Central regions, unlike the rest of the state, feel that they can increase equity by borrowing.

Farmers' Attitudes Toward Banking System

Figure 17 shows the distribution of responses to "Farm lenders don't seem to be competing against each other enough on interest rates." About 60.1% indicated a trend toward strongly agree, while 14.6% indicated a trend toward strongly disagree. The remaining 25.3% of producers remained neutral (Appendix Table 37). This implies that more producers feel that lenders do not seem to be competing against each other enough on interest rates. When sorted by type of ownership, 64.1% of sole proprietorships and 52.8% of partnerships indicated a trend toward strongly agree. When sorted by region, 76.4% of farmers in the North West region and 46.7% of farmers in the East Central region indicated a trend toward strongly agree. This implies that farmers in the North West region feel that the farm lenders are not competing with each other to lower interest rates much stronger than do farmers in the East Central region.

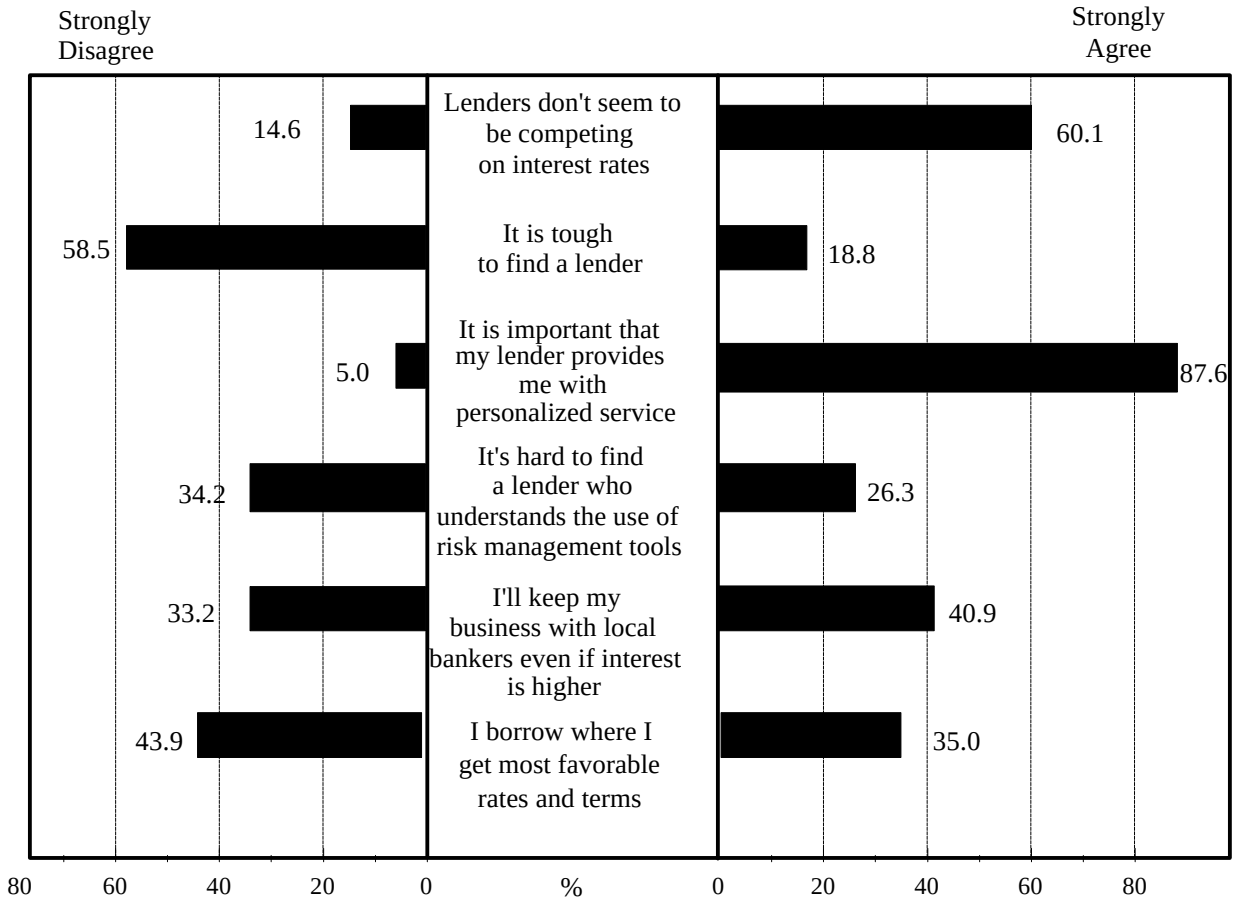

Figure 17. Farmers' Attitudes Toward Their Lending Relationship, 1996

Responses to "It is tough to find a lender who understands my vision for my business" indicated about 58.5% tended toward strongly disagree, while about 18.8% indicated a trend toward strongly agree (Figure 17). The remaining 22.7% of producers remained neutral (Appendix Table 38). The responses, when the data were sorted by type of ownership, did not differ significantly. When sorted by size, about 67.9% of the large farms and 46.5% of the small farms indicated a trend toward strongly disagree. This implies that producers of large farms feel that it is easier to find a lender who understands their visions for the future. When sorted by region, about 53% of farmers in the North West region, 65.9% of farmers in the East Central region, 61.2% of farmers in the Central region, 57.9% of farmers in the North East region, and 57.8% of farmers in the South East region indicated a trend toward strongly disagree. This implies that farmers across regions have similar responses to the statement.

Responses to "It is important to me that my lender knows me and provides me with personalized service" indicated about 87.6% tended toward strongly agree, while about 5.0% indicated a trend toward strongly disagree (Figure 17). The remaining 7.4% of producers remained neutral (Appendix Table 39). This implies that it is very important that they deal with someone whom they know. When sorted by type of organization, about 95.3% of corporations, 81.3% of partnerships, and 89.4% of sole proprietorships indicated a trend toward strongly agree. When sorted by size, about 90.2% of large farms, 90.1% of small farms, and 82.5% of medium farms indicated a trend toward strongly agree. When sorted by region, 92.1% of farmers in the South East region, 90.6% of farmers in the North West region, 85.1% of farmers in the North East region, and 86.1% of farmers in the Central region indicated a trend toward strongly agree.

Responses to "It is tough to find a lender who understands the use of risk management tools (hedging, options) for my operation" indicated about 34.2% tended toward strongly disagree, while about 26.3% indicated a trend toward strongly agree (Figure 17). The remaining 39.5% of producers remained neutral (Appendix Table 40). When sorted by type of ownership, 18.1% of corporations, 23.6% of sole proprietorships, and 36.0% of partnerships indicated a trend toward strongly agree. When sorted by size, 41.9% of large farms indicated a trend toward strongly disagree, indicating that large farms found it easier to find a lender who understands risk management tools. When sorted by region, 36.8% of farmers in the North Central and 33.4% of farmers in the North West regions indicated a trend toward strongly agree. This indicates that unlike the rest of the state, producers in the North Central and North West regions feel that they do have a hard time finding a lender who understands the use of risk management tools (hedging, options) for their operation.

Figure 17 also shows the distribution of responses to "I'll keep my business with a local bank even if the interest rates are a little higher." About 33.2% indicated a trend toward strongly disagree, while about 40.9% indicated a trend toward strongly agree. The remaining 25.9% of producers remained neutral (Appendix Table 41). This indicates that producers feel that they will keep their business with a local bank even if the interest rates are a little higher. The responses for producers, when the data were sorted by size or region, did not differ significantly. When sorted by type of organization, about 18.2% of corporations, 33.7% of partnerships, and 34.7% of sole proprietorships indicated a trend toward strongly disagree. This implies that corporations are much more loyal to their lenders than are either sole proprietorships or partnerships.

Responses to "I don't care who I borrow money from as long as I get the most favorable rates and terms" indicated about 43.9% tended toward strongly disagree, while about 35.0% indicated a trend toward strongly agree (Figure 17). The remaining 21.2% of producers remained neutral (Appendix Table 42). When sorted by organization, about 52.3% of corporations, 43.8% of sole proprietorships, and 41.8% of partnerships indicated a trend toward strongly disagree. When sorted by size, about 50.0% of small farms, 42.4% of large farms, and 39.6% of medium farms indicated a trend toward strongly disagree. When sorted by region, farmers in the North Central region unlike the rest of the state are neutral in their response. One-half or more of the farmers in the North West and East Central regions would stay with their lenders even if interest rates were a little higher.

Farmers' Attitudes Toward Banking Services

Figure 18 shows the distribution of responses to "I would be comfortable doing all my borrowing via computer, mail order and/or telephone, rather than in person." About 76.8% of responses indicated a trend toward strongly disagree, while about 14.1% indicated a trend toward strongly agree. The remaining 9.2% of producers remained neutral (Appendix Table 43). This implies producers feel that they would not be comfortable dealing with mail order banking. When sorted by type of ownership, 81.8% of corporations and 79.0% of sole proprietorships indicated a trend toward strongly disagree. This implies that both corporations and sole proprietorships like the personal aspect more strongly than partnerships. When sorted by size, 83.5% of medium farms, 77.7% of small farms, and 69.6% of large farms indicated a trend toward strongly disagree. This implies that small and medium farms like the personal aspect more strongly than large farms. When sorted by region, 86.9% of farmers in the North Central region, 80.4% of farmers in the West River region, 77.7% of farmers in the East Central region, and 63.8% of farmers in the Central region indicated a trend toward strongly disagree.

Figure 18 shows the distribution of responses to "Now is a good time to lock in long-term interest rates" indicated about 38.9% tended toward strongly agree, while about 20.1% indicated a trend toward strongly disagree (Figure 18). The remaining 41.0% of producers remained neutral (Appendix Table 44). This implies that producers feel that interest rates will not be lower in the future. When sorted by size, 47.9% of large farms and 37.8% of small farms indicated a trend toward strongly agree. When sorted by region, 35.3% of farmers in the North West region indicated a trend toward strongly disagree, while 29.4% of farmers in the same region indicated a trend toward strongly agree.

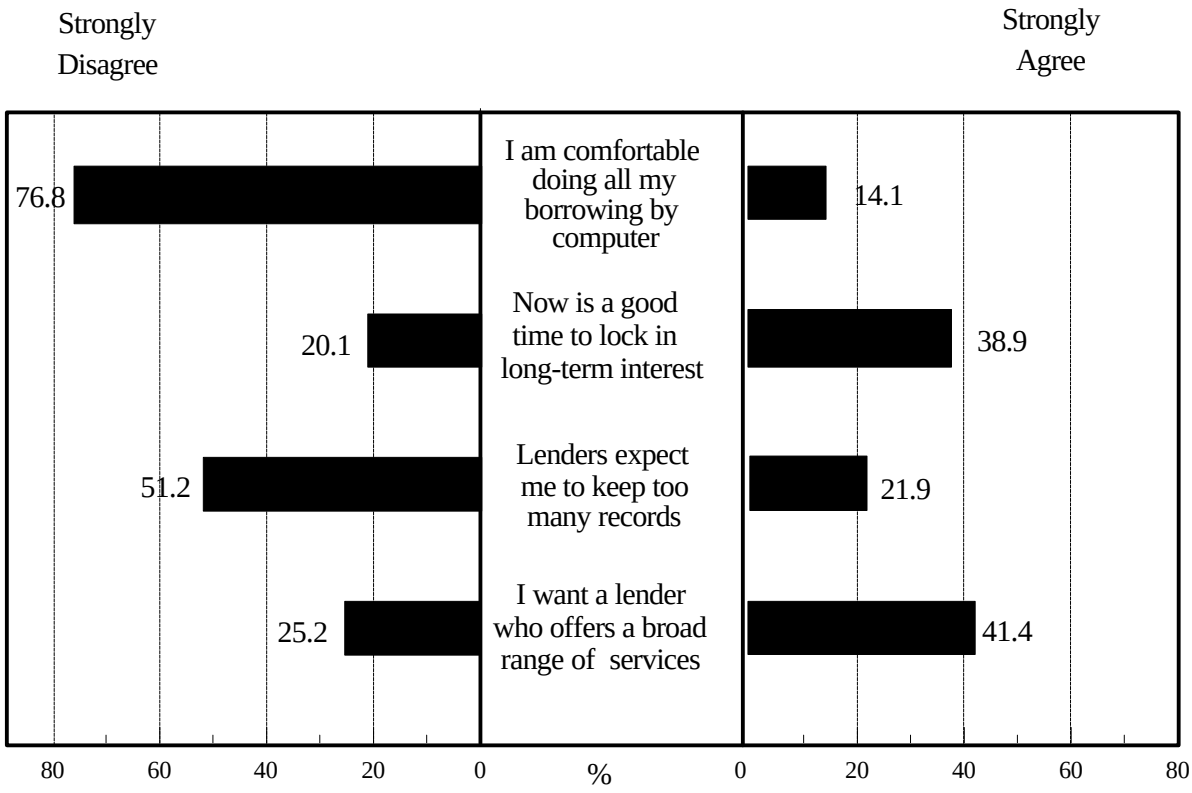

Figure 18. Farmers' Attitudes Toward Their Financial Relationships, 1996

Responses to "Lenders expect me to keep too many farm records for my liking" indicated about 51.2% tended toward strongly disagree, while about 21.9% indicated a trend toward strongly agree (Figure 18). The remaining 26.9% of producers remained neutral (Appendix Table 45). This implies that producers feel that lenders do not require too many records. When sorted by organization, about 57.2% of corporations and 52.4% of sole proprietorships indicated a trend toward strongly disagree. This implies that more than one-half of corporations and sole proprietorships feel that lenders do not require too many records. When sorted by size, about 60.0% of medium farms and 52.6% of large farms indicated a trend toward strongly disagree. This implies that more than one-half of medium and large farms feel that lenders do not require too many records. When sorted by region, about 42.7% of farmers in the West River region and 42.0% of farmers in the North East region tended toward strongly disagree.

