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Analysis of Farm Financing and Risk Management for U.S. Farmers

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Marvin R. Duncan
Richard D. Taylor

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Abstract

Significant changes under the 1996 FAIR Act and 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 farmer plans regarding business expansion, timing of expansion, and expected financing of that business expansion and to analyze their financial services and risk management strategies.

The study was based on data from a nationwide survey of subscribers to *Top Operator* farm magazine. 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 country, 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

About 23% of the producers indicated they would be encouraged to retire due to changes in government programs. The producers in the Northeastern region viewed their retirement date earlier than the rest of the country, while those in the Western region viewed their retirement at a later date. The largest percentage of producers wanted to keep the farm in the family without a sale. 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 40% of the producers responded that they would use marketing tools for price protection due to the changes in government farm programs.

About 57% of the producers had a debt-to-asset ratio less than 25%, while 24% had a debt-to-asset ratio greater than 41%. Corporations debt-to-asset ratios tended to be higher than those for either sole proprietorships or partnerships. More than one-half of the producers felt they do not have too much debt in their operation and, at the same time, agreed that adding more debt is not a good idea.

Producers felt that business management skills are more important than production skills, and they 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. About 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 lower their per unit cost of production.

Producers primarily use local commercial banks for lending. The reasons for the using non-traditional lenders are lower interest rates, better repayment schedules, and discounts on purchases.

Most producers plan to expand production, except for wheat, milk, and fed beef producers, although 25% of the producers stated that they had no plans to expand. 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.

Analysis of Farm Financing and Risk Management
for U.S. Farmers

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

Introduction

Significant changes are occurring in the U.S. farm sector. These changes will affect both the source and the magnitude of the business and financial risks that farmers are required to manage. These 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 may 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 operations and financing and to examine their business plans. Specific objectives were (1) to identify farmer plans regarding business expansion, timing of expansion, and expected financing of that business expansion; (2) to examine 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 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 examine primary business adjustment issues confronting farmers.

The data were collected from a nationwide survey of *Top Operator* farm magazine subscribers. The survey was conducted by Rockwood Research and Marvin Duncan of North Dakota State University.

Statistical analysis was used to evaluate differences among farmers across regions of the country, types of farm businesses, and sizes of farm businesses. 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 category. In that case, questions were tested 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.

Demographic Characteristics

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[*]Koo and Duncan are professors and Taylor is a research associate in the Department of Agricultural Economics, North Dakota State University, Fargo.

Farm Size

Figure 1 shows the average size of all 897 farms responding to the survey. The sizes are the averages for producers involved in each enterprise. Corn producers have an average of 3,870 acres under production. The 1999 averages are producers' plans for production in that year. Producers of corn, soybeans, cotton, hogs, calves, and backgrounding plan to increase their production while those of wheat, milk, and fed cattle plan to decrease production.

The data also are sorted for farm size categorized by legal ownership type (Appendix Table 1). Sole proprietorships (281 farms) are smaller than either partnerships (268 farms) or corporations (100 farms), except for milk cows. Corporations are generally larger than either sole proprietorships or partnerships. Sole proprietorships plan to expand in corn, soybeans, cotton, hogs, calves, and backgrounding production. Partnerships plan to expand in all enterprises, except for fed beef. Corporations plan to expand in all enterprises, except for backgrounding calves.

The data also are sorted by size of farm operation. Small farms (302 farms), medium farms (299 farms), and large farms (296 farms) plan to expand in all enterprises except for fed beef.

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 2,000 units were small farms, farms with between 2,001 and 7,600 units were medium farms, and farms with over 7,600 units were large farms.

The United States is divided into five regions as shown in Figure 2. Region 1 (Western) consists of 177 farms located in Arizona, California, Colorado, Idaho, Montana, New Mexico, Oregon, Utah, Washington, and Wyoming. Region 2 (Great Plains) consists of 194 farms located in Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas. Region 3 (Cornbelt) consists of 276 farms located in Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Region 4 (Southeastern) consists of 205 farms located in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia. Region 5 (Northeastern) consists of 45 farms located in Delaware, Maine, Maryland, New Hampshire, New York, Pennsylvania, Vermont, and West Virginia.

Farms in the Western region are generally smaller than farms in all other regions, except for farms in the Northeastern region. Farms in the Western region plan to expand all enterprises, except for milk and fed beef. Farms in the Great Plains region plan to expand production of corn, cotton, milk, hogs, and calves. Farms in the Cornbelt plan to expand production of corn, wheat, milk, hogs, calves, and backgrounded calves. Farms in the Southeastern region plan to expand production of corn, cotton, milk, hogs, calves, and backgrounded calves. Farms in the Northeast region are the smallest, and its producers plan to expand production of corn, wheat, milk, hogs, calves, and backgrounded calves (Appendix Table 1).
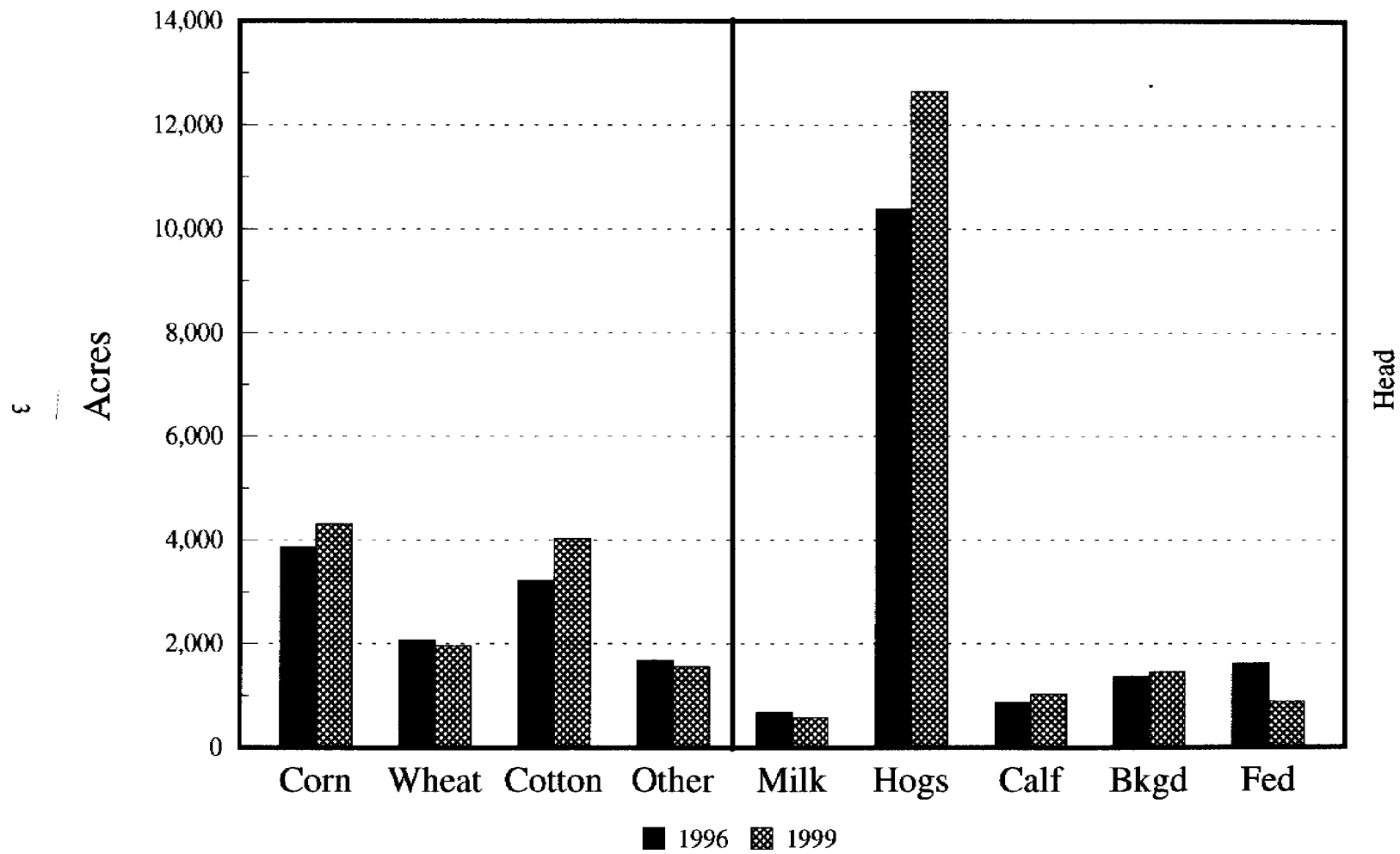
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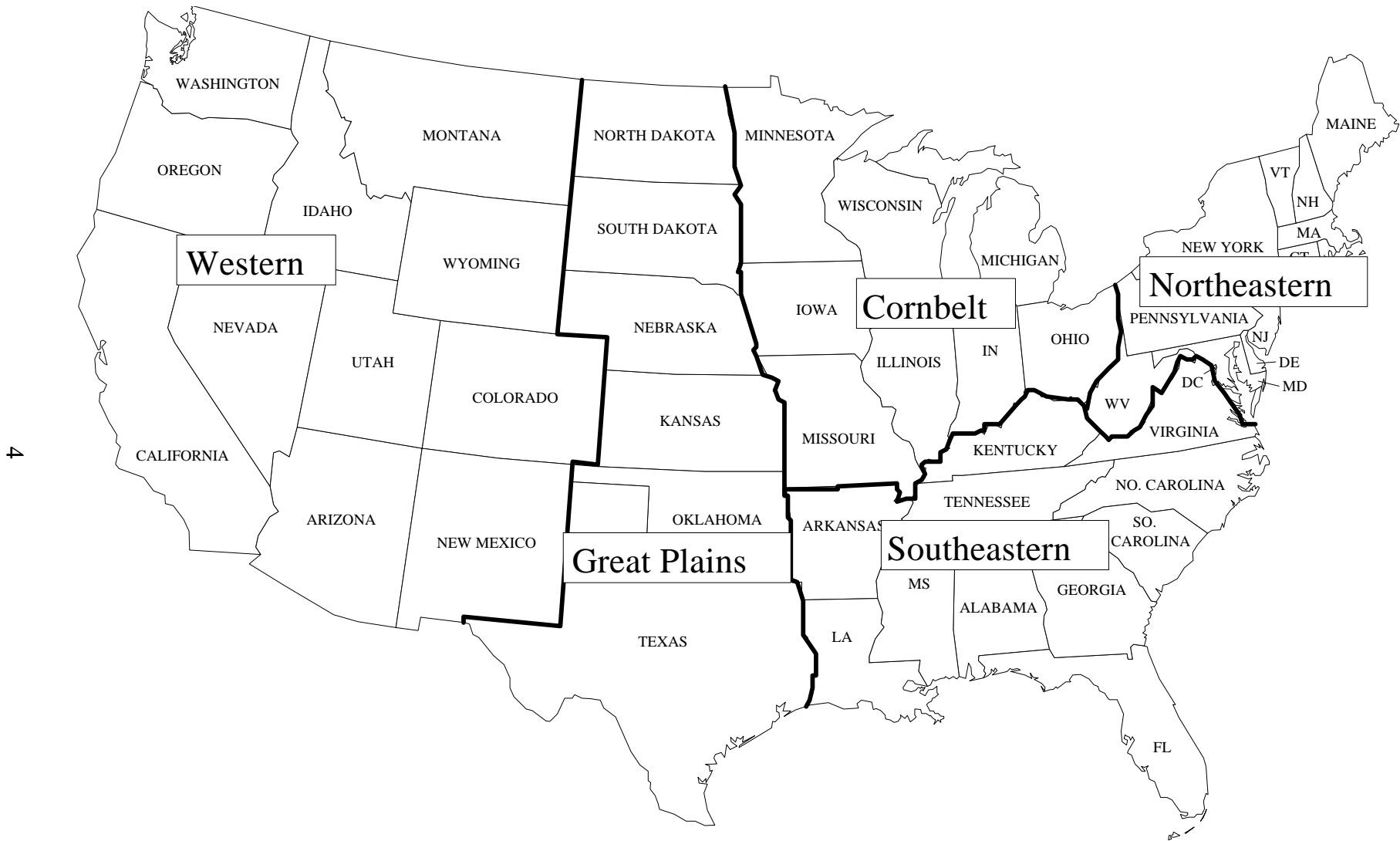
Figure 2. Regional Divisions of the United States

<u>Age</u>

Figure 3 shows the age distribution for producers. The differences in age distribution are not significant at the 95% confidence level, but the differences in age distribution are significant at the 90% confidence level when sorted by region. Northeastern producers tend to be older than the rest of the country, while producers in the Cornbelt and Southeastern regions tend to be younger than the rest of the country (Appendix Table 2).

<u>Education</u>

Figure 4 shows the education level of producers responding to the survey. Among the producers, 40% received at least a high school degree, 8% a technical degree, and 22% a college degree. The education levels did not differ significantly at the 95% confidence level when sorted by ownership type, size of farm, or region (Appendix Table 3).

<u>Ownership</u>

Figure 5 shows the legal ownership of the respondents. Twenty-five percent (230) did not identify the legal ownership of the farm. However, 43% of the respondents indicated that they are sole proprietors, 39% are family partnerships, and 28% are corporations. There were no significant differences when the data were sorted by size of farm or region (Appendix Table 4).

<u>Intergenerational Transfer of Farm Business</u>

<u>Retirement Plans</u>

Figure 6 shows the number of years producers plan to farm until retirement. The most frequent response (36%) was retiring 21 to 30 years from now. The number of years until retirement did not differ significantly at the 95% confidence level for respondents sorted by ownership type or farm size, but it is significant at the 90% confidence level for organization types (Appendix Table 5). Sole proprietorship producers will be farming longer than others. Producers in corporations will retire sooner than others.