Responses to " I want to deal with a financial institution that offers a broad range of services besides farm loans, such as estate planning or investments like mutual funds" indicated about 41.4% tended toward strongly agree, while 25.2% indicated a trend toward strongly disagree (Figure 18). The remaining 33.4% of producers remained neutral (Appendix Table 46). This implies that producers wanted a financial institution that offers a broad range of services. When sorted by organization, about 47.8% of partnerships, 45.4% of corporations, and 39.0% of sole proprietorships indicated a trend toward strongly agree, indicating that corporations and partnerships want a broad range of services stronger than do sole proprietorships. When sorted

by size, about 40.0% of large farms indicated a trend toward strongly agree. When sorted by region, about 30.5% of farmers in the Central region indicated a trend toward strongly agree.

Figure 19 shows the financial services desired by farmers. About 19% of the respondents listed marketing advisory services as a desirable option. About 16% of the respondents listed short-term equipment rental and business management consulting services as desirable, and 13% listed equipment leasing and estate planning and trust services as desirable (Appendix Table 47a). When sorted by organization, 26% of corporations and 23% of partnerships desired business management consulting, compared to 12% of sole proprietorships. About 16% of partnerships and 12% of sole proprietorships desired equipment leasing, compared to 4% of corporations. This implies that corporations desire to own their line of equipment rather than leasing it. When sorted by region, the responses did not differ significantly at the 95% or 90% confidence levels.

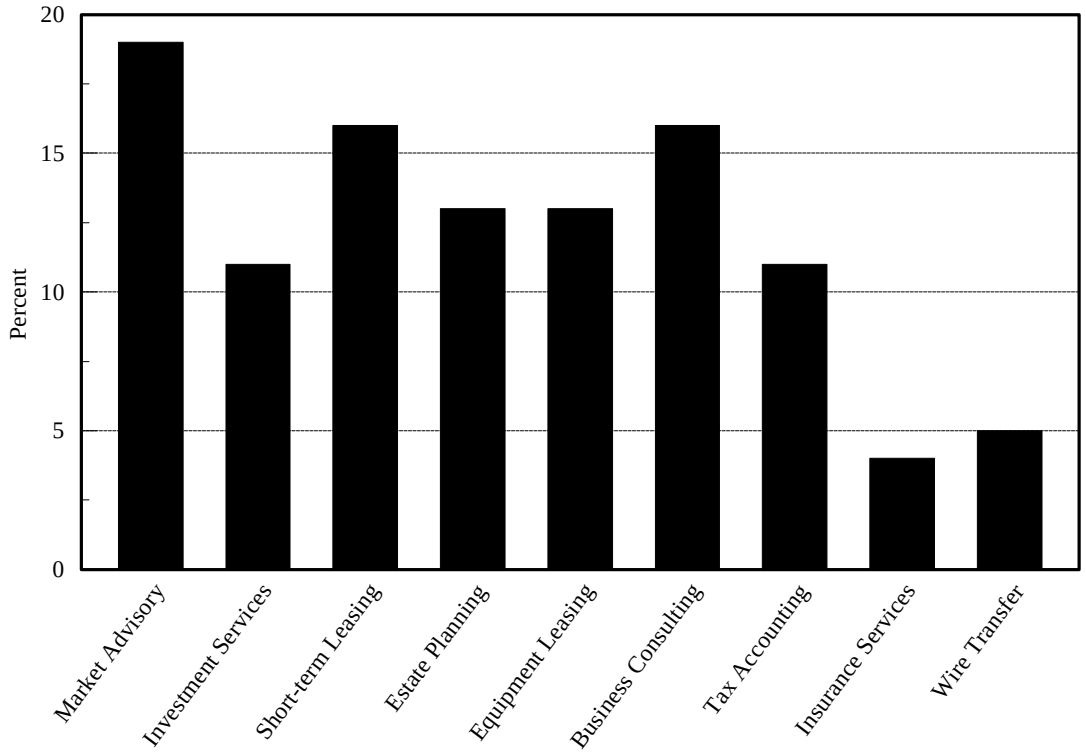

Figure 19. Financial Services Desired by North Dakota Farmers, 1996

Farmers' Attitudes Toward Changes in Government Programs

Figure 20 shows the farmers' reactions to changes in government programs. About 55% of farmers responded that they would be more cautious of debt. About 41% of the farmers responded that changes in government programs would prompt them to focus on earning a premium for their products (Appendix Table 48a). About 38% of the farmers responded that they would diversify their investments outside agriculture. About 25% of the farmers responded that they would contract more of their production and the changes would make them more optimistic about the future. About 24% of the farmers responded that they would be willing to diversify into new livestock and crop enterprises. When sorted by organization (Appendix Tables 48b.), 35% of corporations, 31% of partnerships, and 18% of sole proprietorships would use marketing tools. About 51% of partnerships would focus on earning a premium for their production compared to 38% of sole proprietorships and 30% of corporations. This implies that corporations and partnerships would be more likely to be more aggressive with marketing their production, and partnerships wanted to focus on earning a premium for their crops.

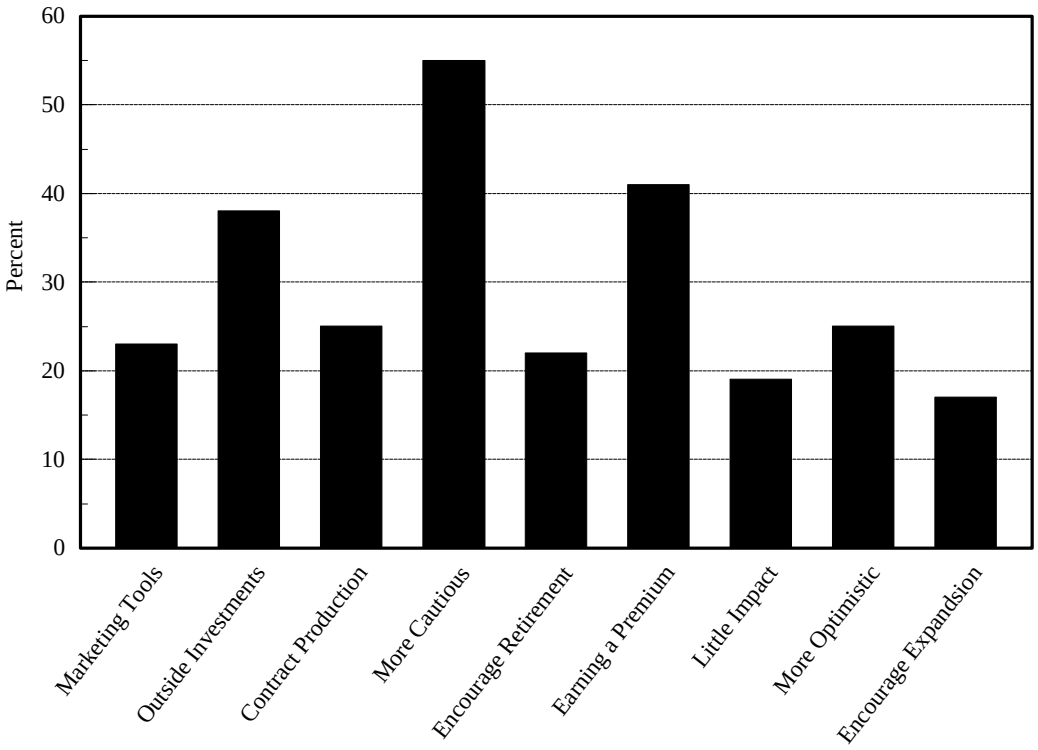

Figure 20. North Dakota Farmers' Reactions to Changes in Governmental Programs, 1996

Appendix Table 48c shows the farmers' reactions to changes in government programs when data were sorted by size of farms. Medium and large farms felt that they would be more aggressive in the use of marketing tools, earning a premium for their production, and will provide them more incentive to contract their production. Large and medium farms felt that they would

be more cautious of debt but they will be more likely to expand. Small farms felt that they would be less affected by the changes than the medium and large size farms.

Appendix Table 48d shows the farmers' reactions to changes in government programs when data were sorted by region. Most categories differ significantly at the 95% confidence level. About 32% of the farmers in the West River region indicated that they would be more optimistic with changes in government programs, compared to 11% of farmers in the North West region. This implies that farmers in the West River region rely less on government programs than farmers in the North West region. About 68% of the farmers in the North Central region would be encouraged to retire compared to 40% of farmers in the West River region. About 33% of farmers in the North East region and 11% of farmers in the Central region felt that changes in government programs would encourage them to retire, and about 29% of farmers in the West River region indicated that changes in government programs would have little impact on them compared to 4% of farmers in the East Central region.

The responses for North Dakota farmers were significantly different at the 95% confidence level than the responses for U.S. farmers. About 1% of U.S. farmers would diversify into different crops or livestock compared to 24% for North Dakota farmers. About 16% of U.S. farmers are more optimistic about the future compared to 25% for North Dakota farmers. About 23% of U.S. farmers would be cautious of debt compared to 55% for North Dakota farmers. About 40% of U.S. farmers would use marketing tools compared to 23% for North Dakota farmers. About 20% of U.S. farmers would try to obtain a premium for their products compared to 41% for North Dakota farmers.

Summary

Most producers in North Dakota expected to expand production, except for hog producers. The age distribution among the three groups (<35, 35 to 54, and >54) differs significantly. Only 7% of the producers were less than 35 years old while 59% were between 35 to 54 years. Producers in small farms were more likely to be older than 54, compared to larger farms. A high school diploma (33%) was the most common education, followed by some college education (26%).

The producers in the North West region viewed their retirement date earlier than the rest of the state, while those in the Central region viewed their retirement at a later date. The largest percentage of producers wanted to rent their farms to a family member (33%) or were undecided (30%). More producers in the East Central region were going to sell their farm (20%) than those in the other regions.

Producers felt that it was necessary to have family help when starting a new operation. They also felt that it was not important to buy as much land as possible to pass on to the next generation. The producers felt that now is not the best time to quit farming, but they would like to see the opportunity in the next five years. The producers also felt that a 50% reduction in capital gains taxes would not encourage them to sell farmland.

About 53% of the producers had a debt-to-asset ratio less than 25%, while 26% had a debt-to-asset ratio greater than 41%. Sole proprietorships' debt-to-asset ratio was higher than either corporations' or partnerships'. The most used financial services were crop insurance (84%), life insurance (70%), medical insurance (69%), and forward crop contracting (38%). The least used financial services were hedge-to-arrive contracts and options. Producers in large farms used forward cash contracting, options, and hedge-to-arrive contracts more than small or medium farms. Producers in the East Central and South East regions used financial services more than other regions of the state, while producers in the West River region used financial services less than the rest of the state.

Producers felt that business management skills were more important (43.0%) than production skills (21.0%), and they felt that it was not important to include a panel of advisers for important business decisions.

Producers felt that farmland is a good investment but that renting land is better than buying, even though more than one-half of the producers felt that no good farmland was available to rent in their area at a reasonable price. Unlike the rest of the state, farms in the East Central and North East regions felt that farmland is not a good investment. Producers in the region did not feel that increasing the size of their operation would lower their per unit cost of production.

Producers in the North West and North Central regions felt that reducing financial risks was more important than those in the rest of the state. Producers in most regions felt that there were ways to lower interest rates, and that buying equipment was better than leasing it. The North Central region was the only region which felt that leasing equipment was better than buying it.

About 43% of the producers felt that they did not have too much debt in their operation and, at the same time, believed additional debt is not a good idea. Producers of large farms felt better about their debt situation than producers in small or medium farms.

Producers felt that rapid expansion would be difficult in the future. Producers felt that cash flow was more important to lenders than equity, but farmers in the North Central and North East regions felt that equity was more important to lenders than cash flow.

Local commercial banks were used most often for lending (62%), followed by self-earnings (39%). More corporations use input retailers than other organizational structures. Producers of large farms will use Farm Credit Service (48%) and non-local commercial banks (43%) more than those of either small or medium farms. Farmers in the South East region use local commercial banks more (72%) than other regions of the state, and farmers in the East Central region use the Farm Credit System more than the rest of the state.

Insurance services was the most frequently used service (31%) offered by financial lenders, followed by tax accounting services (23%), investment services (14%), and estate planning and trust services (14%). Corporations use short-term equipment leasing less than either sole proprietorships or partnerships. Farmers in the West River region use financial services less

than the rest of the state. Producers in the East Central region use financial services more than those in the rest of the state.

About 46% of the producers indicated that they had no plans to expand. The main reason to expand was to generate large sales (38%), followed by capture of economies of scale (22%). About 46% would borrow less than $50,000, while 3% would borrow more than $500,000. Most producers felt that their lenders should be involved in their plans. Producers felt that they could not increase their equity faster by borrowing.

Producers felt that a close personal relationship with a lender was important and that they would not be comfortable doing most of their banking by computer or telephone. They felt that they did not have a difficult time finding a lender who understood their vision for the future. Corporations felt it was easier to find a lender who understood hedging and options than sole proprietorships or partnerships. Producers in the North West and North Central regions found it more difficult than the rest of the state to find a lender who understood hedging and options.

Producers felt that they did not have to keep too many records. They also felt that the lenders were not competing against each other in interest rates, but this is a good time to lock in interest rates. Producers wanted lenders who offer a broad range of financial services, especially marketing adviser services (19%), followed by business management and short-term leasing (16%), and estate planning (13%).

About 41% of the producers believe that they would focus on earning a premium for their production because of the changes in government farm programs. About 55% of the producers would be more cautious of debt and about 22% of the producers said that they would be encouraged to retire due to changes in the government programs. About 38% of the producers said they would diversify investments outside of agriculture because of changes in government farm programs. More producers of large farms would use marketing tools (33%) than those of small (7%) or medium (29%) farms. Corporations and partnerships would focus on earning a premium for their production more than producers of the small size farms. Producers in the West River region were more optimistic than the rest of the state. Producers in the North Central region were encouraged to expand, and producers in the North East region were encouraged to retire.

About 87.6% would not like to deal with bankers by telephone, fax, or computers. They believe that it is very important to know their bankers and deal with them in person.

Producers felt strongly that they do not personally have too much debt, but that it will be difficult for anyone to handle additional debt in the future. They felt that farmland is a good investment for the future but that renting land makes better sense right now than buying it. Reducing the capital gains taxes will not convince them to sell their farmland.

They felt strongly that there are creative ways to finance their operation and that it makes good sense to use dealer credit whenever possible. Producers also felt strongly that bankers are not competing with each other to lower interest rates and that it was important to include their banker in their future plans.

References

Koo, Won W., Marvin R. Duncan, and Richard Taylor. "Analysis of Farm Credit and Risk Management for U.S. Farmers." Agricultural Economics Report No. 399. July 1998. Department of Agricultural Economics, North Dakota State University, Fargo.

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APPENDIX TABLES

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Table 1. Average Size of North Dakota Farms, 1996 and 1999

	Corn	Wheat	Barley	Other	Milk	Hogs	Calf	Bkgd	Fed
	----------acres----------				----------head----------				
1996									
All	430	1,002	352	521	47	651	107	126	116
Organization									
Sole	368	809	285	392	47	929	94	98	54
Part	421	1,436	488	782	49	313	153	167	147
Corp	875	1,102	370	627	0	60	58	296	509
Size									
Small	97	320	134	177	27	316	82	64	25
Med	329	729	285	372	63	52	98	102	62
Large	667	1,038	548	849	78	1,833	199	272	269
Region									
North West	100	1,046	264	366	60	0	92	103	80
North Central	96	1,294	522	566	26	0	97	83	46
North East	218	998	404	667	0	0	45	44	130
Central	130	973	312	487	1	1,434	111	103	55
East Central	697	998	375	492	30	525	78	81	16
South East	612	852	216	572	135	290	157	203	130
West River	137	924	250	352	35	433	123	144	186
1999 Projected									
All	635	1,197	507	646	72	486	122	159	132
Organization									
Sole	525	982	458	499	88	563	108	139	83
Part	732	1,686	627	970	26	100	171	182	148
Corp	1,045	1,135	388	567	0	0	54	291	510
Size									
Small	121	410	170	213	18	500	95	81	63
Medium	402	873	346	448	94	39	105	119	71
Large	1,030	2,020	843	1,032	150	1,800	197	322	229
Region									
North West	25	1,108	316	450	0	0	116	147	80
North Central	241	1,490	1,220	731	34	0	104	93	50
North East	634	1,143	511	843	0	0	72	68	125
Central	165	1,224	341	610	1	8	108	117	78
East Central	905	1,251	434	575	0	0	103	113	20
South East	685	1,102	359	708	155	500	158	227	140
West River	216	1,130	294	431	10	950	142	188	174

Table 2. Age of North Dakota Farmers, 1996

	< 35	35-54	55 >
	--------Number of responses-------- (frequencies)		
All	24	200	114
	(0.07)	(0.59)	(0.33)
Organization			
Sole	13	130	72
	(0.06)	(0.60)	(0.33)
Part	9	54	33
	0.09)	(0.56)	(0.34)
Corp	2	15	6
	(0.09)	(0.65)	(0.26)

Calculated X^2 at 4 degrees of freedom = 2.76
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.49
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78

Size			
Small	6	73	39
	(0.08)	(0.47)	(0.45)
Medium	9	75	26
	(0.08)	(0.68)	(0.24)
Large	8	50	48
	(0.05)	(0.62)	(0.33)

Calculated X^2 at 4 degrees of freedom = 11.64
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.49
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78

Region			
North West	2	20	14
	(0.06)	(0.56)	(0.39)
North Central	2	20	19
	(0.05)	(0.49)	(0.46)
North East	3	46	21
	(0.04)	(0.66)	(0.30)
Central	7	23	7
	(0.19)	(0.62)	(0.19)
East Central	0	30	15
	(0.00)	(0.67)	(0.33)
South East	3	31	13
	(0.06)	(0.66)	(0.28)
West River	7	29	25
	(0.11)	(0.48)	(0.41)

Calculated X^2 at 12 degrees of freedom = 52.55
Critical X^2 at 12 degrees of freedom and 95 % confidence level = 21.03
Critical X^2 at 12 degrees of freedom and 90 % confidence level = 18.55

Table 3. Educational Level of North Dakota Farmers, 1996

	High School	Technical Degree	Some College	Undergraduate Degree	Post Graduate
	----------Number of responses----------				
	(frequencies)				
All	105	30	84	67	30
	(0.33)	(0.09)	(0.26)	(0.21)	(0.09)
Organization					
Sole	68	22	48	41	21
	(0.38)	(0.12)	(0.27)	(0.23)	(0.12)
Part	28	7	29	21	6
	(0.33)	(0.08)	(0.34)	(0.25)	(0.07)
Corp	7	1	7	4	3
	(0.37)	(0.05)	(0.37)	(0.21)	(0.16)

Calculated X^2 at 8 degrees of freedom =8.15
Critical X^2 at 8 degrees of freedom and 95 % confidence level = 15.50
Critical X^2 at 8 degrees of freedom and 90 % confidence level = 13.36

Size					
Small	43	9	24	7	12
	(0.52)	(0.11)	(0.29)	(0.08)	(0.14)
Medium	32	14	25	26	10
	(0.33)	(0.14)	(0.26)	(0.27)	(0.10)
Large	29	7	33	34	8
	(0.28)	(0.07)	(0.32)	(0.33)	(0.08)

Calculated X^2 at 8 degrees of freedom =27.76
Critical X^2 at 8 degrees of freedom and 95 % confidence level = 15.50
Critical X^2 at 8 degrees of freedom and 90 % confidence level = 13.36

Region					
North West	14	1	9	6	5
	(0.48)	(0.03)	(0.31)	(0.21)	(0.17)
North Central	14	4	6	9	4
	(0.50)	(0.14)	(0.21)	(0.32)	(0.14)
North East	21	9	17	17	4
	(0.41)	(0.18)	(0.33)	(0.33)	(0.08)
Central	13	1	9	6	3
	(0.50)	(0.04)	(0.35)	(0.23)	(0.12)
East Central	7	8	12	14	4
	(0.23)	(0.26)	(0.39)	(0.45)	(0.13)
South East	17	4	11	5	6
	(0.45)	(0.11)	(0.29)	(0.13)	(0.16)
West River	19	2	20	10	4
	(0.36)	(0.09)	(036)	(0.18)	(0.07)

Calculated X^2 at 24 degrees of freedom =81.37
Critical X^2 at 24 degrees of freedom and 95 % confidence level = 36.40
Critical X^2 at 24 degrees of freedom and 95% confidence level = 33.20

Table 4. Ownership Characteristics of North Dakota Farmers, 1996

	Sole Proprietorship	Family Partnership	Non-family Partnership	Family Corporation	Non-family Corporation	Other
	Number of responses (frequencies)					
All	217	87	7	19	2	2
	(0.65)	(0.26)	(0.02)	(0.06)	(0.01)	(0.01)
Size						
Small	80	19	1	3	0	2
	(0.76)	(0.18)	(0.09)	(0.28)	(0.00)	(0.19)
Medium	81	21	2	5	0	0
	(0.74)	(0.19)	(0.02)	(0.05)	(0.00)	(0.00)
Large	53	46	4	11	2	0
	(0.46)	(0.40)	(0.03)	(0.09)	(0.02)	(0.00)

Calculated X^2 at 10 degrees of freedom =33.37
Critical X^2 at 10 degrees of freedom and 95 % confidence level = 18.3
Critical X^2 at 10 degrees of freedom and 90 % confidence level = 15.99

Region						
North West	29	7	0	1	0	0
	(0.78)	(0.19)	(0.00)	(0.03)	(0.00)	(0.00)
North Central	19	18	2	1	0	0
	(0.47)	(0.45)	(0.05)	(0.03)	(0.00)	(0.00)
North East	42	18	1	6	0	0
	(0.62)	(0.27)	(0.01)	(0.09)	(0.00)	(0.00)
Central	25	9	0	1	1	0
	(0.69)	(0.25)	(0.01)	(0.03)	(0.00)	(0.00)
East Central	25	12	1	6	0	0
	(0.57)	(0.27)	(0.02)	(0.14)	(0.01)	(0.00)
South East	32	9	2	3	1	0
	(0.68)	(0.19)	(0.04)	(0.06)	(0.00)	(0.02)
West River	44	14	1	1	0	2
	(0.71)	(0.23)	(0.02)	(0.02)	(0.00)	(0.03)

Calculated X^2 at 36 degrees of freedom =91.63
Critical X^2 at 36 degrees of freedom and 95 % confidence level = 49.80
Critical X^2 at 36 degrees of freedom and 90 % confidence level = 46.06

Table 5. Number of Years Until Retirement for North Dakota Farmers. 1996

	Less than 10	11 to 20	21 to 30	31 to 40	Greater than 40
	----------Number of responses----------				
	(frequencies)				
All					
	127	105	71	13	3
	0.40	0.33	0.22	0.04	0.01
Organization					
Sole	78	72	44	6	2
	0.39	0.36	0.22	0.03	0.01
Part	37	28	21	4	1
	0.41	0.31	0.23	0.04	0.01
Corp	10	4	5	4	0
	0.43	0.17	0.22	0.17	0.00

Calculated X^2 at 8 degrees of freedom= 23.10
Critical X^2 at 8 degrees of freedom and 95 % confidence level = 15.50
Critical X^2 at 8 degrees of freedom and 90 % confidence level = 13.36

Size					
Small	53	23	18	58	1
	0.53	0.23	0.18	0.05	0.01
Medium	32	46	23	3	2
	0.30	0.43	0.22	0.03	0.02
Large	42	36	29	5	0
	0.38	0.32	0.26	0.04	0.00

Calculated X^2 at 8 degrees of freedom = 17.00
Critical X^2 at 8 degrees of freedom and 95 % confidence level = 15.50
Critical X^2 at 8 degrees of freedom and 95 % confidence level = 13.36

Region					
North West	18	12	4	1	0
	0.51	0.34	0.11	0.03	0.00
North Central	18	8	9	1	1
	0.49	0.22	0.24	0.03	0.03
North East	26	24	14	3	0
	0.39	0.36	0.21	0.04	0.00
Central	10	9	11	2	1
	0.30	0.27	0.33	0.06	0.03
East Central	16	19	7	2	0
	0.36	0.43	0.16	0.05	0.00
South East	15	15	13	2	0
	0.33	0.33	0.29	0.04	0.00
West River	23	18	12	2	1
	0.41	0.32	0.21	0.04	0.02

Calculated X^2 at 24 degrees of freedom =51.05
Critical X^2 at 24 degrees of freedom and 95 % confidence level = 36.42
Critical X^2 at 24 degrees of freedom and 90 % confidence level = 33.20

Table 6. North Dakota Farmers' Plans for the Business After Retirement, 1996

	Sell to Family	Sell to non-family	Rent to family	Rent to non- family	Keep in family without sale or rental	Undecided/ not sure
	----------Number of responses----------					
	(frequencies)					
All	42	9	110	33	46	102
	(0.12)	(0.03)	(0.32)	(0.10)	(0.13)	(0.30)
Organization						
Sole	23	6	65	22	23	81
	(0.10)	(0.03)	(0.30)	(0.10)	(0.10)	(0.37)
Part	14	1	36	7	22	17
	(0.14)	(0.01)	(0.37)	(0.07)	(0.23)	(0.18)
Corp	4	2	8	3	1	3
	(0.19)	(0.10)	(0.38)	(0.14)	(0.05)	(0.14)
Calculated X^2 at 10 degrees of freedom = 41.57						
Critical X^2 at 10 degrees of freedom and 95 % confidence level = 18.30						
Critical X^2 at 10 degrees of freedom and 90 % confidence level = 15.99						
Size						
Small	15	5	23	13	13	37
	(0.14)	(0.05)	(0.22)	(0.12)	(0.12)	(0.35)
Medium	17	0	36	9	12	39
	(0.15)	(0.00)	(0.32)	(0.08)	(0.11)	(0.35)
Large	10	4	51	11	21	23
	(0.08)	(0.03)	(0.43)	(0.09)	(0.18)	(0.19)
Calculated X^2 at 10 degrees of freedom = 21.64						
Critical X^2 at 10 degrees of freedom and 95 % confidence level = 18.30						
Critical X^2 at 10 degrees of freedom and 90 % confidence level = 15.99						
Region						
North West	4	1	16	2	2	13
	(0.11)	(0.03)	(0.42)	(0.05)	(0.05)	(0.34)
North Central	6	1	17	3	9	8
	(0.14)	(0.02)	(0.39)	(0.07)	(0.20)	(0.18)
North East	5	2	30	8	13	12
	(0.07)	(0.03)	(0.43)	(0.11)	(0.19)	(0.17)
Central	4	1	11	4	2	14
	(0.11)	(0.03)	(0.31)	(0.11)	(0.06)	(0.39)
East Central	9	2	11	8	3	12
	(0.20)	(0.04)	(0.24)	(0.18)	(0.07)	(0.27)
South East	5	0	15	4	5	18
	(0.11)	(0.00)	(0.32)	(0.09)	(0.11)	(0.38)
West River	9	2	10	4	12	24
	(0.15)	(0.03)	(0.16)	(0.07)	(0.20)	(0.39)
Calculated X^2 at 30 degrees of freedom = 83.01						
Critical X^2 at 30 degrees of freedom and 95 % confidence level = 43.77						
Critical X^2 at 30 degrees of freedom and 90 % confidence level = 40.26						