The responses differ significantly among the regions at the 95% confidence level. In the Northeastern region, 45% of the farmers plan to retire within 10 years compared with 21% to 30% for the other regions. In the Cornbelt region, 18% of the farmers plan to retire after more than 31 years, compared to 12% to 16% for the other regions.
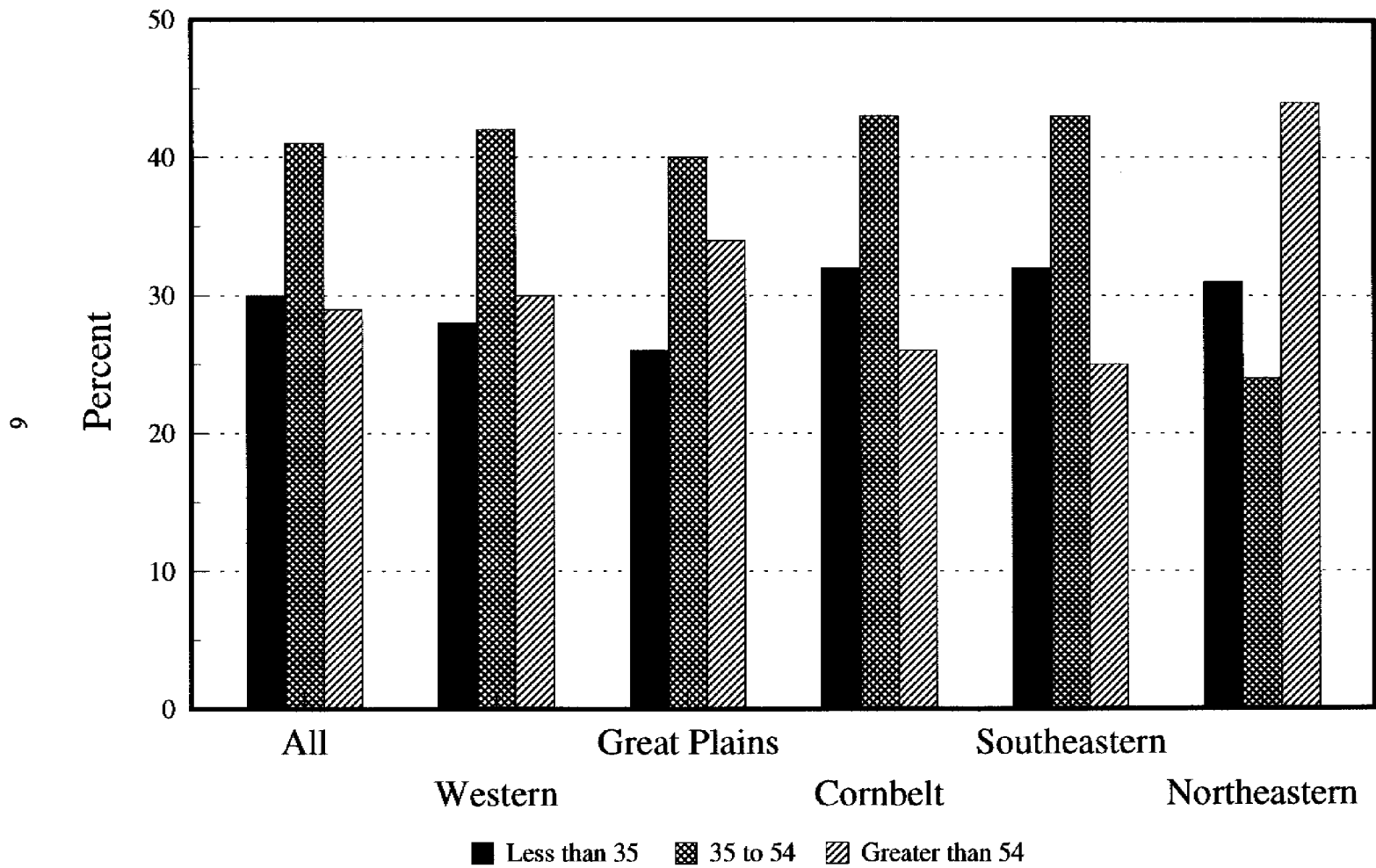
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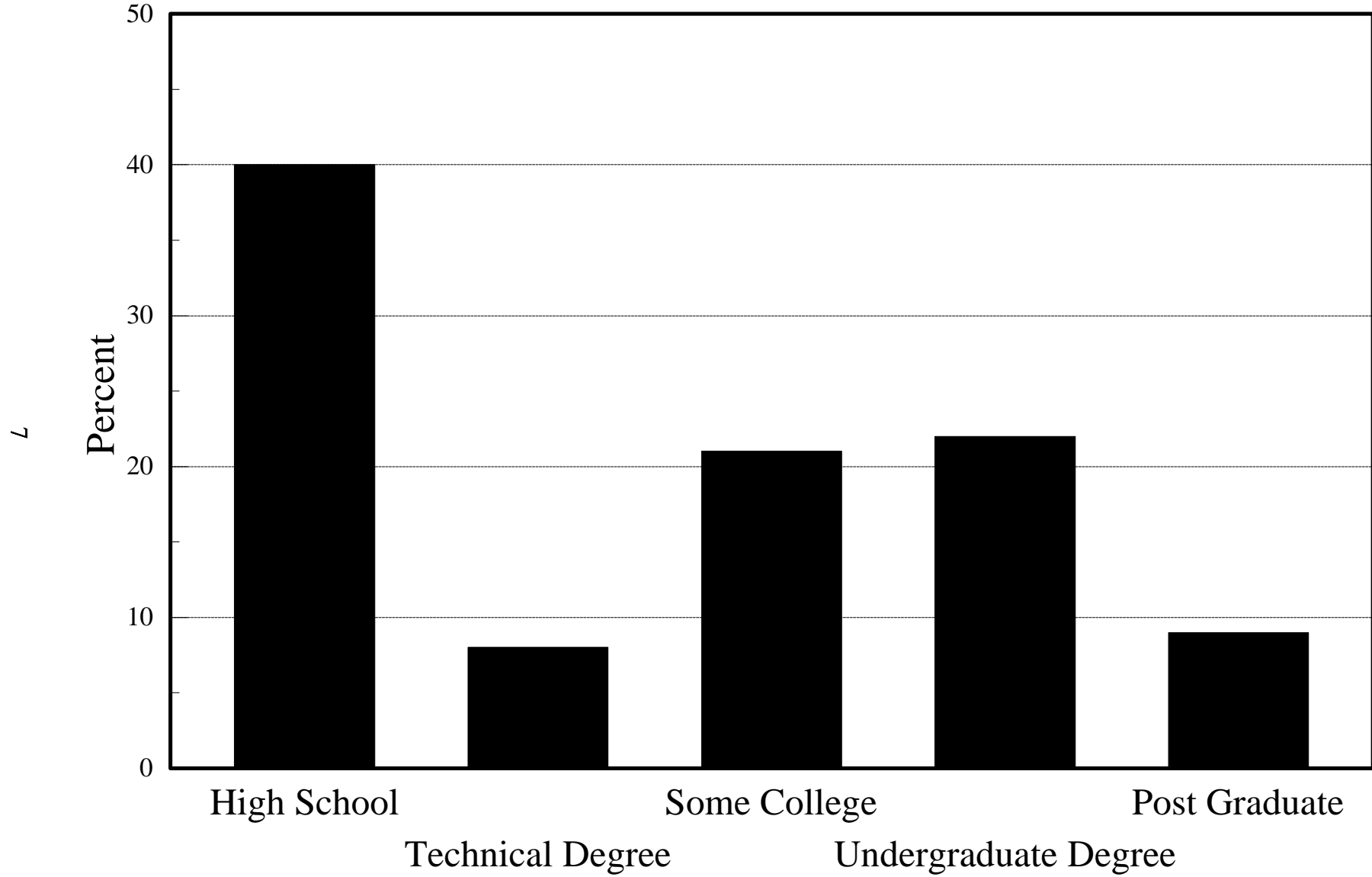
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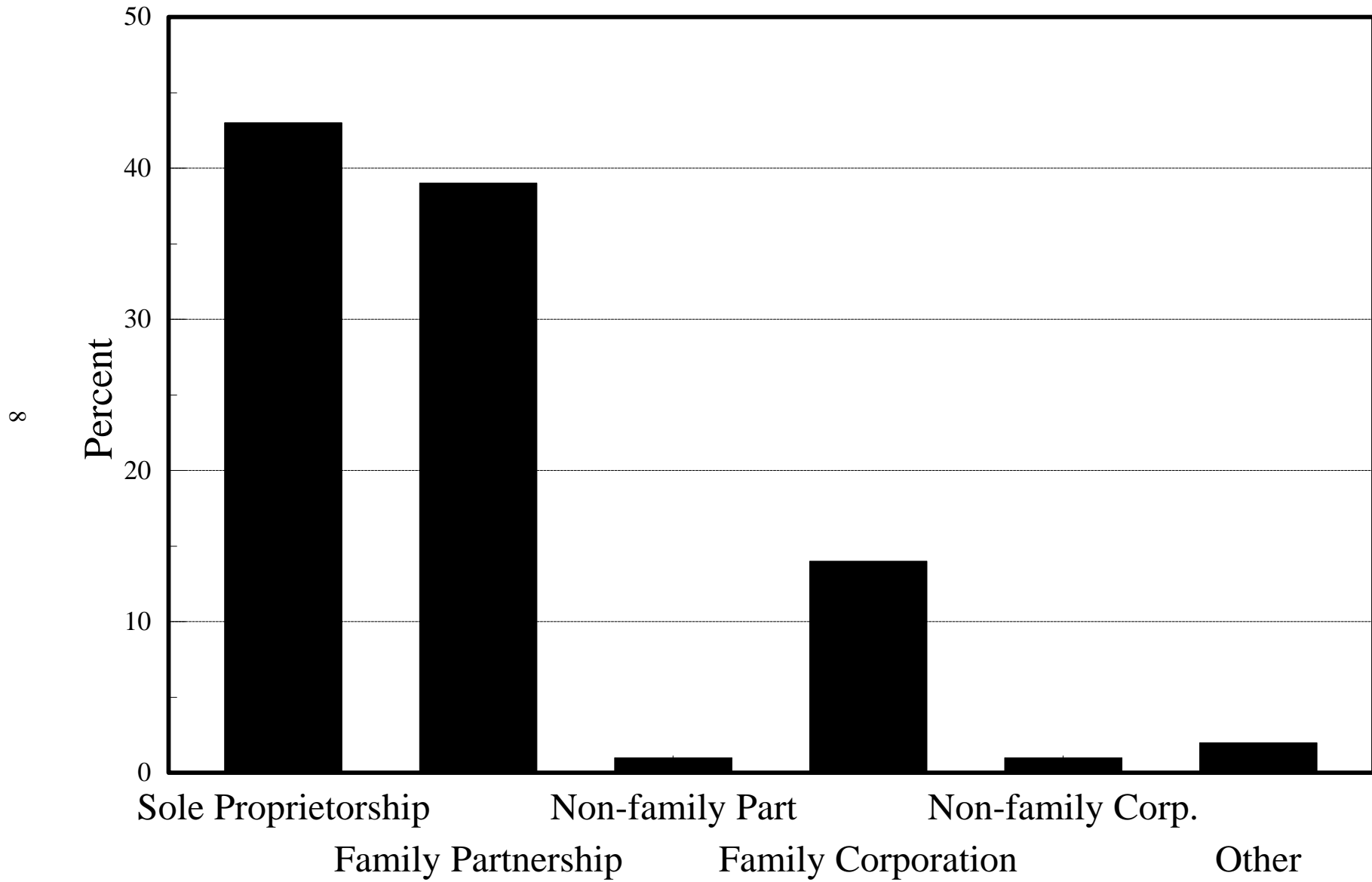
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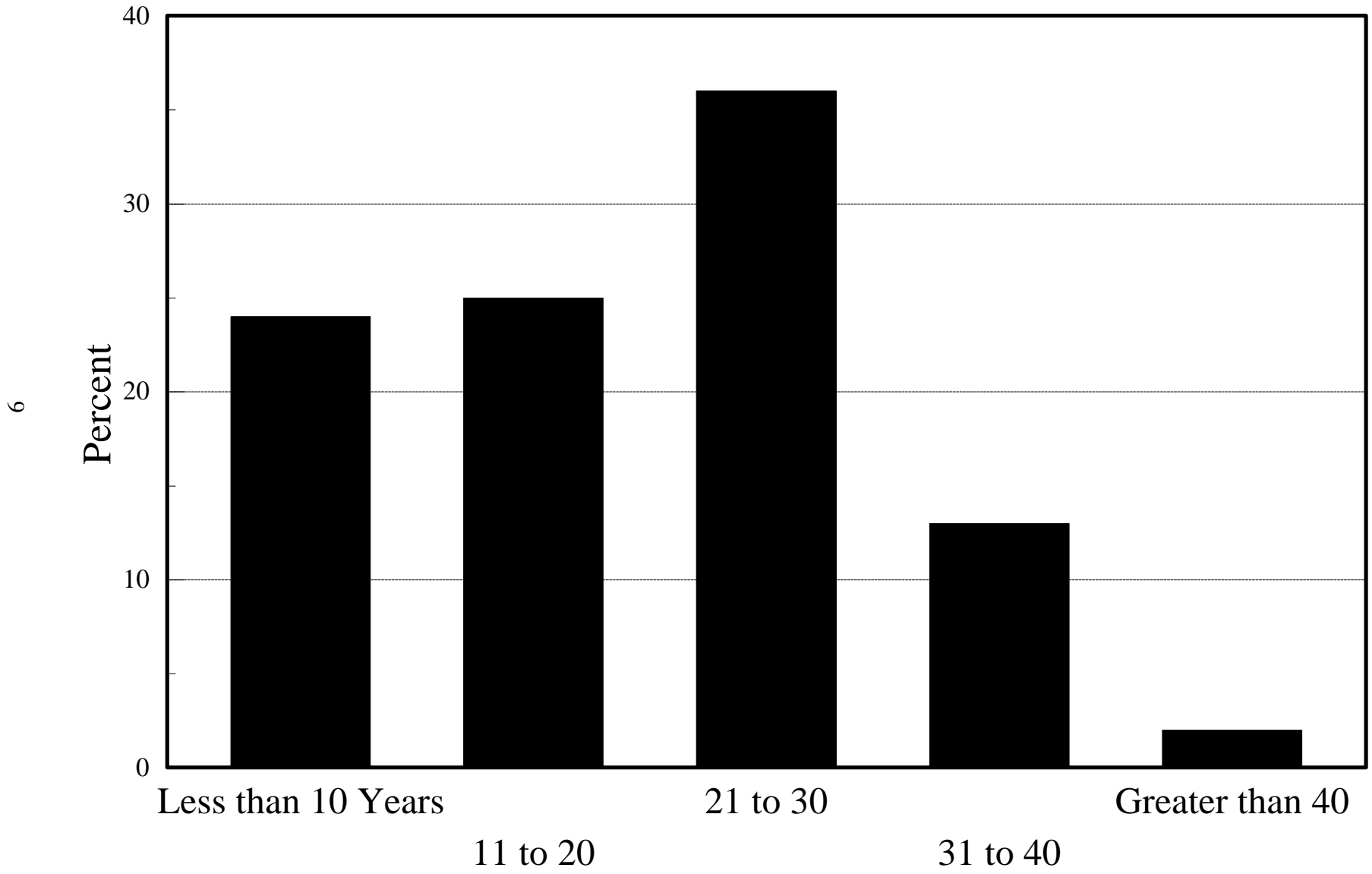
Figure 6. Number of Years to Retirement for U.S. Farmers, 1996

The largest group of producers (36%) does not have any plans for the distribution of the farm when they retire (Figure 7). The second group of producers plans to keep farms in their family members without sale or rental (30%). The next category is renting farms to family members (18%). The responses among ownership types or sizes do not differ significantly at the 95% confidence level (Appendix Table 6).

The responses differ significantly at the 95% confidence level when sorted by region. More producers in the Western and Northeastern regions are planning to sell farms to their family members than in the other regions. More producers in the Great Plains and Cornbelt are planning to rent farms to their family members than in the other regions.

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 42.9% of the producers tended toward strongly disagree, while about 36.1% tended toward strongly agree. The remaining 21% of producers remained neutral. The responses for producers, when the data were sorted by type of ownership, 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 90% confidence level (Appendix Table 7). For sole proprietorships, about 39.5% indicated a trend toward strongly disagree, while about 41.0% indicated a trend toward strongly agree. For partnerships, about 41.8% indicated a trend toward strongly disagree, while 35.2% indicated a trend toward strongly agree. For corporations, about 42.9% indicated a trend toward strongly disagree, while about 34.7% indicated a trend toward strongly agree. The responses do not differ across regions in the United States at the 90% and 95% levels. However, most producers indicated a trend toward strongly disagree, indicating that they need financial support from family members.

Responses to "Now is the best time to get out of farming that we will see in the next five years" indicated about 41.8% a tended toward strongly disagree, while about 21.3% indicated a trend toward strongly agree (Figure 8). The remaining 37% of producers remained neutral. This implies that most farmers are not interested in leaving farming. The responses for producers, when the data were sorted by type of ownership, size, or region, did not differ significantly from each other (Appendix Table 8).