Table 7. North Dakota Farmers' Responses to "It is Possible to Build a Successful Business Without Financial Assistance From Your Family"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.255	0.187	0.181	0.199	0.178
Organization					
Sole	0.243	0.195	0.205	0.200	0.157
Part	0.297	0.143	0.143	0.231	0.187
Corp	0.190	0.286	0.094	0.095	0.333
Calculated X^2 at 2 degrees of freedom=7.80					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 4.61					
Size					
Small	0.304	0.157	0.186	0.127	0.225
Medium	0.245	0.218	0.164	0.236	0.136
Large	0.219	0.184	0.193	0.228	0.175
Calculated X^2 at 2 degrees of freedom =5.16					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 4.61					
Region					
North West	0.303	0.273	0.152	0.121	0.152
North Central	0.263	0.184	0.053	0.289	0.211
North East	0.261	0.203	0.174	0.203	0.159
Central	0.250	0.194	0.222	0.139	0.194
East Central	0.222	0.156	0.111	0.267	0.244
South East	0.227	0.205	0.227	0.227	0.114
West River	0.262	0.131	0.279	0.148	0.180
Calculated X^2 at 6 degrees of freedom = 8.64					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 8. North Dakota Farmers' Responses to "Now is the Best Time to Get Out of Farming That We Will See in the Next Five Years"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.179	0.267	0.337	0.131	0.085
Organization					
Sole	0.156	0.242	0.360	0.137	0.104
Part	0.228	0.326	0.283	0.130	0.033
Corp	0.227	0.318	0.364	0.045	0.045

Calculated X^2 at 2 degrees of freedom = 5.07
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.65

Size					
Small	0.165	0.262	0.350	0.117	0.107
Medium	0.189	0.243	0.378	0.126	0.063
Large	0.183	0.296	0.287	0.148	0.087

Calculated X^2 at 2 degrees of freedom =5.55
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.65

Region					
North West	0.176	0.264	0.265	0.176	0.118
North Central	0.211	0.289	0.237	0.158	0.105
North East	0.129	0.229	0.414	0.086	0.143
Central	0.194	0.361	0.256	0.194	0.000
East Central	0.222	0.244	0.400	0.089	0.044
South East	0.156	0.289	0.356	0.200	0.000
West River	0.197	0.246	0.344	0.082	0.131

Calculated X^2 at 6 degrees of freedom =15.46
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 9. North Dakota Farmers' Responses to "Bringing Another Family Member Into the Operation Isn't Worth the Risk of Taking on More Debt"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.122	0.254	0.291	0.168	0.165
Organization					
Sole	0.114	0.224	0.319	0.181	0.162
Part	0.132	0.297	0.242	0.165	0.165
Corp	0.136	0.364	0.273	0.091	0.136

Calculated X^2 at 2 degrees of freedom = 20.21
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90% confidence level = 4.61

Size					
Small	0.079	0.208	0.287	0.178	0.248
Medium	0.135	0.261	0.279	0.198	0.126
Large	0.148	0.287	0.304	0.130	0.130

Calculated X^2 at 2 degrees of freedom = 14.24
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.059	0.412	0.324	0.176	0.029
North Central	0.237	0.342	0.132	0.184	0.105
North East	0.086	0.286	0.229	0.171	0.229
Central	0.028	0.278	0.333	0.167	0.194
East Central	0.267	0.133	0.222	0.244	0.133
South East	0.133	0.244	0.378	0.111	0.133
West River	0.068	0.153	0.407	0.136	0.237

Calculated X^2 at 6 degrees of freedom = 70.58
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 10. North Dakota Farmers' Responses to "A Fifty Percent Reduction in Capital Gains Taxes Would Encourage Me to Sell Farmland"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.307	0.187	0.273	0.107	0.126
Organization					
Sole	0.319	0.157	0.281	0.105	0.138
Part	0.293	0.228	0.250	0.130	0.098
Corp	0.250	0.300	0.300	0.050	0.100

Calculated X^2 at 2 degrees of freedom = 6.77
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.333	0.147	0.275	0.108	0.137
Medium	0.345	0.209	0.273	0.082	0.091
Large	0.246	0.202	0.272	0.132	0.149

Calculated X^2 at 2 degrees of freedom = 11.01
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90% confidence level = 4.61

Region					
North West	0.294	0.147	0.324	0.118	0.118
North Central	0.289	0.158	0.263	0.000	0.289
North East	0.333	0.174	0.261	0.101	0.130
Central	0.389	0.250	0.278	0.083	0.000
East Central	0.222	0.244	0.289	0.111	0.133
South East	0.311	0.222	0.178	0.156	0.133
West River	0.305	0.136	0.322	0.153	0.085

Calculated X^2 at 6 degrees of freedom = 24.91
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 11. North Dakota Farmers' Responses to "It is Important for Me to Buy as Much Land as Possible to Pass on to the Next Generation"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.407	0.313	0.204	0.055	0.021
Organization					
Sole	0.431	0.322	0.171	0.066	0.009
Part	0.348	0.293	0.283	0.033	0.043
Corp	0.364	0.364	0.182	0.045	0.045

Calculated X^2 at 2 degrees of freedom = 4.69
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.507	0.243	0.184	0.049	0.019
Medium	0.405	0.396	0.135	0.054	0.009
Large	0.322	0.296	0.287	0.061	0.035

Calculated X^2 at 2 degrees of freedom = 9.31
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.382	0.294	0.265	0.059	0.000
North Central	0.316	0.342	0.342	0.000	0.000
North East	0.443	0.271	0.200	0.043	0.043
Central	0.250	0.444	0.222	0.056	0.028
East Central	0.511	0.222	0.222	0.022	0.022
South East	0.400	0.333	0.111	0.133	0.022
West River	0.459	0.328	0.131	0.066	0.016

Calculated X^2 at 6 degrees of freedom = 24.99
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.61

Table 12. Debt-to-asset Ratio for North Dakota Farmers, 1996

	No debt	1%-15%	16%-25%	26%-40%	41%-60%	More than 60%
	----------Number of responses----------					
	(frequencies)					
All	50	63	63	71	63	22
	0.15	0.19	0.19	0.21	0.19	0.07
Organization						
Sole	39	41	42	38	40	15
	0.18	0.18	0.19	0.19	0.20	0.07
Part	10	17	16	25	18	6
	0.11	0.27	0.19	0.20	0.17	0.07
Corp	0	5	4	7	4	1
	0.00	0.33	0.24	0.19	0.19	0.05
Calculated X^2 at 10 degrees of freedom = 23.37						
Critical X^2 at 10 degrees of freedom and 95 % confidence level = 18.30						
Critical X^2 at 10 degrees of freedom and 90 % confidence level = 15.99						
Size						
Small	25	20	12	21	18	7
	0.24	0.20	0.19	0.17	0.12	0.07
Medium	14	19	26	22	20	9
	0.13	0.20	0.17	0.18	0.24	0.08
Large	10	23	25	28	24	4
	0.09	0.25	0.20	0.21	0.22	0.04
Calculated X^2 at 10 degrees of freedom = 15.99						
Critical X^2 at 10 degrees of freedom and 95 % confidence level = 18.30						
Critical X^2 at 10 degrees of freedom and 90 % confidence level = 15.99						
Region						
North West	6	7	5	8	8	2
	0.17	0.22	0.19	0.22	0.14	0.06
North Central	8	8	4	9	8	3
	0.20	0.23	0.20	0.20	0.10	0.08
North East	11	15	13	17	11	3
	0.16	0.24	0.21	0.16	0.19	0.04
Central	2	8	12	7	6	1
	0.06	0.19	0.22	0.17	0.33	0.03
East Central	6	4	10	9	8	6
	0.14	0.21	0.09	0.19	0.23	0.14
South East	4	8	12	11	7	3
	0.09	0.24	0.18	0.16	0.27	0.07
West River	13	12	7	10	15	4
	0.21	0.16	0.20	0.25	0.11	0.07
Calculated X^2 at 30 degrees of freedom =59.22						
Critical X^2 at 30 degrees of freedom and 95 % confidence level = 43.77						
Critical X^2 at 30 degrees of freedom and 90 % confidence level = 40.26						

Table 13a. Tools Used by North Dakota Farmers to Manage Financial Risks, 1996

	Num	Freq
Forward cash contracts	128	0.38
Hedged-to-arrive contracts	27	0.08
Options	54	0.16
Futures	61	0.18
Joint venturing with a processor	24	0.07
Life insurance	237	0.70
Disability insurance	77	0.23
Medical insurance	234	0.69
Lock in interest rates	98	0.29
Crop insurance	283	0.84

Table 13b. Tools Used by North Dakota Farmers to Manage Financial Risks by Organization, 1996

	Sole Pro		Partnerships		Corporation		
	Num	Freq	Num	Freq	Num	Freq	X^2
Forward cash contracts	70	0.32	43	0.46	13	0.57	**11.95**
Hedged-to-arrive contracts	16	0.07	9	0.10	2	0.09	0.32
Options	34	0.16	16	0.17	4	0.17	0.12
Futures	31	0.14	21	0.22	9	0.39	**17.02**
Joint venturing with a processor	14	0.06	9	0.10	1	0.04	2.18
Life insurance	153	0.71	64	0.68	18	0.78	2.82
Disability insurance	49	0.23	21	0.22	6	0.26	0.49
Medical insurance	153	0.71	63	0.67	16	0.70	0.30
Lock in interest rates	60	0.28	33	0.35	5	0.22	4.44
Crop insurance	176	0.81	84	0.89	19	0.83	2.93

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 13c. Tools Used by North Dakota Farmers to Manage Financial Risks by Size, 1996

	Small		Medium		Large		
	Num	Freq	Num	Freq	Num	Freq	X^2
Forward cash contracts	16	0.15	50	0.45	60	0.52	**12.39**
Hedged-to-arrive contracts	3	0.03	6	0.05	18	0.16	**10.86**
Options	7	0.07	19	0.17	27	0.23	**34.01**
Futures	5	0.05	15	0.14	41	0.35	4.93
Joint venturing with a processor	3	0.03	12	0.11	9	0.08	4.65
Life insurance	67	0.63	84	0.76	85	0.73	1.56
Disability insurance	26	0.24	29	0.26	22	0.19	5.24
Medical insurance	66	0.62	85	0.77	81	0.70	**8.62**
Lock in interest rates	20	0.19	35	0.32	43	0.37	**25.68**
Crop insurance	73	0.68	102	0.92	105	0.9	**18.65**

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 13d. Tools Used by North Dakota Farmers to Manage Financial Risks by Region, 1996

	N.West		N.Central		N.East		Central		E.Central		S.East		W.River		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X^2
Forward cash contracts	9	0.24	16	0.40	24	0.34	10	0.28	34	0.76	23	0.49	12	0.19	**92.16**
Hedged-to-arrive contracts	1	0.03	1	0.03	4	0.06	0	0.00	8	0.18	10	0.21	3	0.05	**56.70**
Options	3	0.08	4	0.10	12	0.17	5	0.14	11	0.24	11	0.23	8	0.13	**18.07**
Futures	4	0.11	6	0.15	13	0.19	5	0.14	12	0.27	12	0.26	9	0.15	**15.12**
Joint venturing with a processor	1	0.03	5	0.13	6	0.09	2	0.06	4	0.09	4	0.09	2	0.03	**11.05**
Life insurance	23	0.62	26	0.65	43	0.61	26	0.72	33	0.73	42	0.89	43	0.69	**26.40**
Disability insurance	6	0.16	8	0.20	13	0.19	6	0.17	10	0.22	17	0.36	17	0.27	**17.59**
Medical insurance	21	0.57	30	0.75	40	0.57	27	0.75	34	0.76	36	0.77	45	0.73	**22.38**
Lock in interest rates	8	0.22	9	0.23	23	0.33	10	0.28	16	0.36	15	0.32	17	0.27	8.11
Crop insurance	31	0.84	32	0.80	63	0.90	32	0.89	41	0.91	39	0.83	44	0.71	**22.08**

Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78

Table 14. North Dakota Farmers' Responses to "Farming Today is More Good Business Management Than it is Skilled Crop or Livestock Production"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.064	0.146	0.360	0.280	0.149
Organization					
Sole	0.071	0.167	0.348	0.281	0.133
Part	0.033	0.120	0.402	0.272	0.174
Corp	0.136	0.045	0.227	0.364	0.227

Calculated X^2 at 2 degrees of freedom = 13.32
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.108	0.137	0.343	0.275	0.137
Medium	0.036	0.207	0.369	0.261	0.126
Large	0.052	0.096	0.365	0.304	0.183

Calculated X^2 at 2 degrees of freedom = 8.87
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.059	0.088	0.500	0.265	0.088
North Central	0.054	0.216	0.351	0.243	0.135
North East	0.071	0.157	0.386	0.257	0.129
Central	0.028	0.139	0.389	0.361	0.083
East Central	0.044	0.133	0.378	0.222	0.222
South East	0.044	0.133	0.333	0.378	0.111
West River	0.115	0.148	0.246	0.262	0.230

Calculated X^2 at 6 degrees of freedom = 30.24
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.61

Table 15. North Dakota Farmers' Responses to "It Makes Good Sense to Use a Panel of Business Advisers for Important Financial Decisions Affecting My Operation"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.173	0.188	0.328	0.185	0.125
Organization					
Sole	0.156	0.208	0.358	0.165	0.113
Part	0.198	0.143	0.253	0.242	0.165
Corp	0.227	0.227	0.318	0.136	0.091

Calculated X^2 at 2 degrees of freedom = 1.63
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.221	0.183	0.308	0.135	0.154
Medium	0.145	0.200	0.373	0.200	0.082
Large	0.157	0.183	0.304	0.217	0.139

Calculated X^2 at 2 degrees of freedom = 1.43
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.118	0.235	0.265	0.147	0.235
North Central	0.154	0.179	0.333	0.179	0.154
North East	0.171	0.157	0.342	0.186	0.143
Central	0.167	0.250	0.361	0.167	0.056
East Central	0.200	0.178	0.311	0.178	0.133
South East	0.133	0.267	0.289	0.200	0.111
West River	0.232	0.117	0.367	0.217	0.067

Calculated X^2 at 6 degrees of freedom = 14.31
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 16. North Dakota Farmers' Responses to "Buying Farmland is a Good Investment for Retirement"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.175	0.138	0.326	0.182	0.178
Organization					
Sole	0.184	0.150	0.353	0.164	0.150
Part	0.174	0.098	0.283	0.239	0.207
Corp	0.136	0.227	0.182	0.136	0.318
Calculated X^2 at 2 degrees of freedom = 4.75					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.230	0.120	0.320	0.130	0.200
Medium	0.127	0.145	0.345	0.236	0.145
Large	0.174	0.148	0.313	0.174	0.191
Calculated X^2 at 2 degrees of freedom = 3.79					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.094	0.125	0.344	0.281	0.156
North Central	0.205	0.103	0.282	0.256	0.154
North East	0.214	0.143	0.371	0.086	0.186
Central	0.083	0.222	0.361	0.194	0.139
East Central	0.159	0.205	0.364	0.091	0.182
South East	0.178	0.089	0.311	0.222	0.200
West River	0.220	0.102	0.254	0.222	0.203
Calculated X^2 at 6 degrees of freedom = 19.51					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 17. North Dakota Farmers' Responses to "Farming More Acres is the Best Way to Drive Down Your Per-unit Production Costs"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.140	0.217	0.348	0.208	0.087
Organization					
Sole	0.141	0.228	0.306	0.252	0.073
Part	0.111	0.178	0.444	0.156	0.111
Corp	0.227	0.273	0.318	0.045	0.136

Calculated X^2 at 2 degrees of freedom = 4.02
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.222	0.182	0.333	0.182	0.081
Medium	0.127	0.264	0.318	0.227	0.064
Large	0.080	0.183	0.389	0.212	0.115

Calculated X^2 at 2 degrees of freedom = 10.58
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.303	0.152	0.212	0.242	0.091
North Central	0.158	0.263	0.263	0.237	0.079
North East	0.145	0.232	0.377	0.174	0.072
Central	0.056	0.167	0.500	0.222	0.056
East Central	0.159	0.318	0.250	0.159	0.114
South East	0.045	0.227	0.477	0.159	0.091
West River	0.138	0.155	0.328	0.276	0.103

Calculated X^2 at 6 degrees of freedom = 32.77
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.61

Table 18. North Dakota Farmers' Responses to "There are Creative Ways for Financing an Operation if You're Willing to Hunt for Them"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.065	0.152	0.410	0.255	0.118
Organization					
Sole	0.068	0.140	0.435	0.266	0.092
Part	0.034	0.135	0.404	0.258	0.169
Corp	0.136	0.273	0.273	0.182	0.136

Calculated X^2 at 2 degrees of freedom = 18.15
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.099	0.208	0.356	0.208	0.129
Medium	0.028	0.131	0.430	0.318	0.093
Large	0.070	0.123	0.439	0.237	0.132

Calculated X^2 at 2 degrees of freedom = 11.95
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.059	0.235	0.294	0.265	0.147
North Central	0.054	0.135	0.432	0.162	0.216
North East	0.059	0.147	0.485	0.221	0.088
Central	0.028	0.139	0.417	0.389	0.028
East Central	0.044	0.111	0.356	0.356	0.133
South East	0.068	0.182	0.341	0.250	0.159
West River	0.121	0.138	0.466	0.190	0.086

Calculated X^2 at 6 degrees of freedom = 33.39
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 19. North Dakota Farmers' Responses to "Good Rental Land is Available for a Fair Price in My Area"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.264	0.276	0.319	0.098	0.043
Organization					
Sole	0.263	0.287	0.316	0.086	0.048
Part	0.286	0.231	0.308	0.143	0.033
Corp	0.227	0.318	0.296	0.000	0.045

Calculated X^2 at 2 degrees of freedom = 2.20
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.324	0.255	0.265	0.088	0.069
Medium	0.227	0.345	0.300	0.082	0.045
Large	0.246	0.228	0.386	0.123	0.018

Calculated X^2 at 2 degrees of freedom =3.32
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.500	0.176	0.294	0.029	0.000
North Central	0.297	0.270	0.324	0.027	0.081
North East	0.229	0.286	0.271	0.157	0.057
Central	0.114	0.343	0.400	0.114	0.029
East Central	0.244	0.267	0.333	0.089	0.067
South East	0.289	0.222	0.356	0.089	0.044
West River	0.233	0.333	0.300	0.117	0.017

Calculated X^2 at 6 degrees of freedom = 30.40
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 20. North Dakota Farmers' Responses to "It is Best to Purchase Land for Expansion Rather Than Renting Land"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.174	0.244	0.341	0.171	0.070
Organization					
Sole	0.218	0.265	0.322	0.147	0.047
Part	0.077	0.198	0.374	0.231	0.121
Corp	0.136	0.227	0.409	0.136	0.091

Calculated X^2 at 2 degrees of freedom =11.87
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.184	0.204	0.301	0.204	0.107
Medium	0.189	0.270	0.324	0.189	0.027
Large	0.149	0.254	0.395	0.123	0.079

Calculated X^2 at 2 degrees of freedom = 4.27
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.206	0.206	0.412	0.147	0.029
North Central	0.132	0.184	0.368	0.211	0.105
North East	0.188	0.304	0.275	0.188	0.043
Central	0.139	0.250	0.444	0.139	0.028
East Central	0.289	0.311	0.244	0.089	0.067
South East	0.111	0.222	0.400	0.178	0.089
West River	0.148	0.197	0.328	0.213	0.115

Calculated X^2 at 6 degrees of freedom = 11.27
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.61

Table 21. North Dakota Farmers' Responses to "I do Everything I Can to Take the Financial Risks Out of Farming, Even if it Means Less Profit"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.061	0.128	0.375	0.299	0.137
Organization					
Sole	0.067	0.148	0.348	0.300	0.138
Part	0.054	0.098	0.402	0.293	0.152
Corp	0.045	0.045	0.500	0.318	0.091

Calculated X^2 at 2 degrees of freedom = 4.30
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.078	0.107	0.379	0.262	0.175
Medium	0.045	0.126	0.387	0.333	0.108
Large	0.061	0.149	0.360	0.298	0.132

Calculated X^2 at 2 degrees of freedom = 7.96
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.118	0.059	0.324	0.382	0.118
North Central	0.054	0.135	0.297	0.243	0.270
North East	0.071	0.143	0.386	0.257	0.143
Central	0.000	0.194	0.389	0.361	0.056
East Central	0.067	0.178	0.356	0.267	0.133
South East	0.044	0.156	0.400	0.333	0.067
West River	0.066	0.049	0.426	0.295	0.164

Calculated X^2 at 6 degrees of freedom = 38.72
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 22. North Dakota Farmers' Responses to "It Makes More Sense to Lease New Farm Equipment Rather Than to Buy"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.134	0.198	0.436	0.146	0.085
Organization					
Sole	0.129	0.190	0.414	0.167	0.100
Part	0.163	0.196	0.457	0.130	0.054
Corp	0.091	0.318	0.545	0.000	0.045
Calculated X^2 at 2 degrees of freedom = 14.12					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.167	0.157	0.431	0.167	0.078
Medium	0.153	0.207	0.432	0.126	0.081
Large	0.087	0.226	0.443	0.148	0.096
Calculated X^2 at 2 degrees of freedom = 7.02					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.118	0.206	0.412	0.147	0.118
North Central	0.132	0.132	0.368	0.211	0.158
North East	0.157	0.143	0.457	0.157	0.086
Central	0.028	0.278	0.500	0.139	0.056
East Central	0.111	0.267	0.422	0.111	0.089
South East	0.114	0.250	0.455	0.159	0.023
West River	0.213	0.164	0.426	0.115	0.082
Calculated X^2 at 6 degrees of freedom = 35.09					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 23. North Dakota Farmers' Responses to "I Have too Much Debt in My Operation"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.255	0.175	0.202	0.163	0.206
Organization					
Sole	0.255	0.173	0.197	0.135	0.240
Part	0.283	0.185	0.207	0.207	0.120
Corp	0.182	0.182	0.182	0.227	0.227
Calculated X^2 at 2 degrees of freedom = 3.61					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.300	0.150	0.180	0.130	0.240
Medium	0.189	0.216	0.207	0.153	0.234
Large	0.278	0.157	0.217	0.200	0.148
Calculated X^2 at 2 degrees of freedom = 8.59					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.324	0.206	0.265	0.147	0.059
North Central	0.405	0.135	0.189	0.135	0.135
North East	0.229	0.143	0.171	0.214	0.243
Central	0.111	0.250	0.167	0.167	0.306
East Central	0.222	0.133	0.244	0.133	0.267
South East	0.200	0.244	0.222	0.200	0.133
West River	0.305	0.153	0.186	0.119	0.237
Calculated X^2 at 6 degrees of freedom = 31.20					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 24. North Dakota Farmers' Responses to "Growers Today Will Have a Tougher Time Taking on More Debt Load Than They Did Five Years Ago"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.049	0.083	0.184	0.245	0.439
Organization					
Sole	0.048	0.076	0.181	0.224	0.471
Part	0.055	0.099	0.198	0.308	0.341
Corp	0.048	0.095	0.190	0.238	0.429

Calculated X^2 at 2 degrees of freedom = 3.50
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.039	0.029	0.126	0.204	0.602
Medium	0.064	0.083	0.220	0.239	0.394
Large	0.044	0.132	0.202	0.289	0.333

Calculated X^2 at 2 degrees of freedom = 4.75
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.118	0.029	0.265	0.206	0.382
North Central	0.051	0.179	0.154	0.179	0.436
North East	0.043	0.043	0.174	0.290	0.449
Central	0.000	0.114	0.257	0.229	0.400
East Central	0.067	0.111	0.156	0.244	0.422
South East	0.067	0.067	0.178	0.311	0.378
West River	0.017	0.068	0.153	0.220	0.542

Calculated X^2 at 6 degrees of freedom = 28.01
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 25. North Dakota Farmers' Responses to "The Next Two or Three Years Will be a Good Time to Purchase More Land"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.201	0.198	0.407	0.111	0.083
Organization					
Sole	0.204	0.218	0.398	0.112	0.068
Part	0.185	0.152	0.402	0.130	0.130
Corp	0.182	0.182	0.591	0.045	0.000
Calculated X^2 at 2 degrees of freedom = 0.37					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.267	0.208	0.337	0.099	0.089
Medium	0.155	0.218	0.473	0.091	0.064
Large	0.186	0.168	0.407	0.142	0.097
Calculated X^2 at 2 degrees of freedom = 1.92					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.375	0.188	0.267	0.117	0.133
North Central	0.128	0.154	0.593	0.094	0.031
North East	0.203	0.232	0.538	0.077	0.103
Central	0.111	0.278	0.391	0.130	0.043
East Central	0.200	0.200	0.472	0.083	0.056
South East	0.136	0.182	0.333	0.156	0.111
West River	0.254	0.153	0.500	0.068	0.114
Calculated X^2 at 6 degrees of freedom = 17.01					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 26. North Dakota Farmers' Responses to "Growers Who Expand Rapidly Now Will Pay a Heavy Price in the Future"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.052	0.155	0.380	0.216	0.198
Organization					
Sole	0.043	0.156	0.408	0.213	0.180
Part	0.065	0.163	0.326	0.207	0.239
Corp	0.091	0.091	0.409	0.227	0.182
Calculated X^2 at 2 degrees of freedom = 10.69					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.010	0.097	0.359	0.194	0.340
Medium	0.045	0.189	0.405	0.243	0.117
Large	0.096	0.174	0.374	0.209	0.148
Calculated X^2 at 2 degrees of freedom = 18.29					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.000	0.176	0.265	0.265	0.294
North Central	0.105	0.158	0.316	0.184	0.237
North East	0.043	0.043	0.457	0.271	0.186
Central	0.028	0.194	0.444	0.194	0.139
East Central	0.156	0.244	0.333	0.200	0.067
South East	0.000	0.222	0.378	0.222	0.178
West River	0.033	0.131	0.393	0.164	0.279
Calculated X^2 at 6 degrees of freedom = 61.30					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 4.61					

Table 27. North Dakota Farmers' Responses to "Equity is More Important Than Cash Flow to Lenders"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.202	0.245	0.267	0.199	0.087
Organization					
Sole	0.211	0.263	0.234	0.206	0.086
Part	0.195	0.218	0.322	0.184	0.080
Corp	0.136	0.227	0.318	0.182	0.136
Calculated X^2 at 2 degrees of freedom = 4.93					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.150	0.190	0.280	0.220	0.160
Medium	0.222	0.306	0.222	0.194	0.056
Large	0.228	0.237	0.298	0.184	0.053
Calculated X^2 at 2 degrees of freedom = 1.80					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.147	0.206	0.382	0.147	0.118
North Central	0.263	0.158	0.211	0.263	0.105
North East	0.103	0.221	0.324	0.279	0.074
Central	0.206	0.441	0.206	0.118	0.029
East Central	0.205	0.318	0.227	0.159	0.091
South East	0.273	0.250	0.227	0.182	0.068
West River	0.250	0.183	0.267	0.183	0.117
Calculated X^2 at 6 degrees of freedom = 49.27					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 28a. Sources of Farm Credit, 1996

	Num	Freq
Self-financed from earnings	133	0.39
Other farmers	1	0.00
Local commercial bank	209	0.62
Input retailer	32	0.09
Grain or feed dealer	29	0.09
Farm Credit System	117	0.35
Other	43	0.13
Family loans	12	0.04
Unrelated individuals	11	0.03
Non-local commercial banks	104	0.31
Manufacturer of farm machinery	7	0.02
Insurance company	35	0.10
Farm Service Agency	10	0.03