Responses to "Bringing another family member into the operation isn't worth the risk of taking on more debt" indicated about 36.3% a tended toward strongly disagree, while about 29.4% tended toward strongly agree (Figure 8). The remaining 34.3% of producers remained neutral. When sorted by type of ownership, 47.5% of corporations and 31.7% 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, 39.3% of large farms and 35.7% of medium farms indicated a trend toward strongly disagree. When sorted by region, 39.5% of farmers in the Western region and 28.7% of farmers in the Great Plains region indicated a trend toward strongly disagree.
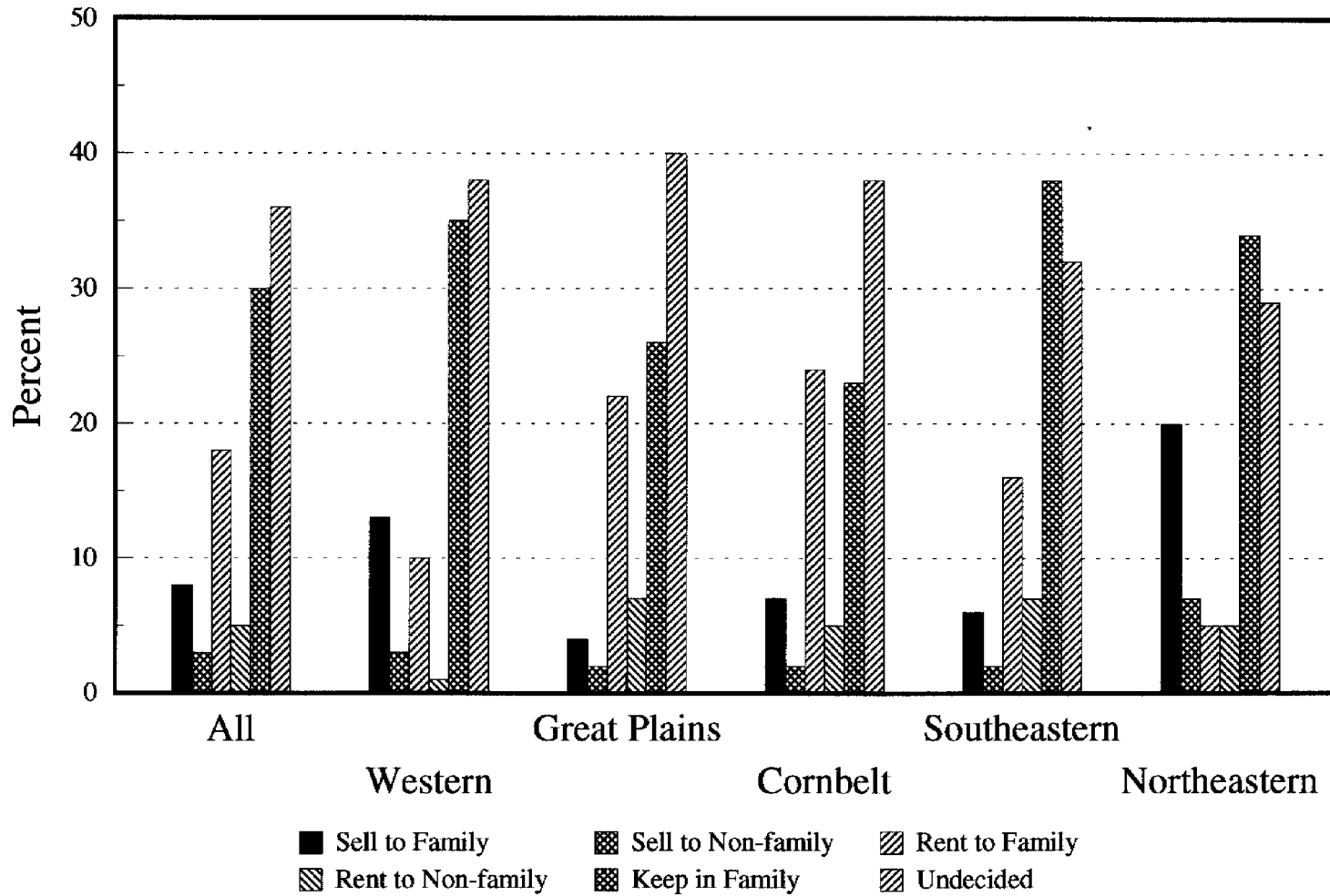
Figure 7. Producers' Alternative Plans for Farmland After
Retirement by Region, 1996

	Strongly Disagree	Strongly Agree
Cannot start farming without financial assistance	42.9	36.1
Now is the best time to get out of farming	41.8	21.3
Bring another family into operation isn't worth the risk	36.3	29.4
50% reduction in capital gains taxes would encourage farmland sale	56.1	18.9
It is important to buy as much land as possible	62.7	16.1
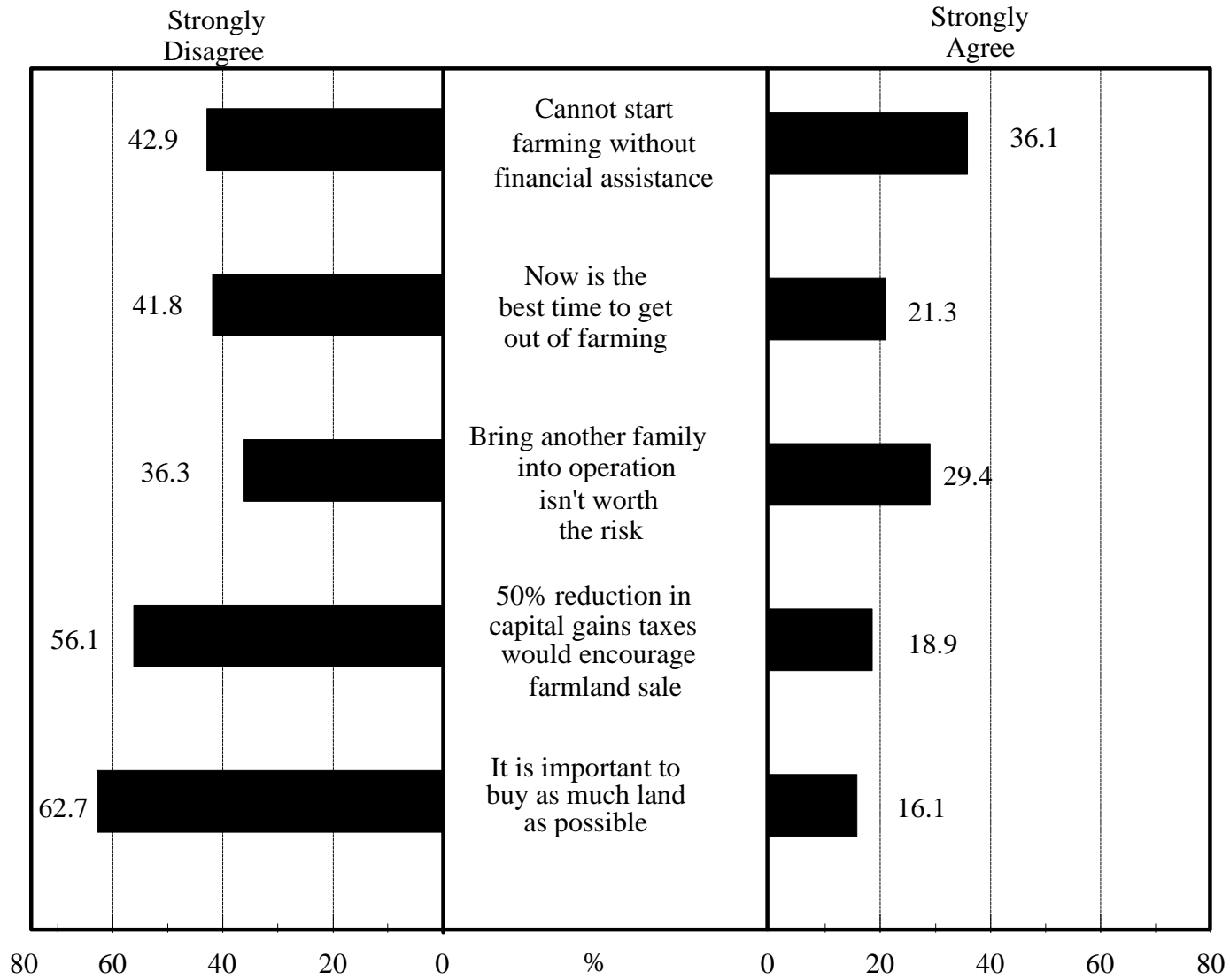
Figure 8. Farmers' Attitudes Towards Intergenerational
Transfer of Farm Business, 1996

Responses to "A fifty percent reduction in capital gains taxes would encourage me to sell farmland" indicated about 56.1% tended toward strongly disagree, while about 18.9% indicated a trend toward strongly agree (Figure 8). The remaining 25% of producers remained neutral. This implies that over one-half of the producers would not consider selling farmland, even if capital gains taxes were lowered. When sorted by type of ownership, 58.1% of corporations and 54.8% of sole proprietorships indicated a trend toward strongly disagree (Appendix Table 10). This indicates that lowering the capital gains tax may not be the main reason for selling farmland. When sorted by size, 57.8% of large farms and 54.5% of small farms indicated a trend toward strongly disagree. When sorted by region, 67.7% of farmers in the Northeastern region and 50.3% of farmers in the Great Plains region indicated a trend toward strongly disagree. This implies that producers in the Northeastern region are less likely to sell farmland than the rest of the country 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 62.7% tended toward strongly disagree, while about 16.1% indicated a trend toward strongly agree (Figure 8). The remaining 21.2% 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, 65.2% of sole proprietorships and about 59.2% of partnerships indicated a trend toward strongly disagree (Appendix Table 11). When sorted by size, 63.8% of medium farms and about 60.9% of large farms indicated a trend toward strongly disagree. When sorted by region, 66.0% of farmers in the Cornbelt region and about 55.8% of farmers in the Southeastern 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 42% of the farmers had a debt-to-asset ratio of 15% or less. About 24% of the farmers had a debt-to-asset ratio greater than 41%.

Figure 9 also shows the debt-to-asset ratio of farms when sorted by ownership types. The debt-to-asset ratios differ significantly at the 95% confidence level. About 26% of sole proprietorships, 21% of partnerships, and 19% of corporations have no debt. About 13% of corporations, 20% of partnerships, and 21% of sole proprietorships have debt-to-asset ratios between 26% and 40%. Twelve percent of partnerships, 15% of sole proprietorships, and 32% of corporations have debt-to-asset ratios between 41% and 46% (Appendix Table 12). This implies that the debt-to-asset ratios for the sole proprietorships and partnerships are lower than for the corporations. There is no significant difference among the different size farms or different regions at the 95% or 90% confidence level.
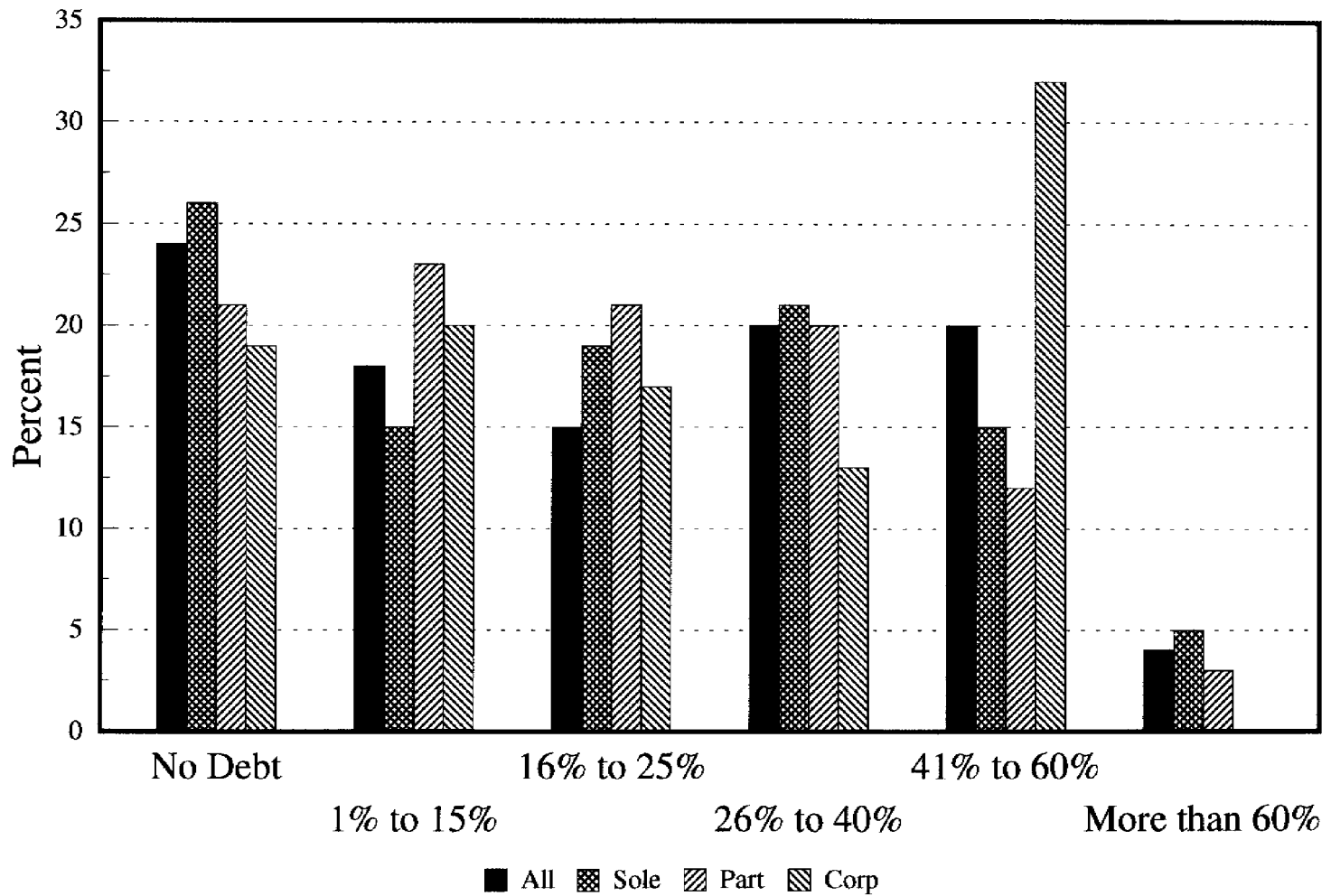
Figure 9. Debt-to-asset Ratio for U.S. Farms by Ownership, 1996

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 (37%), tools that lock in interest rates (31%), and disability insurance (25%) are used by about one-third of the farmers. There is no significant difference in the responses between the legal ownership types at the 95% confidence level (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 (53%), options (25%), and futures (29%) more often than small or medium farms. Large farms also lock in interest rates (40%) more often than small or medium farms. The responses for hedged-to-arrive contracts differ significantly among farms at the 90% confidence level. Large farms use hedge contracts more often (14%) than the small farms (5%). This implies that the large farms are more active in financial risk management.

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 Cornbelt region, 49% of the farmers use forward cash contracts while 11% of the farmers in the Northeastern region use such contracts. Thirteen percent of the farmers in the Cornbelt region use hedged-to-arrive contracts compared to 2% in the Western region. Twenty-one percent of farms in the Great Plains region use options, while 4% of farms in the Northeastern region use options. Medical insurance coverage varied among regions. In the Western, Great Plains, and Cornbelt regions insurance coverage was 68%, 62%, and 72%, respectively. In the Northeastern region, 42% of the farmers carried medical insurance. About 67% of the farms in the Cornbelt region carry crop insurance, while 27% of the farms in the Northeastern region carry crop insurance. At the 90% confidence level, futures and life insurance usage differs across regions. Producers in the Cornbelt region use both more than the rest of the country, while producers in the Northeastern and Cornbelt regions do not tend to use them. This implies that the Great Plains and Cornbelt are more active in financial risk management than the other regions. About 32% of Western, 33% of Cornbelt, 38% of Southeastern, and 11% of Northeastern farms have locked-in interest rates.