Table 28b. Sources of Farm Credit by Organization, 1996

	Sole Pro		Partnerships		Corporation		
	Num	Freq	Num	Freq	Num	Freq	X^2
Self-financed from earnings	88	0.41	33	0.35	11	0.48	3.36
Other farmers	1	0.00	0	0.00	0	0.00	0.92
Local commercial bank	127	0.59	62	0.66	18	0.78	**9.07**
Input retailer	16	0.07	11	0.12	5	0.22	**9.24**
Grain or feed dealer	16	0.07	9	0.10	4	0.17	5.47
Farm Credit System	72	0.33	35	0.37	9	0.39	0.80
Other	26	0.12	13	0.14	3	0.13	0.15
Family loans	7	0.03	4	0.04	1	0.04	0.21
Unrelated individuals	5	0.02	5	0.05	1	0.04	1.24
Non-local commercial banks	60	0.28	38	0.40	6	0.26	5.75
Manufacturer of farm machinery	5	0.02	2	0.02	0	0.00	2.26
Insurance company	28	0.13	6	0.06	1	0.04	5.50
Farm Service Agency	8	0.04	2	0.02	0	0.00	3.60

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 28c. Sources of Farm Credit by Size, 1996

	Small		Medium		Large		
	Num	Freq	Num	Freq	Num	Freq	X^2
Self-financed from earnings	47	0.44	48	0.43	37	0.32	3.81
Other farmers	0	0.00	0	0.00	1	0.01	1.73
Local commercial bank	53	0.50	76	0.68	77	0.66	**9.10**
Input retailer	7	0.07	13	0.12	11	0.09	1.60
Grain or feed dealer	12	0.11	10	0.09	7	0.06	1.69
Farm Credit System	26	0.24	35	0.32	56	0.48	**13.35**
Other	13	0.12	19	0.17	11	0.09	2.67
Family loans	2	0.02	5	0.05	5	0.04	1.26
Unrelated individuals	3	0.03	1	0.01	7	0.06	4.29
Non-local commercial banks	21	0.20	33	0.30	50	0.43	**13.01**
Manufacturer of farm machinery	1	0.01	4	0.04	2	0.02	1.84
Insurance company	10	0.09	16	0.14	8	0.07	3.21
Farm Service Agency	1	0.01	4	0.04	5	0.04	2.22

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 28d. Sources of Farm Credit by Region, 1996

	N.West		N.Central		N.East		Central		E.Central		S.East		W. River		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X^2
Self-financed from earnings	18	0.49	20	0.50	28	0.40	11	0.31	15	0.33	16	0.34	25	0.40	**14.33**
Other farmers	0	0.00	1	0.03	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	**15.05**
Local commercial bank	0	0.54	23	0.58	46	0.66	25	0.69	30	0.67	34	0.72	30	0.48	**19.81**
Input retailer	1	0.03	3	0.08	8	0.11	4	0.11	6	0.13	6	0.13	4	0.06	**10.76**
Grain or feed dealer	4	0.11	4	0.10	4	0.06	4	0.11	1	0.02	4	0.09	8	0.13	**10.08**
Farm Credit System	13	0.35	10	0.25	20	0.29	12	0.33	21	0.47	17	0.36	23	0.37	**12.59**
Other	3	0.08	7	0.18	10	0.14	5	0.14	8	0.18	7	0.15	3	0.05	**12.31**
Family loans	0	0.00	2	0.05	3	0.04	3	0.08	0	0.00	3	0.06	1	0.02	**17.71**
Unrelated individuals	2	0.05	1	0.03	2	0.03	0	0.00	1	0.02	1	0.02	4	0.06	**9.48**
Non-local commercial banks	9	0.24	16	0.40	20	0.29	14	0.39	13	0.29	16	0.34	15	0.24	**11.78**
Manufacturer of farm machinery	1	0.03	1	0.03	2	0.03	0	0.00	1	0.02	1	0.02	1	0.02	2.90
Insurance company	0	0.00	3	0.08	7	0.10	4	0.11	6	0.13	5	0.11	10	0.16	**17.66**
Farm Service Agency	3	0.08	2	0.05	0	0.00	3	0.08	0	0.00	2	0.04	0	0.00	**23.74**

Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78

Table 29a. Weighted Average of Response to "Reasons for Using Non-traditional Lenders," 1996

	Weighted Average
Require less financial information	5.58
Line of credit is to large for local lenders	8.52
Lower interest rates	2.85
Repayment schedule timed to meet cash flow	4.86
Personal relationship with retailer	5.42
Location	6.06
Faster decisions	5.35
Flexibility in event of repayment problems	6.05
Ability to fix interest rates	4.76
Get discounts on purchases	5.67

1 is most important and 10 is least important.

Table 29b. Weighted Average of Response to "Reasons for Using Non-traditional Lenders" by Organization, 1996

	Sole Pro	Partnerships	Corporations	X^2
Require less financial information	5.63	5.44	5.79	**31.73**
Line of credit is to large for local lenders	8.60	8.23	9.15	14.35
Lower interest rates	2.93	2.75	2.43	18.06
Repayment schedule timed to meet cash flow	4.83	4.78	5.50	14.40
Personal relationship with retailer	5.31	5.75	4.92	13.25
Location	6.02	6.16	6.00	12.19
Faster decisions	5.07	5.84	5.71	21.04
Flexibility in event of repayment problems	6.26	5.69	5.79	22.79
Ability to fix interest rates	4.75	4.81	4.69	18.03
Get discounts on purchases	4.32	4.79	3.77	21.49

Critical X^2 at 18 degrees of freedom and 95 % confidence level = 28.90
Critical X^2 at 18 degrees of freedom and 90 % confidence level = 25.99

Table 29c. Weighted Average of Response to "Reasons for Using Non-traditional Lenders by Size, 1996

	Small	Medium	Large	X^2
Require less financial information	5.13	5.91	5.61	20.46
Line of credit is to large for local lenders	9.16	8.37	8.23	17.15
Lower interest rates	3.42	2.84	2.50	23.44
Repayment schedule timed to meet cash flow	4.80	5.07	4.71	15.09
Personal relationship with retailer	4.82	5.61	5.65	17.17
Location	5.17	6.75	6.12	**32.25**
Faster decisions	5.06	5.13	5.72	17.40
Flexibility in event of repayment problems	5.81	5.94	6.26	7.24
Ability to fix interest rates	5.02	4.57	4.79	21.42
Get discounts on purchases	4.76	3.89	4.69	14.73

Critical X^2 at 18 degrees of freedom and 95 % confidence level = 28.90
Critical X^2 at 18 degrees of freedom and 90 % confidence level = 25.99

Table 29d. Weighted Average of Response to "Reasons for Using Non-traditional Lenders" by Region, 1996

	N.West	N.Central	N.East	Central	E. Central	S. East	W.River	X^2
Require less financial information	5.70	4.33	6.32	5.24	6.71	5.44	4.88	56.79
Line of credit is to large for local lenders	9.40	8.36	8.65	8.50	8.18	8.16	8.62	54.78
Lower interest rates	3.00	2.96	1.98	2.17	2.94	3.14	3.75	49.20
Repayment schedule timed to meet cash flow	4.73	5.09	4.76	4.50	5.00	5.09	4.85	30.49
Personal relationship with retailer	3.95	5.64	5.39	6.45	4.97	6.09	5.44	63.26
Location	4.80	5.57	6.14	6.36	6.15	6.72	6.11	66.61
Faster decisions	5.52	5.65	5.84	5.68	5.17	4.91	4.88	43.34
Flexibility in event of repayment problems	6.11	5.86	6.11	6.23	6.24	5.94	5.83	51.08
Ability to fix interest rates	4.75	5.24	4.87	3.87	4.97	4.45	5.11	43.32
Get discounts on purchases	5.81	5.20	3.58	5.00	3.69	4.97	3.84	65.96

Critical X^2 at 36 degrees of freedom and 95 % confidence level = 73.29
Critical X^2 at 36 degrees of freedom and 90 % confidence level = 69.41

Table 30a. Financial Services Used by North Dakota Farmers, 1996

	Num	Freq
Tax Accounting services	77	0.23
Marketing advisory services	32	0.09
Offer wire transfer of funds	40	0.12
Business management consulting	36	0.11
Investment services	49	0.14
Short-term equipment rental	29	0.09
Estate planning and trust services	46	0.14
Equipment leasing	40	0.12
Insurance services	105	0.31
Other	18	0.05

Table 30b. Financial Services Used by North Dakota Farmers by Organization, 1996

	Sole Pro		Partnerships		Corporations		
	Num	Freq	Num	Freq	Num	Freq	X^2
Tax Accounting services	50	0.23	20	0.21	6	0.26	0.66
Marketing advisory services	21	0.10	10	0.11	1	0.04	3.04
Offer wire transfer of funds	20	0.09	15	0.16	4	0.17	3.13
Business management consulting	24	0.11	9	0.10	2	0.09	0.32
Investment services	25	0.12	20	0.21	3	0.13	4.26
Short-term equipment rental	14	0.06	14	0.15	1	0.04	**7.96**
Estate planning and trust services	24	0.11	17	0.18	4	0.17	2.29
Equipment leasing	20	0.09	15	0.16	4	0.17	3.13
Insurance services	62	0.29	35	0.37	6	0.26	3.22
Other	9	0.04	7	0.07	2	0.09	1.75

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 30c. Financial Services Used by North Dakota Farmers by Size, 1996

	Small		Medium		Large		
	Num	Freq	Num	Freq	Num	Freq	X^2
Tax Accounting services	20	0.19	26	0.23	29	0.25	1.24
Marketing advisory services	6	0.06	14	0.13	12	0.10	2.97
Offer wire transfer of funds	14	0.13	14	0.13	12	0.10	0.41
Business management consulting	10	0.09	14	0.13	11	0.09	0.73
Investment services	10	0.09	19	0.17	19	0.16	3.01
Short-term equipment rental	7	0.07	7	0.06	14	0.12	2.79
Estate planning and trust services	15	0.14	12	0.11	18	0.16	0.99
Equipment leasing	7	0.07	14	0.13	18	0.16	4.10
Insurance services	23	0.21	38	0.34	43	0.37	**6.44**
Other	7	0.07	6	0.05	4	0.03	1.01

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 30d. Financial Services Used by North Dakota Farmers by Region, 1996

	N.West		N.Central		N. East		Central		E.Central		S.East		W.River		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X^2
Tax Accounting services	4	0.11	10	0.25	17	0.24	6	0.17	15	0.33	10	0.21	15	0.24	**17.43**
Marketing advisory services	3	0.08	5	0.13	6	0.09	2	0.06	8	0.18	5	0.11	3	0.05	**13.52**
Offer wire transfer of funds	3	0.08	4	0.10	10	0.14	5	0.14	6	0.13	5	0.11	7	0.11	3.03
Business management consulting	3	0.08	3	0.08	9	0.13	6	0.17	7	0.16	4	0.09	4	0.06	10.74
Investment services	5	0.14	5	0.13	16	0.23	7	0.19	5	0.11	7	0.15	4	0.06	**14.25**
Short-term equipment rental	1	0.03	3	0.08	8	0.11	1	0.03	6	0.13	7	0.15	3	0.05	**20.30**
Estate planning and trust services	5	0.14	4	0.10	10	0.14	9	0.25	9	0.20	4	0.09	5	0.08	**19.57**
Equipment leasing	2	0.05	2	0.05	11	0.16	5	0.14	10	0.22	6	0.13	4	0.06	**23.81**
Insurance services	10	0.27	12	0.30	26	0.37	15	0.42	16	0.36	13	0.28	13	0.21	**13.90**
Other	1	0.03	4	0.10	2	0.03	3	0.08	2	0.04	2	0.04	4	0.06	8.95

Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 10.65

Table 31. North Dakota Farmers' Responses to "It Makes Good Sense to Use the Dealer and Manufacturer Credit That is Available"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.049	0.089	0.371	0.322	0.169
Organization					
Sole	0.043	0.091	0.383	0.297	0.187
Part	0.066	0.077	0.319	0.396	0.143
Corp	0.000	0.136	0.409	0.318	0.136
Calculated X^2 at 2 degrees of freedom = 15.43					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.088	0.088	0.324	0.255	0.245
Medium	0.055	0.083	0.376	0.394	0.092
Large	0.009	0.096	0.409	0.313	0.174
Calculated X^2 at 2 degrees of freedom = 7.796					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.121	0.091	0.333	0.242	0.212
North Central	0.026	0.053	0.342	0.421	0.158
North East	0.015	0.103	0.352	0.309	0.221
Central	0.028	0.028	0.361	0.389	0.194
East Central	0.022	0.089	0.400	0.422	0.067
South East	0.067	0.089	0.467	0.267	0.111
West River	0.082	0.131	0.344	0.246	0.197
Calculated X^2 at 6 degrees of freedom = 13.38					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 32. North Dakota Farmers' Responses to "I Always Include My Lender in Discussions About Important Business Decisions I am Considering"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.090	0.136	0.226	0.269	0.279
Organization					
Sole	0.073	0.160	0.175	0.306	0.286
Part	0.152	0.109	0.272	0.185	0.283
Corp	0.000	0.048	0.429	0.333	0.190
Calculated X^2 at 2 degrees of freedom = 8.76					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.090	0.100	0.260	0.260	0.290
Medium	0.092	0.174	0.183	0.294	0.257
Large	0.088	0.132	0.237	0.254	0.289
Calculated X^2 at 2 degrees of freedom = 3.49					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.152	0.030	0.242	0.273	0.303
North Central	0.026	0.184	0.237	0.211	0.342
North East	0.147	0.088	0.294	0.235	0.235
Central	0.028	0.222	0.167	0.278	0.306
East Central	0.045	0.159	0.182	0.341	0.273
South East	0.089	0.200	0.200	0.333	0.178
West River	0.102	0.102	0.220	0.237	0.339
Calculated X^2 at 6 degrees of freedom = 47.10					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 33. Amount of Additional Debt That Farmers Would be Comfortable With, 1996