Management, Finance, and Risk: Attitudes and Plans

Business Management

Figure 11 shows the distribution of responses to "Farming today is more good business management than it is skilled crop or livestock production." About 46.9% indicated a trend toward strongly agree, while 19.2% tended toward strongly disagree (Appendix Table 14). The remaining 11.8% of producers remained neutral. This implies that farmers feel that good business management is more important than production practices. The responses, when the data were sorted by type of ownership, size, or region, did not differ significantly from each other.
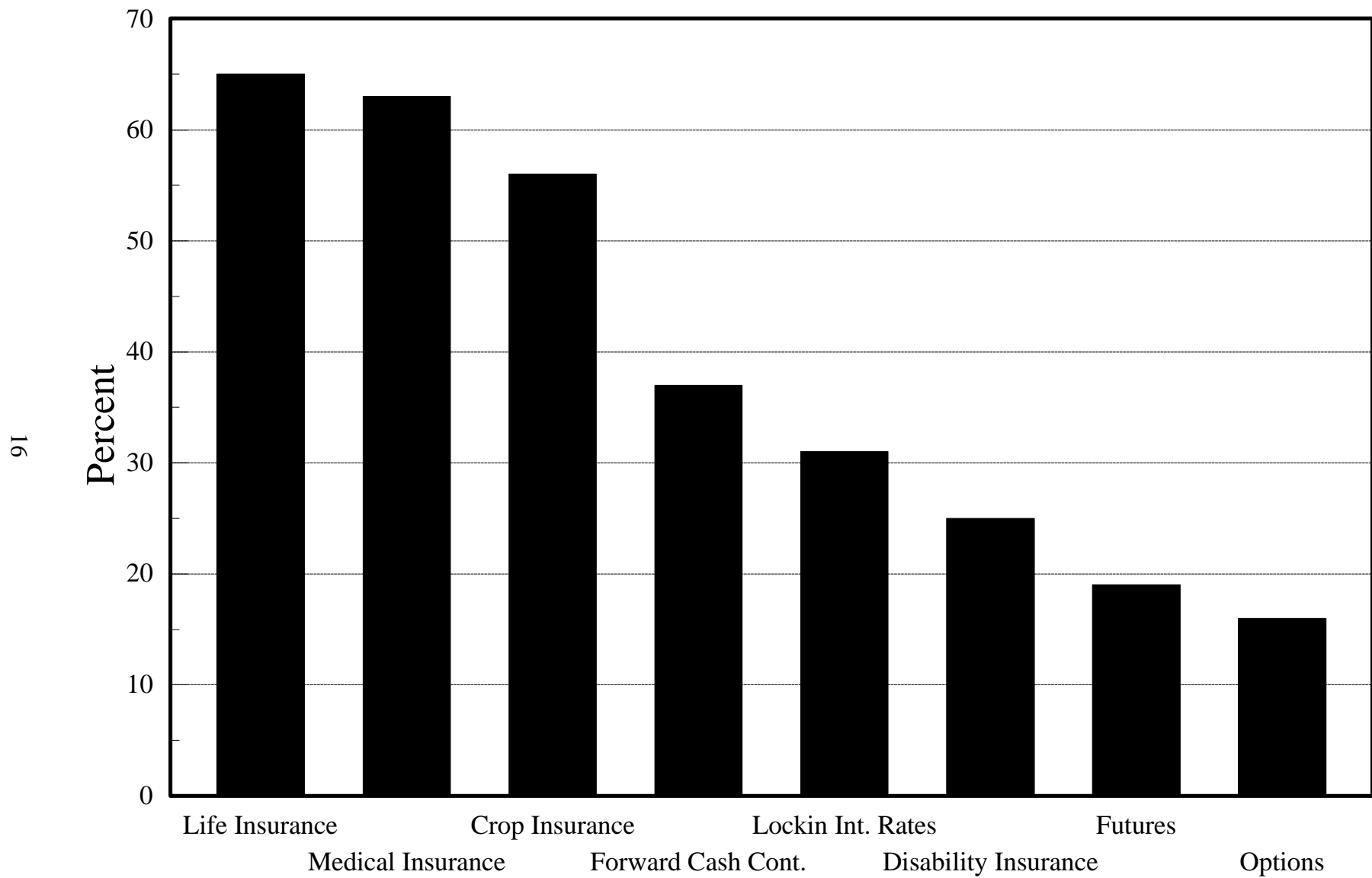
Figure 10. Alternative Tools Used by U.S. Farmers to Manage Financial Risks, 1996

Strongly
Disagreee

Strongly
Agree

	Strongly Disagree		Strongly Agree
Good Business Management is more important	19.2		46.9
Always use a panel of Advisers	40.5		28.9
Buying Farmland is a Good Investment	31.8		42.0
Farming more acres is the best way to lower costs	31.0		37.3
There are Creative ways to finance an operation	14.4		49.7
Good rental land is available	46.5		23.7
It is best to purchase land for expansion	55.3		16.9
I take financial risks out of farming even for less profit	22.6		39.7

80 (60) (40) (20) 0 % 0 20 40 60 80

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

Responses to "It makes good sense to use a panel of business advisers for important financial decisions affecting my operation" indicated about 40.5% tended toward strongly disagree, while about 28.9% indicated a trend toward strongly agree (Figure 11). The remaining 30.6% of producers remained neutral (Appendix Table 15). This implies that farmers feel that a panel of business advisers is not important for financial decisions. The responses, when the data were sorted by type of ownership, size, or region, did not differ significantly from each other.

Investment and Financial Services

Figure 11 shows the distribution of responses to "Buying farmland is a good investment for retirement." About 31.8% indicated a trend toward strongly disagree, while about 42.0% indicated a trend toward strongly agree. The remaining 26.2% of producers remained neutral (Appendix Table 16). This implies that farmers feel that buying farmland is not 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, 38.1% of the farmers in the Northeastern region indicated a trend toward strongly disagree, while 19.3% of the farmers in the Northeastern region indicated a trend toward strongly agree.

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 31.0% indicated a trend toward strongly disagree, while about 37.3% indicated a trend toward strongly agree. The remaining 31.7% of producers remained neutral (Appendix Table 17). This implies that farmers feel that farming more acres is the best way to drive down per-unit production costs. 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, but did differ at the 90% level. The responses for regions did differ significantly. About 39.8% of producers in the Southeastern region indicated a trend toward strongly disagree, while about 29.6% indicated a trend toward strongly agree. This implies that, unlike the rest of the country, Southeastern producers feel that farming more acres is not 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 49.7% tended toward strongly agree, while about 14.4% indicated a trend toward strongly disagree (Figure 11). The remaining 35.9% 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, 50.0% of corporations indicated a trend toward strongly agree, while 13.3% indicated a trend toward strongly disagree. When sorted by region, 58.5% of the farmers in the Northeastern region and 41.8% of the farmers in the Great Plains region indicated a trend toward strongly agree. This implies that more farmers in the Northeastern region feel that there are creative ways to finance than do those in the Great Plains region.

Responses to "Good rental land is available for a fair price in my area" indicated about 46.5% tended toward strongly disagree, while about 23.7% indicated a trend toward strongly agree (Figure 11). The remaining 29.8% of producers remained neutral (Appendix Table 19). This implies that the producers feel that there is not good rental land available for a fair price in the area. The responses, when the data were sorted by type of ownership or region, did not differ

significantly from each other at the 95% confidence level; but at the 90% confidence level, the responses for size differ significantly. About 58.4% of producers in the Cornbelt region and about 37.3% of producers in the Northeastern region indicated a trend toward strongly disagree.

Responses to "It is best to purchase land for expansion rather than renting land" indicated about 55.3% tended toward strongly disagree, while about 16.9% indicated a trend toward strongly agree (Figure 11). The remaining 27.7% of producers remained neutral (Appendix Table 20). This implies that producers feel that renting land is better than purchasing it. The responses for producers, when the data were sorted by type of ownership, size, or region, did not differ significantly from each other.

Responses to "I do everything I can to take the financial risks out of farming, even if it increases my production costs" indicated about 39.7% tended toward strongly agree, while about 22.6% indicated a trend toward strongly disagree (Figure 11). The remaining 37.7% of producers remained neutral (Appendix Table 21). When sorted by type of ownership, 32.0% of corporations and 43.8% of sole proprietorships indicated a trend toward strongly agree. This implies that sole proprietorships feel stronger than corporations that reducing financial risks is more important than profits. When sorted by size, 44.3% of large farms and 37.2% of small farms indicated a trend toward strongly agree. This implies that large farms feel stronger than small farms that reducing financial risks is more important than profits. When sorted by region, 34.9% of the farmers in the Northeastern region indicated a trend toward strongly disagree, while 28% of the farmers in the Northeastern region indicated a trend toward strongly agree. This implies that, unlike the rest of the country, farmers in the Northeastern region feel that profits are more important than reducing financial risks.

Equipment

Figure 12 shows the distribution of responses to "It makes more sense to lease new farm equipment rather than to buy." About 37.7% indicated a trend toward strongly disagree, while about 22.3% indicated a trend toward strongly agree. The remaining 40.0% of producers remained neutral (Appendix Table 22). This implies that producers feel that it is better to buy new farm equipment rather than to lease it. When sorted by type of ownership, 40.2% of partnerships and 36.5% of corporations indicated a trend toward strongly disagree. The responses for producers, when the data were sorted by size or region, did not differ significantly from each other.

Strongly Disagree		Strongly Agree
37.7	It makes more sense to lease	22.3
50.9	I have too muchdebt	28.6
14.9	Tougher time today for taking on more debt	65.8
32.0	Good time to purchase land	23.1
19.6	Growers who expand rapidly will pay a heavy price	41.8
39.2	Equity more important than cash flow to lenders	30.0

80   60   40   20   0   %   0   20   40   60   80
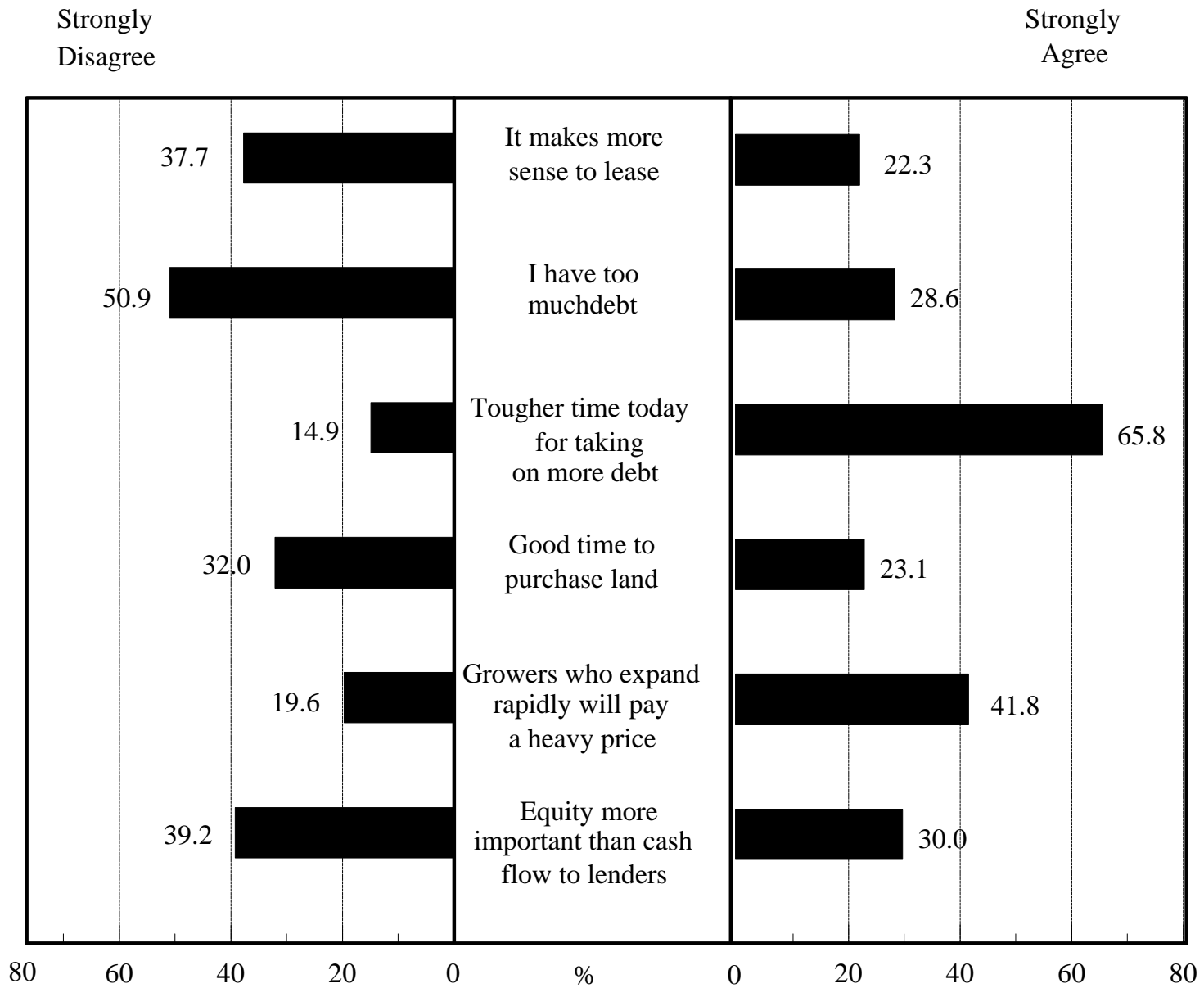
Figure 12. Farmers' Attitudes Towards Equipment, Debt,
and Financial Credit , 1996

Figure 12 shows the distribution of responses to "I have too much debt in my operation." About 50.9% indicated a trend toward strongly disagree, while about 28.6% indicated a trend toward strongly agree. The remaining 20.5% 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 type of ownership, 55.1% of corporations and 48.0% of partnerships indicated a trend toward strongly disagree. When sorted by size, 54.6% of small farms and 46.5% of large farms indicated a trend toward strongly disagree. This indicates that small farms feel stronger than large farms that they do not have too much debt. When sorted by region, 54.8% of the farmers in the Northeastern region and 47.9% of the farmers in the Western region indicated a trend toward strongly disagree. This implies that producers in the Northeastern region feel stronger than those in the Western region that they do not have too much debt in their operation.

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 65.8% indicated a trend toward strongly agree, while about 14.9% indicated a trend toward strongly disagree. The remaining 19.3% 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, size, or region, did not differ significantly from each other.

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 32.0% indicated a trend toward strongly disagree, while about 23.1% indicated a trend toward strongly agree. The remaining 44.9% of producers remained neutral (Appendix Table 25). This implies that producers feel 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, size, or region, did not differ significantly from each other at the 95% confidence level; but at the 90% confidence level, the responses for organizations did differ significantly. About 34.1% of the partnerships and 30.8% of sole proprietorships indicated a trend toward strongly disagree. This indicates that partnerships feel stronger than sole proprietorships 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 41.8% indicated a trend toward strongly agree, while about 19.6% indicated a trend toward strongly disagree. The remaining 38.6% of producers remained neutral (Appendix Table 26). When sorted by type of ownership, 41.8% of sole proprietorships and 35.0% of corporations indicated a trend toward strongly agree. When sorted by size, 47.5% of medium farms and 35.9% of large farms indicated a trend toward strongly agree. When sorted by region, 46.5% of the farmers in the Southeastern region and 35.3% of the farmers in the Western region indicated a trend toward strongly agree. This implies that producers of most farm sizes and regions agree that additional debt will be difficult to handle.

Responses to "Equity is more important than cash flow to lenders" indicated about 39.2% tended toward strongly disagree, while about 30.0% indicated a trend toward strongly agree (Figure 12). The remaining 30.8% of producers remained neutral (Appendix Table 27). When sorted by type of ownership, 39.2% of corporations and 36.2% of partnerships indicated a trend toward strongly disagree. When sorted by size, 40.5% of large farms and 37.4% of medium farms indicated a trend toward strongly disagree. When sorted by region, 40.4% of the farmers in the Southeastern region indicated a trend toward strongly agree, while 31.6% indicated a trend toward strongly disagree. This implies that, unlike the rest of the country, producers in the Southeastern region feel that equity is more important than cash flow.

Farm Credit

Figure 13 shows the sources of credit used by the farmers responding to the survey. Traditional sources are used the most. They are local commercial bank (63%), self-financed from earnings (45%), Farm Credit System (27%), and Farm Service Agency (11%). The second most used credit sources include manufacturers of farm machinery (27%), input retailer (9%), and grain or feed dealer (7%). Least used credit sources are other farmers (1%), unrelated individuals (2%), insurance companies (3%), and non-local commercial banks (4%).

When sorted by ownership types, most categories do not differ significantly at the 95% confidence level (Appendix Table 28b). About 9% of corporations use non-local commercial banks, compared to 3% of sole proprietorships and 2% of partnerships. About 13% of sole proprietorships use the Farm Service Agency, compared to 10% of partnerships and 3% of corporations.

When sorted by size, the only significant difference is at the 95% confidence level. About 36% of large farms use credit from farm machinery manufacturers, compared to 20% of small farms and 25% of medium farms (Appendix Table 28c). About 35% of the large farms, 25% of small farms, and 22% of the medium farms use the Farm Credit System.
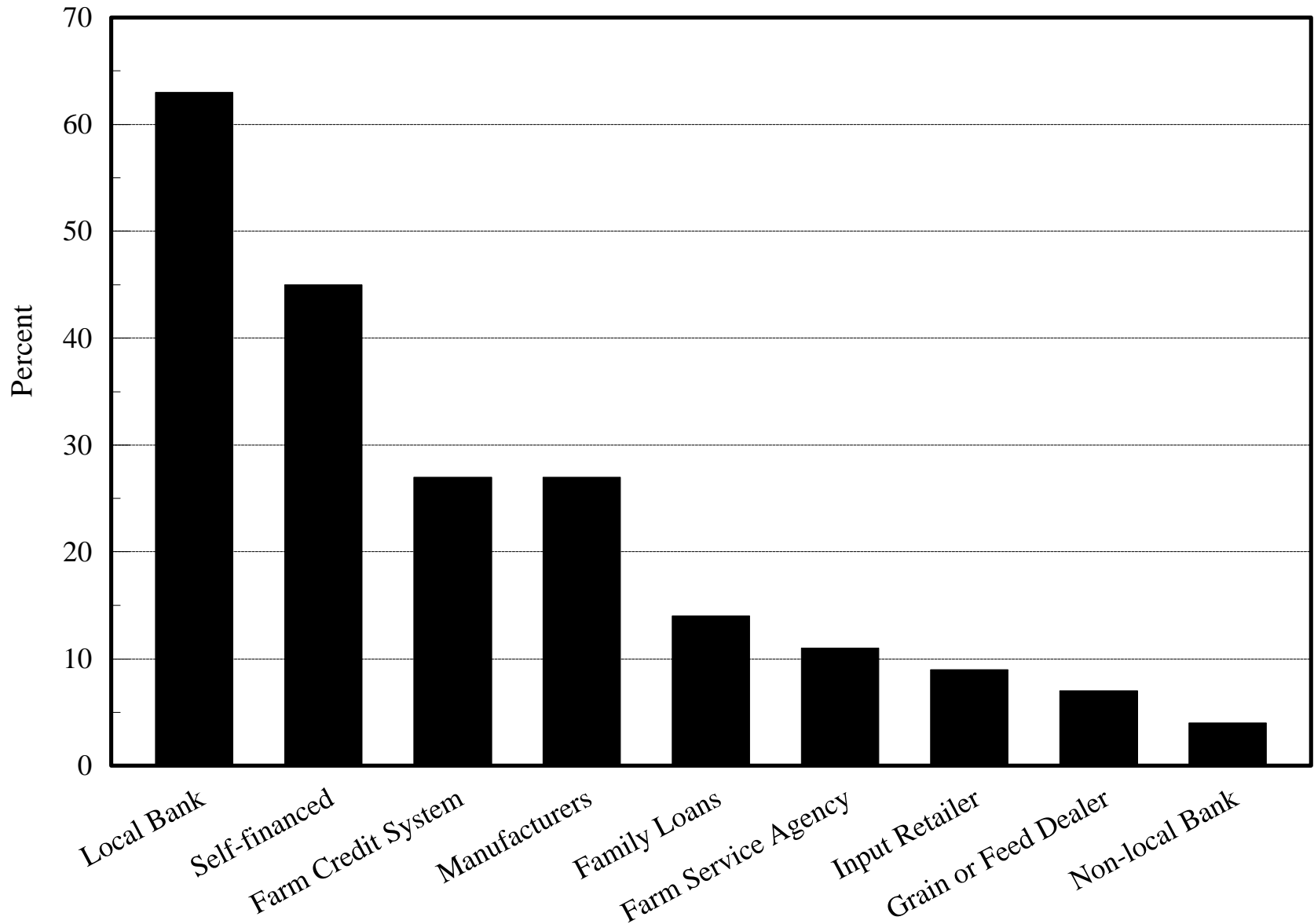
Figure 13. Sources of Farm Credit Used by U.S. Farmers, 1996

When sorted by regions, several categories differ significantly at the 95% confidence level (Appendix Table 28d). In the Northeastern region, about 7% of farmers use credit from other farmers, compared to 1% for the other regions. In the Northeastern region, about 38% of farmers use credit from local commercial banks, compared to 61% to 66% in for the other regions. About 18% of farmers in the Western region and 19% of farmers in the Great Plains region use credit from the manufacturers of farm machinery, compared to 7% of farmers in the Southeastern region. About 18% of farmers in the Western region and 16% of farmers in the Northeastern region use credit from insurance companies, compared to 3% of farmers in the Great Plains region and 6% of farmers in the Southeastern region. In the Great Plains region, 10% of the farmers use the Farm Service Agency for their credit needs, compared to 1% for the Cornbelt and Southeastern regions. At the 90% confidence level, more farmers in the Northeastern region use the Farm Credit System than in the rest of the country.

Appendix Table 29a shows the weighted average of responses to reasons to use non-traditional lenders. The most important reason is lower interest rates, followed by a repayment schedule that is timed to meet cash flow, and the ability to obtain discounts on purchases. 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 the requirement of financial information. There are no significant differences among the different ownership types (Appendix Table 29b) or among the different size farms (Appendix Table 29c).

Appendix Table 29d shows the weighted average of responses to reasons for the use of non-traditional lenders for farmers in the different regions. Most categories differ significantly at the 95% confidence level. Lower interest was more important in the Northeastern region than in the other regions. The farmers' credit needs for local lenders were the least important in the Western and Southeastern regions. Lower interest rates were most important in the Cornbelt region and least important in the Northeastern region. Repayment schedule was most important in the Southeastern region and least important in the Northeastern region. Location was least important in the Western region and most important in the Northeastern region. Faster decisions were most important in the Northeastern region and least important in the Cornbelt region. Flexibility in the event of repayment problems was most important in the Southeastern region and least important in the Western region. The ability to fix interest rates was most important in the Western region and least important in the Northeastern region. The ability to obtain discounts on purchases was most important in the Cornbelt region and least important in the Western region. At the 90% confidence level, personal relationship with the retailer differs significantly. It was most important in the Western region.

Financial Services

Figure 14 shows the financial services used by farmers. The greatest use was tax accounting services (19%), followed by insurance services (16%), investment services, and equipment services (12%). The lowest use was short-term equipment rental (6%), followed by marketing advisory services, business management consulting (8%), and estate planning and trust services (9%).
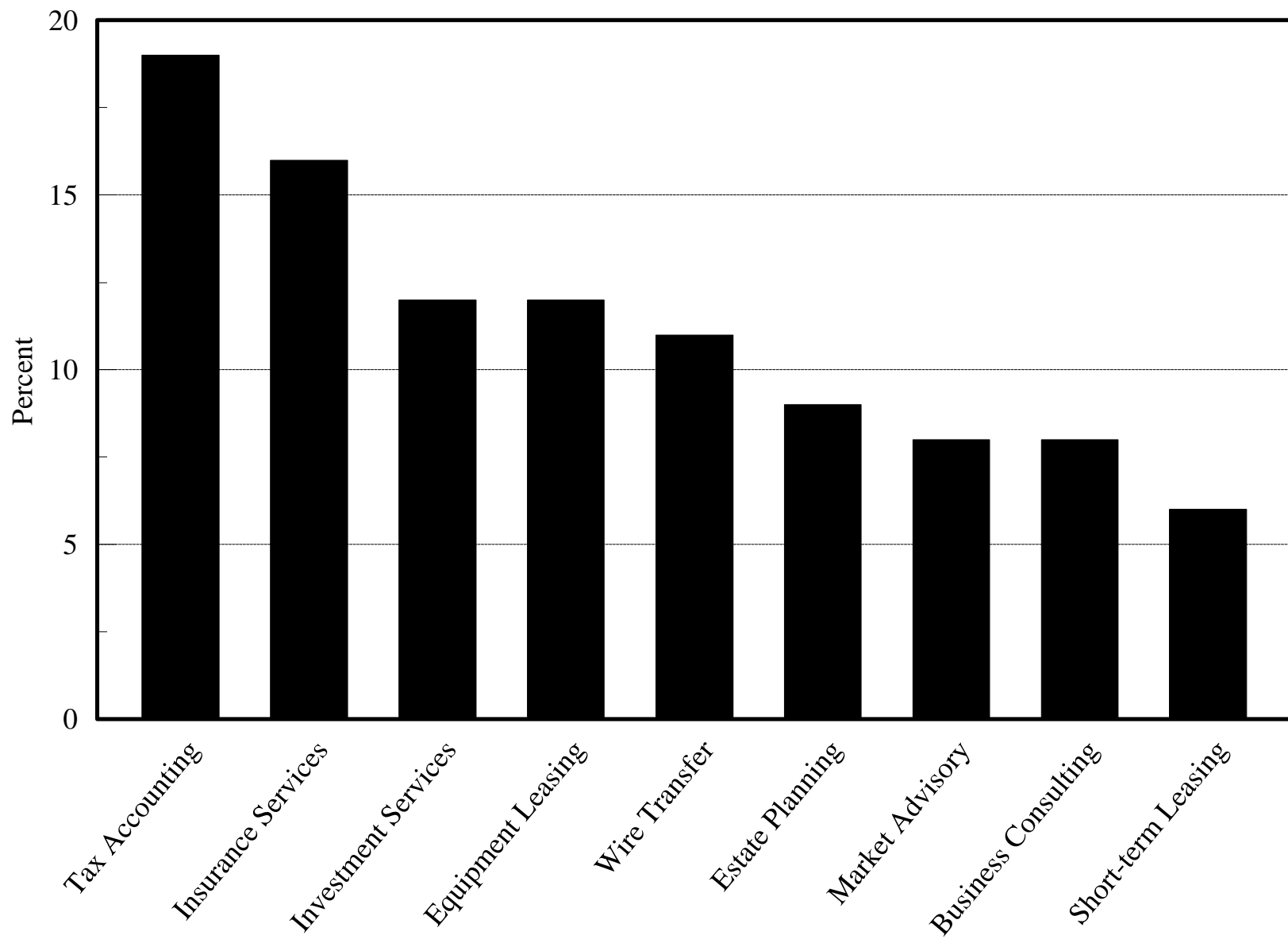
Figure 14. Financial Services Used by U.S Farmers, 1996

The financial services used by farmers did not differ significantly over ownership types at the 95% confidence level. The frequencies for the use of investment services and estate planning and trust services differ significantly among the ownership types (Appendix Table 30b). Corporations use the services more often than either partnerships or sole proprietorships. There is no significant difference in the use of financial services among the different sizes of farms at the 95% confidence level (Appendix Table 30c).

The financial services used by farms did not differ in most categories, over regions, at the 95% confidence level (Appendix Table 30d). The responses for most categories showed no significant differences among the five regions. About 33% of farmers used tax accounting services in the Northeastern region, compared to 16% in the Cornbelt region and 15% in the Southeastern region. About 26% of farmers used insurance services in the Western region, compared to 10% in the Southeastern region.

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 47.4% indicated a trend toward strongly agree, while about 18.9% indicated a trend toward strongly disagree. The remaining 33.7% 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. The responses for producers, when the data were sorted by type of ownership, size, or region, did not differ significantly from each other.

Figure 15 also shows the distribution of responses to the statement "I always include my lender in discussions about important business decisions I am considering." About 42.9% indicated a trend toward strongly agree, while about 31.8% indicated a trend toward strongly disagree. The remaining 25.4% of producers remained neutral (Appendix Table 32). This implies that more producers include their lenders in their important business decisions. The responses for producers, when the data were sorted by type of ownership, size, or region, did not differ significantly from each other.

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 44% would borrow more than $250,000 (Appendix Table 33).

When sorted by ownership type, amount of debt differs significantly at the 95% confidence level. Sole proprietorships tended to be comfortable with a lower level of debt expansion when compared to partnerships or corporations. About 78% of sole proprietorships would be comfortable with less than $100,000 of additional debt, while 66% of partnerships and about 46% of corporations would be comfortable with less than $100,000 of additional debt. About 9% of sole proprietorships would be comfortable with an additional debt of $250,000, while partnerships and corporations were 13% and 22%, respectively.