	None	$1,000-$50,000	$51,000-$100,000	$101,000-$250,000	$251,000-$500,000	$501,000-$1,000,000	Over $1,000,000
	Number of responses (frequencies)						
All	85	69	71	64	33	8	5
	0.25	0.21	0.21	0.19	0.10	0.02	0.01
Organization							
Sole	57	48	52	40	12	5	1
	0.27	0.23	0.25	0.19	0.06	0.02	0.00
Part	19	15	18	19	16	3	4
	0.21	0.16	0.20	0.21	0.18	0.03	0.04
Corp	6	6	1	5	4	0	0
	0.27	0.27	0.05	0.23	0.18	0.00	0.00
Calculated X^2 at 12 degrees of freedom = 34.83							
Critical X^2 at 12 degrees of freedom and 95 % confidence level = 21.00							
Critical X^2 at 12 degrees of freedom and 90 % confidence level = 18.55							
Size							
Small	41	33	20	7	4	0	1
	0.39	0.31	0.19	0.07	0.04	0.00	0.01
Medium	22	25	35	18	9	3	1
	0.19	0.22	0.31	0.16	0.08	0.03	0.01
Large	21	10	15	39	20	5	3
	0.19	0.09	0.13	0.35	0.18	0.04	0.03
Calculated X^2 at 12 degrees of freedom = 66.93							
Critical X^2 at 12 degrees of freedom and 95 % confidence level =21.00							
Critical X^2 at 12 degrees of freedom and 90 % confidence level = 18.55							
Region							
North West	8	8	9	6	2	0	0
	0.24	0.24	0.27	0.18	0.06	0.00	0.00
North Central	11	8	4	10	7	2	2
	0.25	0.18	0.09	0.23	0.16	0.05	0.05
North East	20	12	13	14	5	4	1
	0.29	0.17	0.19	0.20	0.07	0.06	0.01
Central	5	8	13	8	1	1	0
	0.14	0.22	0.36	0.22	0.03	0.03	0.00
East Central	10	4	14	6	9	1	1
	0.22	0.09	0.31	0.13	0.20	0.02	0.02
South East	10	15	6	11	4	0	1
	0.21	0.32	0.13	0.23	0.09	0.00	0.02
West River	21	13	12	9	5	0	0
	0.35	0.22	0.20	0.15	0.08	0.00	0.00
Calculated X^2 at 36 degrees of freedom and 95 % confidence level = 107.49							
Critical X^2 at 36 degrees of freedom and 95 % confidence level = 49.80							
Critical X^2 at 36 degrees of freedom and 90 % confidence level = 46.06							

Table 34a. Reasons Given for Expansion Plans of North Dakota Farmers, 1996

	Num	Freq
Does not apply to my operation	155	0.46
To accommodate a family member	46	0.14
To accommodate a non-family member	6	0.02
To generate larger annual sales	127	0.38
To capture economies of scale	75	0.22
To obtain more favorable marketing contracts	30	0.09
Others	17	0.05

Table 34b. Reasons Given for Expansion Plans of North Dakota Farmers by Organization, 1996

	Sole Pro		Partnerships		Corporation		
	Num	Freq	Num	Freq	Num	Freq	X^2
Does not apply to my operation	106	0.49	39	0.41	8	0.35	4.07
To accommodate a family member	25	0.12	18	0.19	2	0.09	5.13
To accommodate a non-family member	2	0.01	3	0.03	0	0.00	3.99
To generate larger annual sales	84	0.39	32	0.34	11	0.48	4.09
To capture economies of scale	43	0.20	26	0.28	6	0.26	1.86
To obtain more favorable marketing contracts	14	0.06	13	0.14	3	0.13	3.33
Others	10	0.05	6	0.06	1	0.04	0.51

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 34c. Reasons Given for Expansion Plans of North Dakota Farmers by Size, 1996

	Small		Medium		Large		
	Num	Freq	Num	Freq	Num	Freq	X2
Does not apply to my operation	59	0.55	45	0.41	48	0.41	5.41
To accommodate a family member	6	0.06	21	0.19	19	0.16	**8.48**
To accommodate a non-family member	1	0.01	3	0.03	2	0.02	0.89
To generate larger annual sales	28	0.26	53	0.48	46	0.40	**10.10**
To capture economies of scale	9	0.08	24	0.22	42	0.36	**22.47**
To obtain more favorable marketing contracts	3	0.03	6	0.05	21	0.18	**16.75**
Others	8	0.07	3	0.03	6	0.05	2.35

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 34d. Reasons Given for Expansion Plans of North Dakota Farmers by Region, 1996

	N.West		N.Central		N.East		Central		E.Central		S.East		W.River		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X2
Does not apply to my operation	20	0.54	14	0.35	31	0.44	18	0.50	18	0.40	23	0.49	31	0.50	**10.68**
To accommodate a family member	4	0.11	11	0.28	9	0.13	3	0.08	7	0.16	6	0.13	6	0.10	**20.72**
To accommodate a non-family member	0	0.00	0	0.00	0	0.00	2	0.06	2	0.04	2	0.04	0	0.00	**19.90**
To generate larger annual sales	12	0.32	17	0.43	24	0.34	14	0.39	21	0.47	16	0.34	22	0.35	6.92
To capture economies of scale	7	0.19	11	0.28	11	0.16	8	0.22	13	0.29	16	0.34	9	0.15	**17.95**
To obtain more favorable marketing contracts	3	0.08	2	0.05	5	0.07	3	0.08	7	0.16	5	0.11	5	0.08	8.23
Others	3	0.08	3	0.08	1	0.01	4	0.11	1	0.02	1	0.02	4	0.06	**15.58**

Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78

Table 35. North Dakota Farmers' Responses to "Farmers Need to Put Their Profits Into Off Farm Investments"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.125	0.173	0.359	0.243	0.100
Organization					
Sole	0.118	0.166	0.389	0.237	0.090
Part	0.130	0.196	0.293	0.283	0.098
Corp	0.136	0.182	0.318	0.182	0.182

Calculated X^2 at 2 degrees of freedom = 2.74
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.165	0.184	0.262	0.282	0.107
Medium	0.117	0.144	0.405	0.225	0.108
Large	0.096	0.191	0.400	0.226	0.087

Calculated X^2 at 2 degrees of freedom = 3.58
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.118	0.118	0.294	0.412	0.059
North Central	0.132	0.211	0.395	0.215	0.053
North East	0.086	0.186	0.371	0.257	0.100
Central	0.083	0.167	0.500	0.167	0.083
East Central	0.200	0.133	0.400	0.156	0.111
South East	0.089	0.200	0.378	0.267	0.067
West River	0.164	0.180	0.230	0.246	0.180

Calculated X^2 at 6 degrees of freedom = 13.97
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 36. North Dakota Farmers' Responses to "I Can Build Equity More Quickly by Borrowing"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.175	0.185	0.382	0.185	0.074
Organization					
Sole	0.179	0.188	0.386	0.184	0.063
Part	0.130	0.196	0.370	0.196	0.109
Corp	0.227	0.136	0.409	0.182	0.045
Calculated X^2 at 2 degrees of freedom = 3.60					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.198	0.149	0.406	0.168	0.079
Medium	0.173	0.182	0.418	0.200	0.027
Large	0.158	0.219	0.325	0.184	0.114
Calculated X^2 at 2 degrees of freedom = 1.73					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.242	0.121	0.364	0.182	0.091
North Central	0.162	0.162	0.459	0.162	0.054
North East	0.261	0.188	0.348	0.145	0.058
Central	0.028	0.278	0.361	0.278	0.056
East Central	0.156	0.111	0.356	0.244	0.133
South East	0.156	0.289	0.356	0.133	0.067
West River	0.167	0.150	0.433	0.183	0.067
Calculated X^2 at 6 degrees of freedom = 30.49					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 37. North Dakota Farmers' Responses to "Farm Lenders Don't Seem to be Competing Against Each Other Enough on Interest Rates"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.059	0.087	0.254	0.254	0.347
Organization					
Sole	0.058	0.083	0.218	0.291	0.350
Part	0.066	0.121	0.286	0.187	0.341
Corp	0.045	0.000	0.409	0.227	0.318

Calculated X^2 at 2 degrees of freedom = 6.58
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Size					
Small	0.060	0.080	0.190	0.240	0.430
Medium	0.037	0.083	0.241	0.315	0.324
Large	0.078	0.096	0.322	0.209	0.296

Calculated X^2 at 2 degrees of freedom = 2.24
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Region					
North West	0.088	0.029	0.118	0.382	0.382
North Central	0.000	0.079	0.395	0.105	0.421
North East	0.074	0.088	0.265	0.206	0.368
Central	0.000	0.086	0.257	0.315	0.343
East Central	0.089	0.111	0.333	0.200	0.267
South East	0.068	0.114	0.205	0.386	0.227
West River	0.068	0.085	0.203	0.237	0.407