Strongly
Disagree

Strongly
Agree

It makes good sense
to use dealer credit

I always include
my lender
in my decisions

Farmers should put
their profit into
off-farm investments

I can build equity
more quickly
by borrowing

80 60 40 20 0 % 0 20 40 60 80
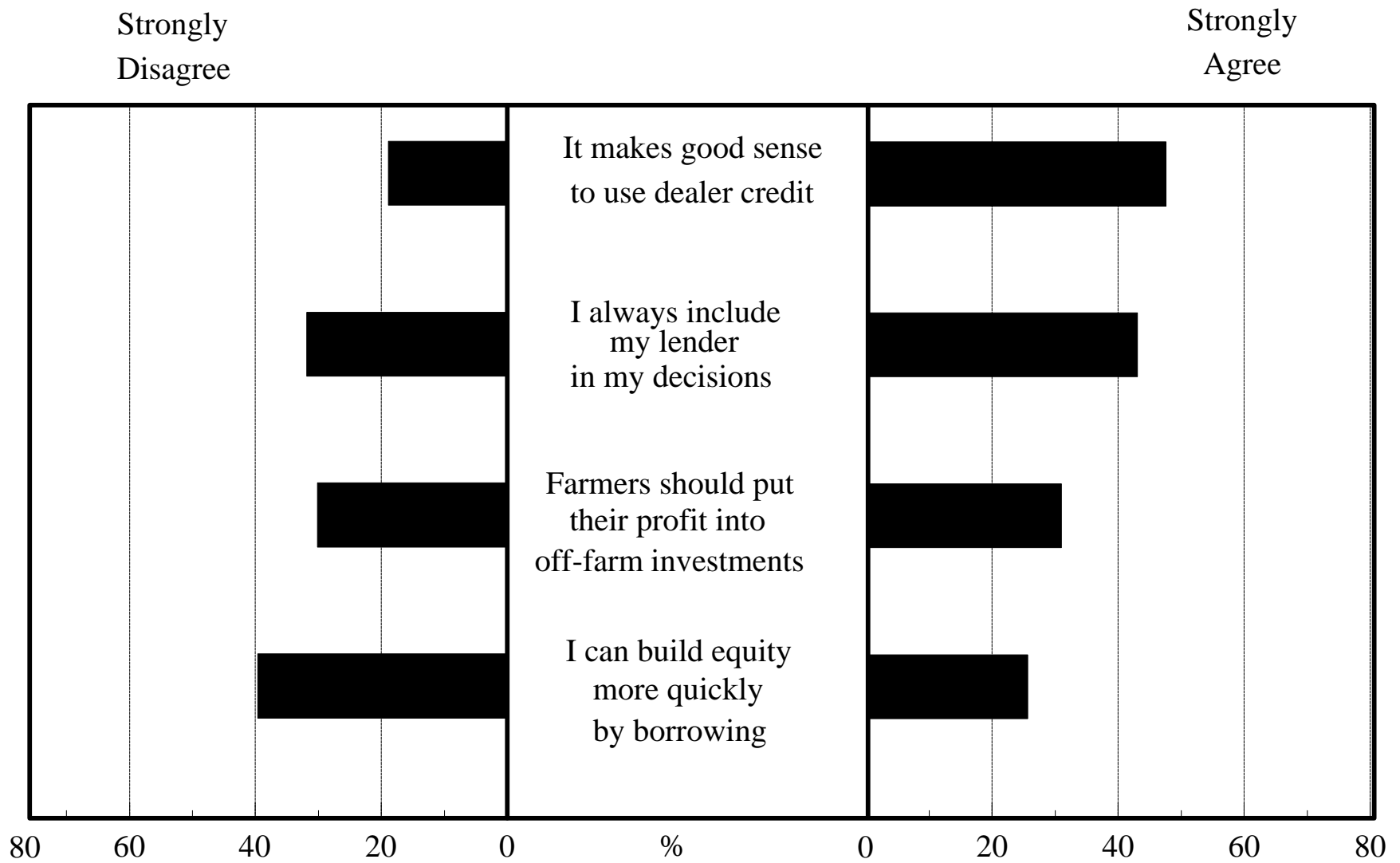
Figure 15. Farmers' Attitudes Towards the Use of Credit Services, 1996
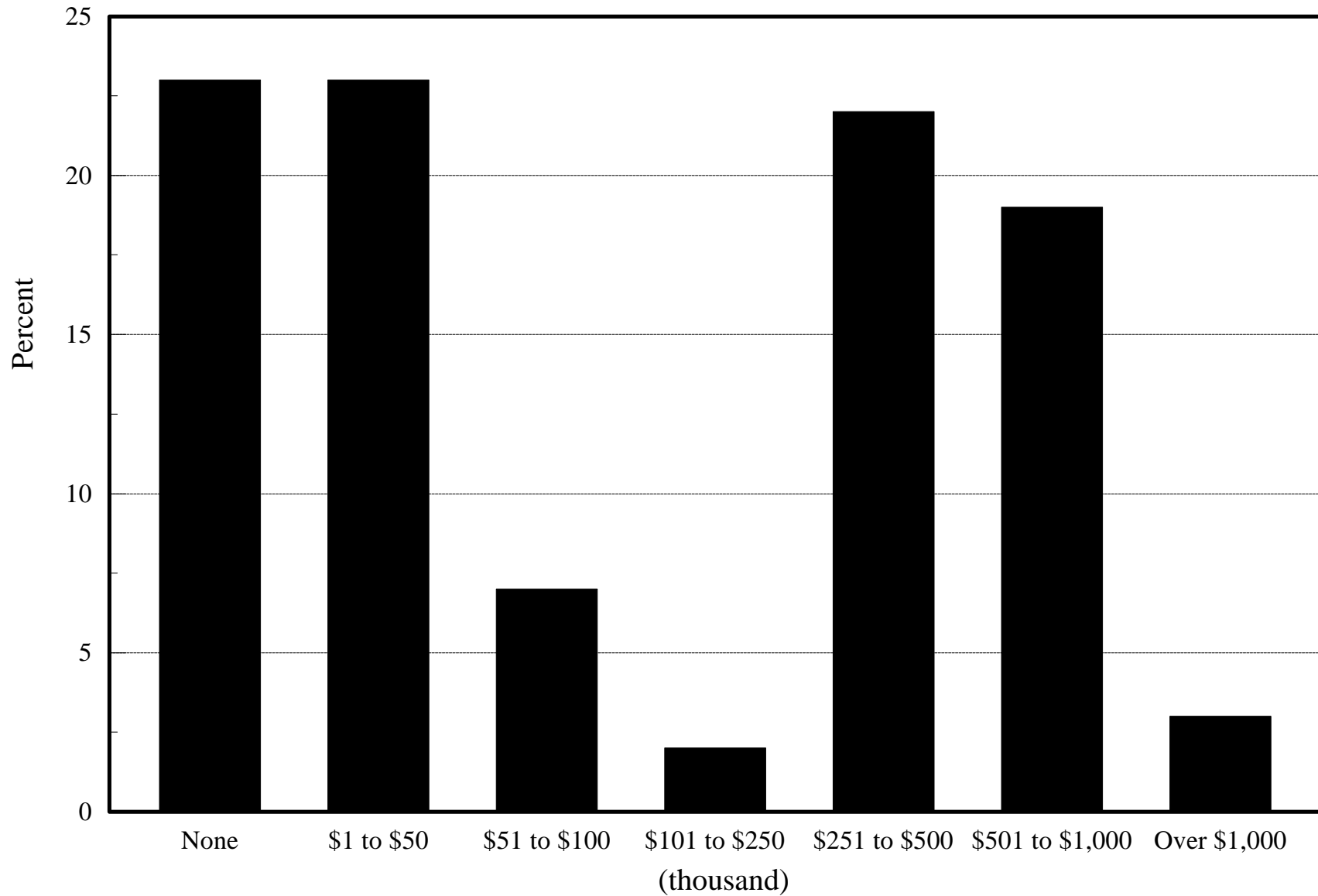
Figure 16. Additional Debt That Would be Comfortable for U.S. Farmers, 1996

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 when compared to medium or large farms. About 79% of small farms would be comfortable with less than $100,000 of additional debt, while only about 9% of small farms would be comfortable with additional debt of $250,000. Medium and large farms were comfortable with much larger debt than small farms. The amount of debt did not differ significantly at the 95% confidence level when sorted by region.

Appendix Table 34a shows the farmers' reasons for future expansion of their operation. About 25% of the respondents indicated that they had no plans to expand, while 32% indicated that their reason for expansion was to generate larger sales and 18% wanted to capture economies of scale. About 10% indicated their reason to expand was to include a family member in the operation. There is no significant difference at the 95% confidence level when the data were sorted by ownership type, size, or region (Appendix Tables 34b, 34c, and 34d). At the 90% confidence level, more corporations and large farms were going to expand when compared to sole proprietorships and small farms.

Figure 15 shows the distribution of responses to "Farmers need to put their profits into off farm investments." About 30.1% indicated a trend toward strongly disagree, while about 30.8% indicated a trend toward strongly agree. The remaining 39.1% of producers remained neutral (Appendix Table 35). The responses for producers, when the data were sorted by type of ownership, size, or region did not differ significantly.

Responses to "I can build equity more quickly by borrowing" indicated about 39.6% tended toward strongly disagree, while about 25.5% indicated a trend toward strongly agree (Figure 15). The remaining 34.9% of producers remained neutral (Appendix Table 36). This implies that more producers feel that they cannot build equity more quickly by borrowing. The responses for producers, when the data were sorted by type of ownership, size, or region, did not differ significantly from each other.

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 53.3% indicated a trend toward strongly agree, while 15.7% indicated a trend toward strongly disagree. The remaining 31% of producers remained neutral (Appendix Table 37). This implies that more producers feel that farm lenders do not seem to be competing against each other enough on interest rates. When sorted by type of ownership, 55.0% of sole proprietorships and 47.9% of corporations indicated a trend toward strongly agree. When sorted by size, 57.8% of large farms and 48.6% of small farms indicated a trend toward strongly agree. When sorted by region, 59.0% of farms in the Southeastern region and 47.3% of farms in the Northeastern region indicated a trend toward strongly agree. This implies that the producers feel that the farm lenders are not competing with each other to lower interest rates.

Strongly
Disagree

Strongly
Agree

	Strongly Disagree	Statement	Strongly Agree
	15.7	Lender don't seem to be competing on interest rates	53.3
	47.6	It is tough to find a lender	23.2
	7.8	It is important that my lender provides me with personalized service	81.3
	29.3	It's hard to find a lender who understand the use of risk management tools	25.6
	36.6	I'll keep my business with local bankers even if interest is higher	39.6
	42.8	I borrow where I get most favorable rates and terms	37.7

80 60 40 20 0   %   0 20 40 60 80

Figure 17. Farmers' Attitudes Towards Their Lending Relationships, 1996

Responses to "It is tough to find a lender who understands my vision for my business" indicated about 47.6% tended toward strongly disagree, while about 23.2% indicated a trend toward strongly agree (Figure 17). The remaining 29.2% of producers remained neutral (Appendix Table 38). The responses, when the data were sorted by type of ownership, size, or region, did not differ significantly. This implies that producers feel that they do not have difficulty finding lenders who understand their future business plans.

Responses to "It is important to me that my lender knows me and provides me with personalized service" indicated about 81.3% tended toward strongly agree, while about 7.8% indicated a trend toward strongly disagree (Figure 17). The remaining 10.9% of producers remained neutral (Appendix Table 39). The responses, when the data were sorted by type of ownership, size, or region, did not differ significantly. This implies that it is very important that they deal with someone whom they know.

Responses to "It is tough to find a lender who understands the use of risk management tools (hedging, options) for my operation" indicated about 29.3% tended toward strongly disagree, while about 25.6% indicated a trend toward strongly agree (Figure 17). The remaining 45.1% of producers remained neutral (Appendix Table 40). When sorted by type of ownership, 33.3% of corporations and 29.6% of sole proprietorships indicated a trend toward strongly disagree. When sorted by size, 32.6% of large farms tended toward strongly agree, indicating that, unlike the other sizes of producers, they agree with the statement. When sorted by region, 27.6% of farmers in the Southeastern region indicated a trend toward strongly agree, while 26.6% of farmers in the Southeastern region indicated a trend toward strongly disagree. This indicates that producers in the Southeastern region feel that they are more apt to 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 39.6% indicated a trend toward strongly agree, while about 36.6% indicated a trend toward strongly disagree. The remaining 23.8% 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 type of ownership, size, or region, did not differ significantly.

Responses to "I don't care who I borrow money from as long as I get the most favorable rates and terms" indicated about 42.8% tended toward strongly disagree, while about 37.7% indicated a trend toward strongly agree (Figure 17). The remaining 19.4% of producers remained neutral (Appendix Table 42). The responses, when the data were sorted by type of ownership, size, or region, did not differ significantly at the 95% confidence level, but did differ at the 90% confidence level. About 42.7% of the sole proprietorships, unlike the other ownerships types, feel that they do not care from whom they borrow money as long as they get the most favorable rates and terms. When sorted by region, about 41.8% of farms in the Cornbelt, unlike the other regions, tended to strongly agree.

Farmers' Attitudes Towards 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 75.3% indicated a trend toward strongly disagree, while about 12.5% indicated a trend toward strongly agree. The remaining 12.2% 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, 80.2% of partnerships and 67.0% of corporations indicated a trend toward strongly disagree. When sorted by size, 76.3% of medium farms and 74.0% of large farms indicated a trend toward strongly disagree. When sorted by region, 77.7% of farmers in the Southeastern region and 71.4% of farmers in the Northeastern region indicated a trend toward strongly disagree. This suggests that producers of all different sizes and locations disagree with the statement.

Figure 18 shows the distribution of responses to "Now is a good time to lock in long-term interest rates" indicated about 44.2% tended toward strongly agree, while about 19.7% indicated a trend toward strongly disagree (Figure 18). The remaining 36.1% 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 type of ownership, 46.3% of corporations and 42.4% of sole proprietorships indicated a trend toward strongly agree. When sorted by size, 46.8% of large farms and 39.8% of small farms indicated a trend toward strongly agree. When sorted by region, 38.1% of farmers in the Northeastern region and 52.1% of farmers in the Western region indicated a trend toward strongly agree. This indicates that producers of all different sizes and locations agree with the statement.

Responses to "Lenders expect me to keep too many farm records for my liking" indicated about 48.8% tended toward strongly disagree, while about 32.0% indicated a trend toward strongly agree (Figure 18). The remaining 29.2% of producers remained neutral (Appendix Table 45). This implies that producers feel that lenders do not require too many records. The responses for producers, when the data were sorted by type of ownership, size, or region, did not differ significantly at the 95% confidence level, but responses for regions did differ significantly at the 90% confidence level. About 52.2% of farms in the Cornbelt and 41.5% of farms in the Great Plains tended toward strongly disagree. This implies that more Cornbelt producers disagreed with the statement than producers in the other regions.

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 38.8% tended toward strongly agree, while 26.1% indicated a trend toward strongly disagree (Figure 18). The remaining 35.1% of producers remained neutral (Appendix Table 46). The responses for producers, when the data were sorted by type of ownership, size, or region, did not differ significantly.

Strongly
Disagree

Strongly
Agree

Strongly Disagree		Statement	Strongly Agree
75.3		I am comfortable doing all my borrowing by computer	12.5
19.7		Now is a good time to lock in long-term interest	44.2
48.8		Lenders expect me to keep too many records	22.0
26.1		I want a lender who offers a broad range of services	38.8

80   60   40   20   0   %   0   20   40   60   80
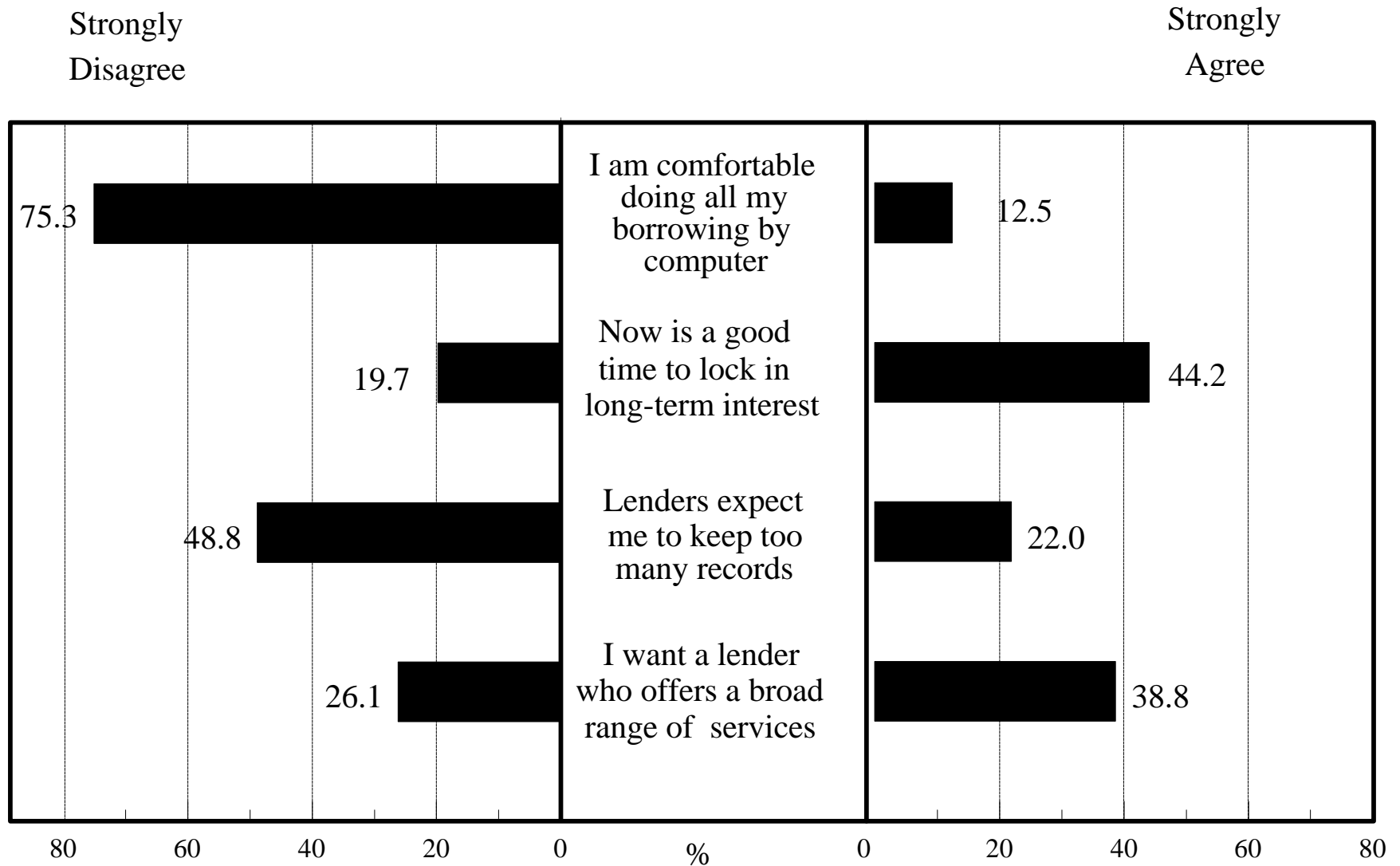
Figure 18. Farmers' Attitudes Towards Their Financial
Relationships, 1996

Figure 19 shows the financial services desired by farmers. About 18% of the respondents listed marketing advisory services as a desirable option. About 15% of the respondents listed investment services, short-term equipment rental, and estate planning and trust services as desirable, and 13% listed equipment leasing (Appendix Table 47a). The financial services desired by farmers did not differ significantly when data were sorted by type of ownership, size, or region (Appendix Tables 47b, 47c, and 47d).

Farmers' Attitudes Toward Changes in Government Programs

Figure 20 shows the farmers' reactions to changes in government programs. About 40% of the farmers responded that changes in government programs would prompt them to use marketing tools to improve their return (Appendix Table 48a). About 31% responded that they would diversify their investments outside agriculture. About 28% responded that they would contract more of their production. About 23% responded that they would both be encouraged to retire from farming and be more cautious of debt. Only about 1% responded that they would be willing to diversify into new livestock and crop enterprises. The farmers' reactions to changes in government programs, when sorted by type of ownership, did not differ significantly at the 95% confidence level (Appendix Table 48b). At the 90% confidence level, farmers' feelings toward the future differ significantly when the data were sorted by ownership. Sole proprietorships were more optimistic about the future than either partnerships or corporations.

Appendix Table 48c shows the farmers' reactions to changes in government programs when data were sorted by size of farms. Most categories did not differ significantly at the 95% confidence level, but 16% of small farms would be encouraged to retire with changes in government programs, while 23% of medium and 32% of large farms would be encouraged to retire. This implies that producers of the large farms are more likely to retire due to changes in government programs. About 15% of producers in both small and medium farms and 29% of producers in the large farms indicated that changes in government programs would have little impact.

Appendix Table 48d shows the farmers' reactions to changes in government programs when data were sorted by region. Several categories differ significantly at the 95% confidence level. About 26% of the farmers in the Great Plains region indicated that they would be more optimistic with changes in government programs, compared to 9% of farmers in the Northeastern region. About 29% of the farmers in the Cornbelt region would be encouraged to retire compared to 11% in the Northeastern region. About 25% of the farmers in the Cornbelt region indicated that changes in government programs would have little impact on them compared to 9% in the Northeastern region. This implies that farmers in the Northeastern region feel that they had relied less on government programs than other areas of the country. At the 90% confidence level, farmers' feelings toward outside investments differ significantly when the data were sorted by regions. About 18% of producers in the Northeastern region and 35% of producers in the Southeastern region felt that it was a good idea.
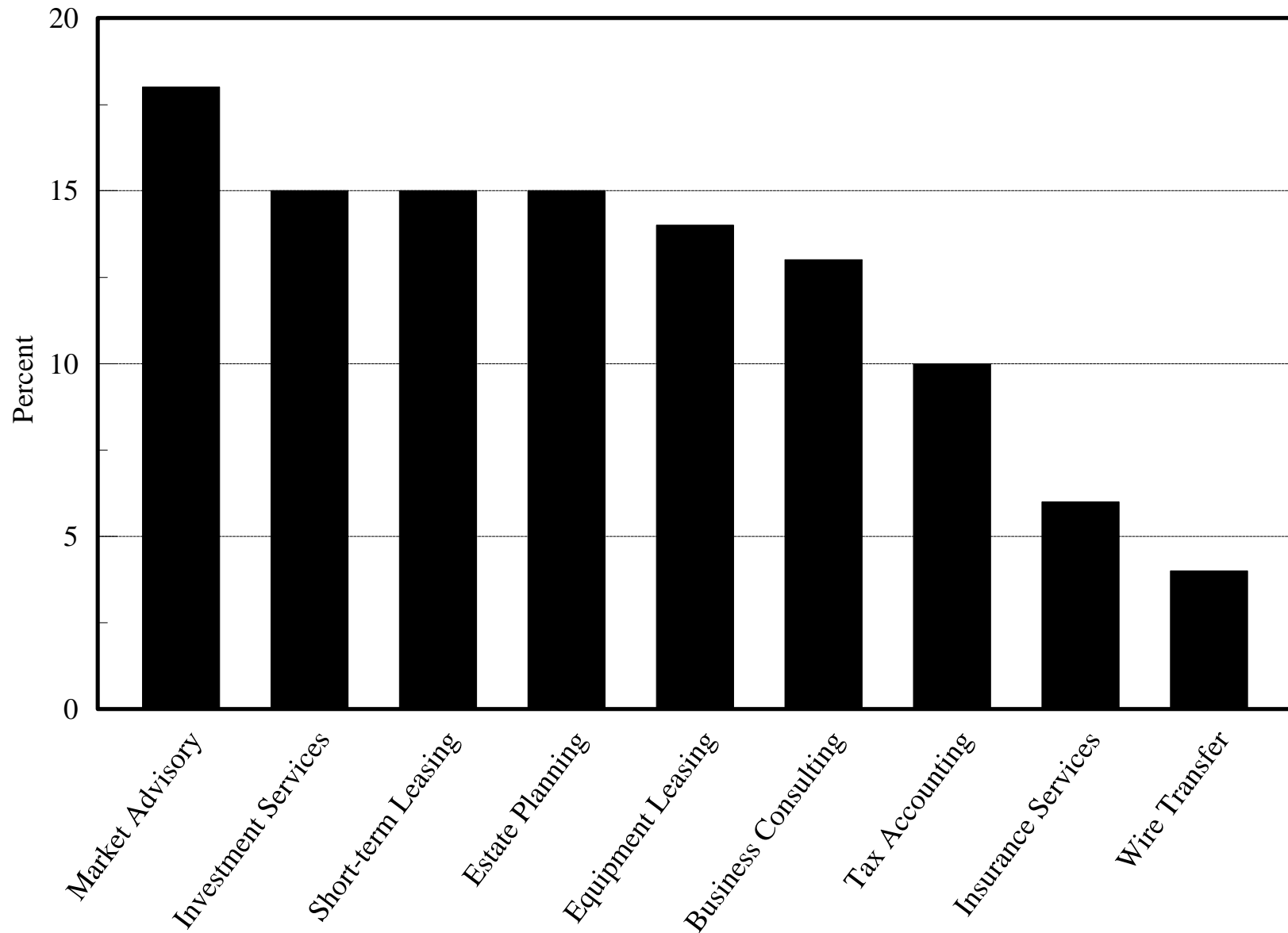
Figure 19. Financial Services Desired by U.S. Farmers, 1996
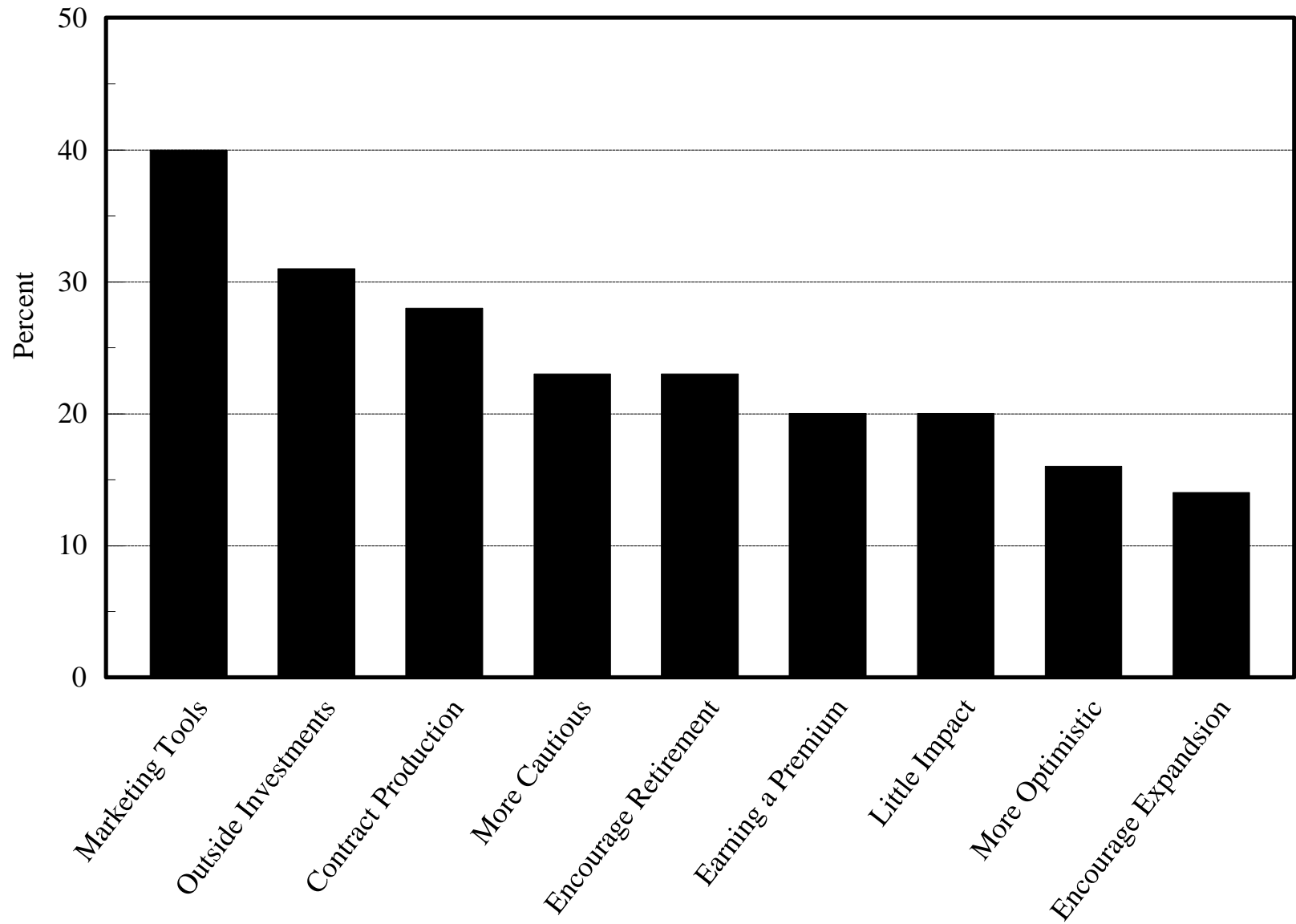
Figure 20. U.S. Farmers' Reactions to Changes in
Governmental Programs, 1996

Summary

Most producers expected to expand production, except for wheat, milk, and fed beef. The age spread among the three groups (< 35, 35 to 54, and > 54) was evenly divided. There were no significant differences among ownership type, farm size, or region. A high school diploma was the most common education (40%), followed by a college degree (22%).

The producers in the Northeastern region viewed their retirement date earlier than the rest of the country, while producers in the Western region viewed their retirement at a later date. The largest percentage of producers wanted to keep farms in their family without a sale (30%). More producers in the Northeastern region were going to sell farms (27%) than 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 57% of the producers had a debt-to-asset ratio less than 25%, while 24% had a debt-to-asset ratio greater than 41%. Corporations' debt-to-asset ratios were higher than for either sole proprietorships or partnerships. The most used financial services were life insurance (65%), medical insurance (63%), crop insurance (56%), and forward crop contracting (37%). The least used financial services were disability insurance, futures, and options. Producers of large farms used forward cash contracting, options, and futures more than producers of small or medium farms. Producers in the Northeastern region used financial services less than other regions of the country, while producers in the Cornbelt used financial services more than the rest of the country.

Producers felt that business management skills were more important (46.8%) than production skills (19.2%), and they 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 that renting land is better than buying. About one-half of the producers felt no good land was available in their area at a reasonable price. Producers felt that increasing the size of their operation would lower their per-unit cost of production.

Producers felt that reducing their financial risks was more important than profits. Corporations felt that lowering financial risks was more important than did sole proprietorships and partnerships. Producers of large farms felt that profits were less important than did producers of small or medium farms. Producers in the Northeastern region felt that reducing financial risks was less important than those in the rest of the country, while producers in the Great Plains felt that profits were less important than those in the rest of the country. Producers, in general, felt that there were ways to lower interest rates and that buying equipment was better than leasing it.

More than one-half of the producers felt that they did not have too much debt in their operation and, at the same time, believe additional debt is not a good idea. Corporations felt better about their debt than sole proprietorships or partnerships. Producers of large farms felt worse about their debt situation than did those of small or medium farms.

Producers felt that rapid expansion would be difficult in the future. Sole proprietorships felt it more strongly than either partnerships or corporations. However, producers of large farms felt that it is easier to expand now.

Producers felt that cash flow was more important than equity. Producers in the Northeastern region felt it more strongly than those in the rest of the country.

Local commercial banks were used the most frequently for lending (63%), followed by self-earnings (45%). More corporations use non-local commercial banks than other organizational structures. The Farm Service Agency is used less by corporations than others. Producers of large farms will use farm equipment manufacturer credit more (36%) than those of either small or medium farms. Producers in the Northeastern region use local commercial banks less (38%) than those in other areas of the country, and producers in the Western and Northeastern regions use insurance companies more than those in the rest of the country.

Tax accounting service was the most frequently used service (19%) offered by financial lenders, followed by investment services (12%), equipment leasing (12%), and wire transfer of funds (11%). Corporations use investment services more than either sole proprietorships or partnerships. Producers in the Northeastern region use tax accounting services more than those in the rest of the country. Producers in the Western region use insurance services more than those in the rest of the country. Producers in the Cornbelt and Southwestern regions felt that off- farm investments were less desirable than those in the rest of the country.

About 25% of the producers indicated that they had no plans to expand. The main reason to expand was to generate large sales (32%), followed by capture of economies of scale (18%). About 46% would borrow less than $50,000, while 22% would borrow more than $500,000. More 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, but producers of larger farms believe it is harder to find a lender who understands hedging and options than do producers of small or medium farms. Producers in the Northeastern region found it more difficult than those in the rest of the country, and the producers in the Great Plains and Cornbelt regions found it easier.

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 to offer a broad range of financial services, especially

marketing adviser services (18%), investment services (15%), short-term equipment rental (15%), and estate planning (15%).

About 40% of the producers believe that they would use marketing tools for price protection due to the changes in government farm programs. About 31% would use outside investments, followed by forward price contracts (28%). About 23% of the producers said that they would be encouraged to retire due to changes in the government programs. More producers of large farms would be encouraged to retire (32%) than producers of small (16%) or medium (23%) farms. The producers in the Great Plains region were more optimistic than those in the rest to the country. Producers in the Northeastern region were encouraged to expand, while the producers in the Cornbelt region were encouraged to retire.

The producers felt strongly about having personal relationships in banking. About 75% 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. They felt that farmland is not a good investment and that renting land makes better sense than buying it. They also felt that 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.

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Appendix

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Table 1. Average Size of U.S. Farms, 1996 and 1999

	Corn	Wheat	Cotton	Other	Milk	Hogs	Calf	Bkgd	Fed
	-------------acres--------------				-----------------head--------------------				
1996									
All	3,870	2,071	3,220	1,693	684.1	10,380	862	1,375	1,618
Organization									
Sole	3,284	1,794	2,876	1,129	1,051	4,203	696	1,207	1,386
Part	4,903	2,676	3,302	1,550	663	1,707	837	804	874
Corp	5,277	2,164	6,966	3,328	601	15,490	1,638	6,155	2,950
Size									
Small	518	503	653	331	138	599	166	65	113
Medium	2,083	905	2,778	1,130	487	2,600	559	345	376
Large	8,098	3,526	5,121	3,143	2,106	18,839	1,586	2,710	2,942
Region									
Western	2,376	2,865	8,070	3,172	1,950	2,973	1,606	1,706	1,019
Great Plains	4,596	3,189	3,022	2,060	492	7,799	946	2,351	2,810
Corn Belt	3,550	513	6,250	879	338	10,282	305	612	1,988
Southeastern	5,447	2,042	3,553	908	530	19,387	598	861	386
Northeastern	1,394	286	0	1,210	564	50	676	477	933
1999									
All	4,313	1,966	4,035	1,568	581.9	12,645	1,027	1,458	880
Organization									
Sole	3,996	1,635	3,998	1,208	569	4,630	1,035	1,601	421
Part	5,730	2,710	3,610	1,719	887	2,050	1,195	1,425	331
Corp	6,148	2,331	12,000	3,417	901	16,950	1,995	4,133	3,338
Size									
Small	711	712	906	375	196	1,116	280	162	91
Medium	2,653	1,143	3,542	1,211	620	4,121	726	429	190
Large	9,219	3,538	6,885	3,069	1,732	26,432	1,978	3,104	1,703
Region									
Western	2,831	3,645	8,144	3,501	1,168	5,162	2,189	2,425	614
Great Plains	4,969	3,006	3,733	1,547	867	9,827	1,072	2,067	2,218
Cornbelt	4,515	622	5,125	1,031	405	15,498	433	858	800
Southeastern	6,288	1,829	4,572	1,008	563	24,473	820	1,424	352
Northeastern	1,658	467	0	1,203	952	200	693	736	814

Table 2. Age of U.S. Farmers, 1996

	< 35	35-54	55 >
	----------Number of responses----------		
	(frequencies)		
All			
	268	368	260
	(0.30)	(0.41)	(0.29)
Organization			
Sole	86	114	78
	(0.31)	(0.41)	(0.28)
Part	91	113	66
	(0.34)	(0.42)	(0.24)
Corp	31	40	29
	(0.31)	(0.40)	(0.29)

Calculated X^2 = 0.63
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.49

Size			
Small	76	112	105
	(0.26)	(0.38)	(0.36)
Medium	99	123	76
	(0.33)	(0.41)	(0.26)
Large	93	123	79
	(0.32)	(0.42)	(0.27)

Calculated X^2 = 3.30
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.49

Region			
Western	49	73	53
	(0.28)	(0.42)	(0.30)
Great Plains	51	79	66
	(0.26)	(0.40)	(0.34)
Cornbelt	88	117	70
	(0.32)	(0.43)	(0.26)
Southeastern	66	88	51
	(0.32)	(0.43)	(0.25)
Northeastern	14	11	20
	(0.31)	(0.24)	(0.44)

Calculated X^2 = 15.43
Critical X^2 at 8 degrees of freedom and 90 % confidence level = 13.4.
Critical X^2 at 8 degrees of freedom and 95 % confidence level = 15.5.