Calculated X^2 at 6 degrees of freedom =21.11
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 38. North Dakota Farmers' Responses to "It is Tough to Find a Lender Who Understands My Vision for My Business"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.274	0.311	0.228	0.095	0.092
Organization					
Sole	0.287	0.306	0.220	0.086	0.100
Part	0.256	0.344	0.222	0.111	0.067
Corp	0.227	0.227	0.364	0.136	0.045
Calculated X^2 at 2 degrees of freedom = 1.38					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.961					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.208	0.257	0.257	0.099	0.178
Medium	0.220	0.376	0.275	0.092	0.037
Large	0.383	0.296	0.157	0.096	0.070
Calculated X^2 at 2 degrees of freedom = 5.72					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.265	0.265	0.265	0.118	0.088
North Central	0.297	0.270	0.216	0.108	0.108
North East	0.333	0.246	0.261	0.058	0.101
Central	0.306	0.306	0.222	0.083	0.083
East Central	0.227	0.432	0.227	0.114	0.000
South East	0.178	0.400	0.200	0.089	0.133
West River	0.283	0.283	0.200	0.117	0.117
Calculated X^2 at 6 degrees of freedom = 16.33					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 39. North Dakota Farmers' Responses to "It is Important to Me That My Lender Knows Me and Provides Me With Personalized Service"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.025	0.025	0.074	0.300	0.576
Organization					
Sole	0.024	0.024	0.058	0.343	0.551
Part	0.033	0.033	0.121	0.242	0.571
Corp	0.000	0.000	0.048	0.143	0.810
Calculated X^2 at 2 degrees of freedom =8.56					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.050	0.010	0.040	0.307	0.594
Medium	0.028	0.009	0.138	0.330	0.495
Large	0.000	0.053	0.044	0.265	0.637
Calculated X^2 at 2 degrees of freedom =8.87					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.000	0.031	0.063	0.250	0.656
North Central	0.026	0.053	0.053	0.263	0.605
North East	0.030	0.000	0.119	0.284	0.567
Central	0.000	0.056	0.083	0.361	0.500
East Central	0.044	0.044	0.044	0.311	0.556
South East	0.022	0.022	0.044	0.333	0.578
West River	0.033	0.000	0.083	0.300	0.583
Calculated X^2 at 6 degrees of freedom = 15.88					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 40. North Dakota Farmers' Responses to "It is Tough to Find a Lender Who Understands the Use of Risk Management Tools (hedging, options) for My Operation"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.097	0.245	0.395	0.128	0.135
Organization					
Sole	0.083	0.260	0.422	0.123	0.113
Part	0.124	0.236	0.281	0.169	0.191
Corp	0.091	0.182	0.545	0.045	0.136
Calculated X^2 at 2 degrees of freedom = 15.62					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.090	0.190	0.440	0.120	0.160
Medium	0.103	0.215	0.449	0.150	0.084
Large	0.098	0.321	0.304	0.116	0.161
Calculated X^2 at 2 degrees of freedom = 19.40					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.091	0.212	0.364	0.152	0.182
North Central	0.026	0.132	0.474	0.079	0.289
North East	0.090	0.224	0.448	0.149	0.090
Central	0.083	0.250	0.444	0.139	0.083
East Central	0.114	0.250	0.318	0.182	0.136
South East	0.238	0.333	0.286	0.071	0.071
West River	0.051	0.288	0.407	0.119	0.136
Calculated X^2 at 6 degrees of freedom = 49.27					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 41. North Dakota Farmers' Responses to "I'll Keep My Business With a Local Bank Even if the Interest Rates are a Little Higher"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.155	0.177	0.259	0.250	0.159
Organization					
Sole	0.157	0.190	0.243	0.248	0.162
Part	0.185	0.152	0.283	0.239	0.141
Corp	0.000	0.182	0.364	0.318	0.136
Calculated X^2 at 2 degrees of freedom = 18.82					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.147	0.225	0.216	0.196	0.216
Medium	0.189	0.180	0.198	0.306	0.126
Large	0.130	0.130	0.357	0.243	0.139
Calculated X^2 at 2 degrees of freedom =1.67					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.118	0.147	0.265	0.353	0.118
North Central	0.184	0.184	0.263	0.211	0.158
North East	0.186	0.186	0.229	0.271	0.129
Central	0.139	0.222	0.306	0.222	0.111
East Central	0.156	0.178	0.267	0.244	0.156
South East	0.133	0.111	0.311	0.267	0.178
West River	0.150	0.200	0.217	0.200	0.233
Calculated X^2 at 6 degrees of freedom = 3.31					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 42. North Dakota Farmers' Responses to "I Don't Care Who I Borrow Money From as Long as I get the Most Favorable Rates and Terms"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.163	0.276	0.212	0.187	0.163
Organization					
Sole	0.171	0.267	0.219	0.176	0.167
Part	0.132	0.286	0.209	0.190	0.143
Corp	0.190	0.333	0.143	0.066	0.009
Calculated X^2 at 2 degrees of freedom = 11.63					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.255	0.245	0.108	0.167	0.225
Medium	0.090	0.306	0.270	0.171	0.162
Large	0.150	0.274	0.248	0.221	0.106
Calculated X^2 at 2 degrees of freedom = 15.43					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.147	0.353	0.235	0.176	0.088
North Central	0.184	0.158	0.316	0.158	0.184
North East	0.130	0.275	0.275	0.159	0.159
Central	0.083	0.361	0.194	0.222	0.139
East Central	0.222	0.311	0.178	0.156	0.133
South East	0.136	0.295	0.159	0.227	0.182
West River	0.217	0.217	0.133	0.217	0.217
Calculated X^2 at 6 degrees of freedom = 38.56					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 43. North Dakota Farmers' Responses to "I Would be Comfortable Doing all my Borrowing via Computer, Mail Order, and/or Telephone, Rather Than in Person"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.566	0.202	0.092	0.092	0.049
Organization					
Sole	0.560	0.230	0.081	0.077	0.053
Part	0.543	0.163	0.109	0.130	0.054
Corp	0.682	0.136	0.091	0.091	0.000
Calculated X^2 at 2 degrees of freedom = 70.65					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.612	0.165	0.126	0.019	0.078
Medium	0.606	0.229	0.083	0.073	0.009
Large	0.487	0.209	0.070	0.174	0.061
Calculated X^2 at 2 degrees of freedom = 53.76					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.529	0.176	0.088	0.118	0.088
North Central	0.711	0.158	0.079	0.053	0.000
North East	0.609	0.188	0.072	0.087	0.043
Central	0.444	0.194	0.278	0.056	0.028
East Central	0.533	0.244	0.089	0.089	0.044
South East	0.477	0.250	0.000	0.182	0.091
West River	0.607	0.197	0.082	0.066	0.049
Calculated X^2 at 6 degrees of freedom = 123.50					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 44. North Dakota Farmers' Responses to "Now is a Good Time to Lock in Long-term Interest Rates"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.046	0.155	0.410	0.249	0.140
Organization					
Sole	0.047	0.152	0.408	0.261	0.133
Part	0.054	0.174	0.380	0.250	0.141
Corp	0.000	0.045	0.591	0.182	0.182
Calculated X^2 at 2 degrees of freedom = 16.27					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.087	0.155	0.379	0.223	0.155
Medium	0.009	0.189	0.495	0.198	0.108
Large	0.043	0.122	0.357	0.322	0.157
Calculated X^2 at 2 degrees of freedom = 21.99					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.088	0.265	0.335	0.206	0.088
North Central	0.026	0.079	0.447	0.289	0.158
North East	0.014	0.171	0.443	0.229	0.143
Central	0.000	0.139	0.528	0.278	0.056
East Central	0.133	0.111	0.422	0.222	0.111
South East	0.022	0.178	0.378	0.289	0.133
West River	0.049	0.148	0.328	0.246	0.230
Calculated X^2 at 6 degrees of freedom = 55.86					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 45. North Dakota Farmers' Responses to "Lenders Expect Me to Keep too Many Farm Records for My Liking"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.194	0.318	0.269	0.133	0.086
Organization					
Sole	0.202	0.322	0.255	0.125	0.096
Part	0.176	0.286	0.308	0.165	0.066
Corp	0.143	0.429	0.286	0.095	0.048
Calculated X^2 at 2 degrees of freedom = 19.66					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.176	0.225	0.333	0.127	0.137
Medium	0.209	0.391	0.200	0.136	0.064
Large	0.196	0.330	0.277	0.134	0.063
Calculated X^2 at 2 degrees of freedom = 9.51					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.121	0.424	0.242	0.152	0.061
North Central	0.237	0.289	0.211	0.158	0.105
North East	0.116	0.304	0.348	0.145	0.087
Central	0.194	0.361	0.333	0.056	0.056
East Central	0.311	0.311	0.222	0.111	0.044
South East	0.214	0.381	0.167	0.119	0.119
West River	0.197	0.230	0.295	0.164	0.115
Calculated X^2 at 6 degrees of freedom = 35.73					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 46. North Dakota Farmers' Responses to "I Want to Deal With a Financial Institution that Offers a Broad Range of Services Besides Farm Loans, Such as Estate Planning or Investments Like Mutual Funds"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.083	0.169	0.334	0.282	0.132
Organization					
Sole	0.095	0.162	0.352	0.276	0.114
Part	0.067	0.167	0.289	0.322	0.156
Corp	0.045	0.227	0.273	0.227	0.227
Calculated X^2 at 2 degrees of freedom = 18.14					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Size					
Small	0.109	0.139	0.327	0.287	0.139
Medium	0.055	0.182	0.345	0.300	0.118
Large	0.087	0.183	0.330	0.261	0.139
Calculated X^2 at 2 degrees of freedom = 10.60					
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96					
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61					
Region					
North West	0.118	0.176	0.324	0.235	0.147
North Central	0.105	0.132	0.342	0.211	0.211
North East	0.071	0.143	0.314	0.300	0.171
Central	0.028	0.139	0.528	0.194	0.111
East Central	0.111	0.178	0.289	0.311	0.111
South East	0.044	0.267	0.222	0.378	0.089
West River	0.103	0.155	0.362	0.293	0.086
Calculated X^2 at 6 degrees of freedom = 29.70					
Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59					
Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65					

Table 47a. Financial Services Desired by North Dakota Farmers, 1996

	Num	Freq
Tax Accounting services	37	0.11
Marketing advisory services	63	0.19
Offer wire transfer of funds	17	0.05
Business management consulting	55	0.16
Investment services	37	0.11
Short-term equipment rental	55	0.16
Estate planning and trust services	45	0.13
Equipment leasing	44	0.13
Insurance services	13	0.04
Other	3	0.01

Table 47b. Financial Services Desired by North Dakota Farmers by Organization, 1996

	Sole Pro		Partnerships		Corporation		
	Num	Freq	Num	Freq	Num	Freq	X^2
Tax Accounting services	21	0.10	14	0.15	2	0.09	2.25
Marketing advisory services	45	0.21	12	0.13	6	0.26	5.65
Offer wire transfer of funds	9	0.04	6	0.06	2	0.09	1.73
Business management consulting	26	0.12	22	0.23	6	0.26	**6.89**
Investment services	24	0.11	12	0.13	1	0.04	4.65
Short-term equipment rental	34	0.16	16	0.17	4	0.17	0.12
Estate planning and trust services	25	0.12	18	0.19	2	0.09	5.13
Equipment leasing	27	0.12	15	0.16	1	0.04	**7.29**
Insurance services	11	0.05	2	0.02	0	0.00	5.53
Other	0	0.00	3	0.03	0	0.00	**6.45**

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99

Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 47c. Financial Services Desired by North Dakota Farmers by Size, 1996

	Small		Medium		Large		
	Num	Freq	Num	Freq	Num	Freq	X^2
Tax Accounting services	13	0.12	9	0.08	14	0.12	1.11
Marketing advisory services	16	0.15	25	0.23	22	0.19	1.88
Offer wire transfer of funds	7	0.07	5	0.05	4	0.03	1.08
Business management consulting	14	0.13	16	0.14	24	0.21	2.45
Investment services	16	0.15	9	0.08	12	0.10	2.46
Short-term equipment rental	20	0.19	14	0.13	21	0.18	1.63
Estate planning and trust services	16	0.15	12	0.11	16	0.14	0.79
Equipment leasing	14	0.13	14	0.13	16	0.14	0.06
Insurance services	5	0.05	6	0.05	2	0.02	2.01
Other	0	0.00	0	0.00	3	0.03	5.22

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99

Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 47d. Financial Services Desired by North Dakota Farmers by Region, 1996

	N.West		N.Central		N.East		Central		E.Central		S.East		W.River		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X^2
Tax Accounting services	6	0.16	4	0.10	10	0.14	5	0.14	2	0.04	3	0.06	7	0.11	11.47
Marketing advisory services	8	0.22	8	0.20	12	0.17	9	0.25	11	0.24	7	0.15	8	0.13	8.29
Offer wire transfer of funds	3	0.08	3	0.08	2	0.03	1	0.03	4	0.09	3	0.06	1	0.02	10.20
Business management consulting	5	0.14	8	0.20	10	0.14	6	0.17	15	0.33	8	0.17	3	0.05	**31.28**
Investment services	4	0.11	6	0.15	4	0.06	5	0.14	5	0.11	7	0.15	5	0.08	7.47
Short-term equipment rental	10	0.27	8	0.20	9	0.13	4	0.11	10	0.22	3	0.06	10	0.16	**21.78**
Estate planning and trust services	6	0.16	9	0.23	7	0.10	4	0.11	5	0.11	7	0.15	7	0.11	9.87
Equipment leasing	6	0.16	9	0.23	7	0.10	4	0.11	7	0.16	2	0.04	8	0.13	**17.07**
Insurance services	0	0.00	1	0.03	1	0.01	4	0.11	2	0.04	2	0.04	3	0.05	**19.50**
Other	0	0.00	2	0.05	0	0.00	0	0.00	1	0.02	0	0.00	0	0.00	**22.02**

Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59

Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65

Table 48a. North Dakota Farmers' Reactions to Changes in Government Programs, 1996

	Num	Freq
Prompting farmers to diversify into livestock or new crops	81	0.24
Make farmers more optimistic about the future	84	0.25
Make farmers more cautious of debt	186	0.55
Prompting farmers to use marketing tools	78	0.23
Encourage farmers retirement	75	0.22
Encourage farmers to expand	56	0.17
Makes farmers to focus on earning a premium for products	138	0.41
Encourage farmers to diversify investments outside agriculture	127	0.38
Gives farmers incentives to contract his production	85	0.25
Has little impact	65	0.19
Other	8	0.02

Table 48b. North Dakota Farmers' Reactions to Changes in Government Programs by Organization, 1996

	Sole Pro		Partnerships		Corporation		
	Num	Freq	Num	Freq	Num	Freq	X^2
Prompting farmers to diversify into livestock or new crops	54	0.25	23	0.24	4	0.17	2.05
Make farmers more optimistic about the future	50	0.23	29	0.31	5	0.22	2.58
Make farmers more cautious of debt	120	0.55	50	0.53	13	0.57	0.23
Prompting farmers to use marketing tools	40	0.18	29	0.31	8	0.35	**7.22**
Encourage farmers retirement	48	0.22	21	0.22	5	0.22	0.01
Encourage farmers to expand	30	0.14	22	0.23	3	0.13	4.77
Makes farmers to focus on earning a premium for products	82	0.38	48	0.51	7	0.30	**9.13**
Encourage farmers to diversify investments outside agriculture	77	0.35	39	0.41	9	0.39	0.77
Gives farmers incentives to contract his production	54	0.25	25	0.27	5	0.22	0.66
Has little impact	45	0.21	16	0.17	4	0.17	0.56
Other	2	0.01	5	0.05	1	0.04	3.13

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99

Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 48c. North Dakota Farmers' Reactions to Changes in Government Programs by Size, 1996

	Small		Medium		Large		
	Num	Freq	Num	Freq	Num	Freq	X^2
Prompting farmers to diversify into livestock or new crops	21	0.20	34	0.31	24	0.21	4.08
Make farmers more optimistic about the future	20	0.19	30	0.27	33	0.28	2.97
Make farmers more cautious of debt	49	0.46	59	0.53	77	0.66	**8.90**
Prompting farmers to use marketing tools	7	0.07	32	0.29	38	0.33	**22.78**
Encourage farmers retirement	26	0.24	20	0.18	28	0.24	1.49
Encourage farmers to expand	9	0.08	19	0.17	27	0.23	**8.19**
Makes farmers to focus on earning a premium for products	26	0.24	52	0.47	59	0.51	**16.99**
Encourage farmers to diversify investments outside agriculture	24	0.22	50	0.45	51	0.44	**13.94**
Gives farmers incentives to contract his production	11	0.10	36	0.32	37	0.32	**17.10**
Has little impact	28	0.26	16	0.14	20	0.17	4.84
Other	2	0.02	3	0.03	3	0.03	0.18

Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.99

Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61

Table 48d. North Dakota Farmers' Reactions to Changes in Government Programs by Region, 1996

	N.West		N.Central		N.East		Central		E.Central		S.East		W.River		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X^2
Prompting farmers to diversify into livestock or new crops	8	0.22	13	0.33	19	0.27	10	0.28	10	0.22	8	0.17	13	0.21	8.89
Make farmers more optimistic about the future	4	0.11	9	0.23	13	0.19	11	0.31	13	0.29	14	0.30	20	0.32	**19.86**
Make farmers more cautious of debt	23	0.62	27	0.68	40	0.57	18	0.50	27	0.60	25	0.53	25	0.40	**19.33**
Prompting farmers to use marketing tools	4	0.11	8	0.20	14	0.20	12	0.33	17	0.38	14	0.30	9	0.15	**33.46**
Encourage farmers retirement	7	0.19	8	0.20	23	0.33	4	0.11	13	0.29	11	0.23	9	0.15	**20.98**
Encourage farmers to expand	6	0.16	11	0.28	7	0.10	7	0.19	6	0.13	9	0.19	10	0.16	**12.77**
Makes farmers to focus on earning a premium for products	11	0.30	22	0.55	22	0.31	9	0.53	21	0.47	24	0.51	19	0.31	**31.87**
Encourage farmers to diversify investments outside agriculture	12	0.32	19	0.48	24	0.34	15	0.42	19	0.42	21	0.45	17	0.27	**13.52**
Gives farmers incentives to contract his production	8	0.22	15	0.38	15	0.21	10	0.28	19	0.42	11	0.23	7	0.11	**33.93**
Has little impact	9	0.24	6	0.15	12	0.17	9	0.25	2	0.04	9	0.19	18	0.29	**25.58**
Other	1	0.03	3	0.08	2	0.03	0	0.00	1	0.02	0	0.00	1	0.02	**16.34**

Critical X^2 at 6 degrees of freedom and 95 % confidence level = 12.59

Critical X^2 at 6 degrees of freedom and 90 % confidence level = 10.65