Table 3. Educational Level of U.S. Farmers, 1996

	High School	Technical Degree	Some College	Undergraduate Degree	Post Graduate
	----------------------------Number of responses----------------------------				
	(frequencies)				
All					
	340	71	179	185	74
	(0.40)	(0.08)	(0.21)	(0.22)	(0.09)
Organization					
Sole	116	25	50	54	17
	(0.44)	(0.10)	(0.19)	(0.21)	(0.07)
Part	95	21	64	58	23
	(0.36)	(0.08)	(0.25)	(0.22)	(0.09)
Corp	33	5	14	30	12
	(0.35)	(0.05)	(0.15)	(0.32)	(0.13)

Calculated X^2 = 10.0
Critical X^2 at 8 degrees of freedom and 90 % confidence level = 13.4
Critical X^2 at 8 degrees of freedom and 95 % confidence level = 15.5

Size					
Small	110	25	64	54	25
	(0.40)	(0.09)	(0.23)	(0.19)	(0.09)
Medium	120	23	59	59	24
	(0.42)	(0.08)	(0.21)	(0.21)	(0.08)
Large	110	23	56	72	25
	(0.39)	(0.08)	(0.20)	(0.25)	(0.09)

Calculated X^2 = 1.39
Critical X^2 at 8 degrees of freedom and 90 % confidence level = 13.4
Critical X^2 at 8 degrees of freedom and 95 % confidence level = 15.5

Region					
Western	58	11	43	33	22
	(0.35)	(0.07)	(0.26)	(0.20)	(0.13)
Great Plains	67	12	35	49	21
	(0.36)	(0.07)	(0.19)	(0.27)	(0.11)
Cornbelt	127	32	47	47	13
	(0.48)	(0.12)	(0.18)	(0.18)	(0.05)
Southeastern	68	14	48	46	16
	(0.35)	(0.07)	(0.25)	(0.24)	(0.08)
Northeastern	20	2	6	10	2
	(0.50)	(0.05)	(0.15)	(0.25)	(0.05)

Calculated X^2 = 22.44
Critical X^2 at 16 degrees of freedom and 90 % confidence level = 23.5.
Critical X^2 at 16 degrees of freedom and 95 % confidence level = 26.3.

Table 4. Ownership Characteristics of U.S. Farmers, 1996

	Sole Proprietorship	Family Partnership	Non-family Partnership	Family Corporation	Non-family Corporation	Other
	----------------------------------Number of responses----------------------------------					
	(frequencies)					
All	289	258	6	93	5	16
	(0.43)	(0.39)	(0.01)	(0.14)	(0.01)	(0.02)
Size						
Small	111	67	1	33	3	6
	(0.50)	(0.30)	(0.01)	(0.15)	(0.01)	(0.03)
Medium	97	95	3	24	0	5
	(0.43)	(0.42)	(0.01)	(0.11)	(0.00)	(0.02)
Large	81	96	2	36	2	5
	(0.37)	(0.43)	(0.01)	(0.16)	(0.01)	(0.02)

Calculated X^2 = 7.85
Critical X^2 at 10 degrees of freedom and 90 % confidence level = 16.0
Critical X^2 at 10 degrees of freedom and 95 % confidence level = 18.3

Region						
Western	32	57	1	33	1	4
	(0.25)	(0.45)	(0.01)	(0.26)	(0.01)	(0.03)
Great Plains	69	51	1	15	2	4
	(0.49)	(0.36)	(0.01)	(0.11)	(0.01)	(0.28)
Cornbelt	98	64	3	26	0	5
	(0.50)	(0.33)	(0.02)	(0.13)	(0.00)	(0.03)
Southeastern	73	72	1	14	0	2
	(0.45)	(0.44)	(0.01)	(0.09)	(0.00)	(0.01)
Northeastern	17	14	0	5	2	1
	(0.44)	(0.44)	(0.01)	(0.09)	(0.00)	(0.01)

Calculated X^2 = 7.89
Critical X^2 at 20 degrees of freedom and 90 % confidence level = 28.4.
Critical X^2 at 20 degrees of freedom and 95 % confidence level = 31.4.

Table 5 . Number of Years Until Retirement for U.S. Farmers, 1996

	Less than 10	11 to 20	21 to 30	31 to 40	Greater than 40
	------------------------Number of responses----------------------------				
	(frequencies)				
All					
	186	191	280	106	12
	(0.24)	(0.25)	(0.36)	(0.13)	(0.02)
Organization					
Sole	55	73	58	41	20
	(0.23)	(0.29)	(0.24)	(0.17)	(0.08)
Part	50	53	80	29	19
	(0.24)	(0.25)	(0.37)	(0.13)	(0.01)
Corp	25	16	33	10	2
	(0.30)	(0.19)	(0.39)	(0.12)	(0.02)

Calculated X^2 = 24.19
Critical X^2 at 16 degrees of freedom and 90 % confidence level = 23.5
Critical X^2 at 16 degrees of freedom and 95 % confidence level = 26.3

Size					
Small	64	75	86	28	5
	(0.25)	(0.29)	(0.33)	(0.11)	(0.02)
Medium	56	66	88	43	4
	(0.22)	(0.26)	(0.34)	(0.17)	(0.02)
Large	66	50	106	35	3
	(0.15)	(0.20)	(0.41)	(0.14)	(0.01)

Calculated X^2 = 8.22
Critical X^2 at 16 degrees of freedom and 90 % confidence level = 23.5
Critical X^2 at 16 degrees of freedom and 95 % confidence level = 26.3

Region					
Western	32	38	64	17	2
	(0.21)	(0.24)	(0.42)	(0.11)	(0.01)
Great Plains	50	28	63	26	1
	(0.30)	(0.17)	(0.37)	(0.15)	(0.01)
Cornbelt	51	66	85	39	5
	(0.21)	(0.27)	(0.34)	(0.16)	(0.02)
Southeastern	37	54	60	19	2
	(0.21)	(0.31)	(0.35)	(0.11)	(0.01)
Northeastern	17	5	10	5	0
	(0.45)	(0.14)	(0.28)	(0.14)	(0.00)

Calculated X^2 = 57.03.
Critical X^2 at 32 degrees of freedom and 90 % confidence level = 42.6.
Critical X^2 at 32 degrees of freedom and 95 % confidence level = 46.2.

Table 6. U.S. 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	62	20	144	40	237	288
	(0.08)	(0.03)	(0.18)	(0.05)	(0.30)	(0.36)
Organization						
Sole	16	5	47	21	55	110
	(0.06)	(0.02)	(0.19)	(0.08)	(0.22)	(0.43)
Part	14	8	45	8	94	77
	(0.06)	(0.03)	(0.18)	(0.03)	(0.38)	(0.31)
Corp	11	1	12	3	35	26
	(0.13)	(0.01)	(0.14)	(0.03)	(0.40)	(0.30)

Calculated X^2 = 18.02
Critical X^2 at 10 degrees of freedom and 90 % confidence level = 16.0
Critical X^2 at 10 degrees of freedom and 95 % confidence level = 18.3

Size						
Small	15	8	45	16	83	102
	(0.06)	(0.03)	(0.17)	(0.06)	(0.31)	(0.38)
Medium	25	7	34	16	86	101
	(0.09)	(0.03)	(0.13)	(0.06)	(0.32)	(0.38)
Large	22	5	65	8	68	85
	(0.09)	(0.02)	(0.26)	(0.03)	(0.27)	(0.34)

Calculated X^2= 7.89
Critical X^2 at 10 degrees of freedom and 90 % confidence level = 16.0
Critical X^2 at 10 degrees of freedom and 95 % confidence level = 18.3

Region						
Western	20	5	15	1	53	56
	(0.13)	(0.03)	(0.10)	(0.01)	(0.35)	(0.38)
Great Plains	7	3	38	12	44	68
	(0.04)	(0.02)	(0.22)	(0.07)	(0.26)	(0.40)
Cornbelt	17	5	60	13	57	94
	(0.07)	(0.02)	(0.24)	(0.05)	(0.23)	(0.38)
Southeastern	10	4	29	12	69	58
	(0.06)	(0.02)	(0.16)	(0.07)	(0.38)	(0.32)
Northeastern	8	3	2	2	14	12
	(0.20)	(0.07)	(0.05)	(0.05)	(0.34)	(0.29)

Calculated X^2 = 53.25.
Critical X^2 at 20 degrees of freedom and 90 % confidence level = 28.4.
Critical X^2 at 20 degrees of freedom and 95 % confidence level = 31.4.

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

	Strongly Disagree				Strongly Agree
	1	2	3	4	5
All	0.215	0.214	0.210	0.190	0.171
Organization					
Sole	0.192	0.203	0.196	0.207	0.203
Part	0.230	0.188	0.230	0.180	0.172
Corp	0.143	0.286	0.224	0.184	0.163

Calculated X^2 = 5.22
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.218	0.160	0.191	0.205	0.225
Medium	0.194	0.250	0.236	0.170	0.149
Large	0.231	0.231	0.204	0.194	0.139

Calculated X^2 = 1.60
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.228	0.216	0.158	0.211	0.187
Great Plains	0.253	0.184	0.211	0.205	0.147
Cornbelt	0.201	0.223	0.209	0.209	0.158
Southeastern	0.192	0.217	0.242	0.152	0.197
Northeastern	0.186	0.256	0.279	0.093	0.186

Calculated X^2 = 2.50.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 8. U.S. 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	0.183	0.235	0.370	0.129	0.084
Organization					
Sole	0.156	0.233	0.367	0.138	0.105
Part	0.210	0.222	0.381	0.125	0.062
Corp	0.242	0.293	0.273	0.121	0.071

Calculated $X^2 = 2.043$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.230	0.206	0.388	0.086	0.089
Medium	0.166	0.252	0.372	0.128	0.083
Large	0.152	0.248	0.348	0.172	0.079

Calculated $X^2 = 4.205$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.235	0.224	0.353	0.118	0.071
Great Plains	0.101	0.222	0.402	0.164	0.111
Cornbelt	0.193	0.213	0.386	0.122	0.086
Southeastern	0.193	0.213	0.386	0.122	0.086
Northeastern	0.256	0.209	0.372	0.000	0.163

Calculated $X^2 = 5.231$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 9. U.S. 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	0.130	0.233	0.343	0.163	0.131
Organization					
Sole	0.102	0.215	0.350	0.175	0.157
Part	0.183	0.214	0.350	0.144	0.109
Corp	0.186	0.289	0.309	0.155	0.062

Calculated $X^2 = 6.50$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.135	0.205	0.385	0.142	0.132
Medium	0.119	0.238	0.322	0.175	0.147
Large	0.137	0.256	0.321	0.171	0.116

Calculated $X^2 = 9.01$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.126	0.269	0.329	0.156	0.120
Great Plains	0.080	0.207	0.351	0.223	0.138
Cornbelt	0.140	0.254	0.371	0.143	0.092
Southeastern	0.157	0.223	0.294	0.132	0.193
Northeastern	0.186	0.116	0.395	0.186	0.116

Calculated $X^2 = 16.86$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 10. U.S. Farmers' Responses to "A 50% Reduction in Capital Gains Taxes Would Encourage Me to Sell Farmland"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.334	0.227	0.250	0.099	0.090
Organization					
Sole	0.302	0.246	0.291	0.090	0.071
Part	0.359	0.197	0.259	0.093	0.093
Corp	0.323	0.258	0.226	0.097	0.097

Calculated $X^2 = 6.02$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.348	0.197	0.254	0.097	0.104
Medium	0.330	0.228	0.260	0.091	0.091
Large	0.324	0.254	0.237	0.108	0.077

Calculated $X^2 = 6.90$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.331	0.253	0.187	0.102	0.127
Great Plains	0.276	0.227	0.315	0.099	0.083
Cornbelt	0.338	0.238	0.230	0.112	0.082
Southeastern	0.347	0.202	0.280	0.083	0.088
Northeastern	0.500	0.167	0.214	0.071	0.048

Calculated $X^2 = 23.71$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 11. U.S. 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	0.371	0.256	0.212	0.103	0.058
Organization					
Sole	0.380	0.272	0.225	0.069	0.054
Part	0.365	0.227	0.219	0.127	0.062
Corp	0.323	0.273	0.232	0.091	0.081

Calculated X^2 = 5.43
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.387	0.247	0.219	0.072	0.075
Medium	0.386	0.252	0.197	0.124	0.041
Large	0.340	0.269	0.221	0.112	0.058

Calculated X^2 = 6.73
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.339	0.304	0.199	0.082	0.076
Great Plains	0.387	0.257	0.209	0.094	0.052
Cornbelt	0.374	0.286	0.194	0.114	0.033
Southeastern	0.367	0.191	0.251	0.121	0.070
Northeastern	0.429	0.167	0.214	0.071	0.119

Calculated X^2 = 21.06.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 12. Debt-to-asset Ratio for U.S. Farmers, 1996

	No debt	1%-15%	16%-25%	26%-40%	41%-60%	More than 60%
	---------------------------------Number of responses-----------------------------------					
	(frequencies)					
All	208	203	128	172	178	32
	(0.24)	(0.18)	(0.15)	(0.20)	(0.20)	(0.04)
Organization						
Sole	70	39	50	56	41	13
	(0.26)	(0.15)	(0.19)	(0.21)	(0.15)	(0.05)
Part	55	59	54	51	32	8
	(0.21)	(0.23)	(0.21)	(0.20)	(0.12)	(0.03)
Corp	24	26	22	17	41	0
	(0.19)	(0.20)	(0.17)	(0.13)	(0.32)	(0.00)

Calculated X^2= 20.95
Critical X^2 at 10 degrees of freedom and 90 % confidence level = 16.0
Critical X^2 at 10 degrees of freedom and 95 % confidence level = 18.3

Size						
Small	91	71	37	42	41	8
	(0.31)	(0.25)	(0.13)	(0.15)	(0.14)	(0.03)
Medium	74	48	51	62	43	13
	(0.25)	(0.17)	(0.18)	(0.21)	(0.15)	(0.05)
Large	43	53	65	74	44	11
	(0.15)	(0.18)	(0.22)	(0.26)	(0.15)	(0.04)

Calculated X^2 = 13.80
Critical X^2 at 10 degrees of freedom and 90 % confidence level = 16.0
Critical X^2 at 10 degrees of freedom and 95 % confidence level = 18.3

Region						
Western	42	32	35	37	19	8
	(0.24)	(0.19)	(0.20)	(0.21)	(0.11)	(0.05)
Great Plains	57	39	26	31	27	9
	(0.29)	(0.20)	(0.13)	(0.16)	(0.19)	(0.05)
Cornbelt	60	48	48	60	44	8
	(0.22)	(0.18)	(0.18)	(0.22)	(0.16)	(0.03)
Southeastern	38	41	40	46	29	5
	(0.19)	(0.21)	(0.20)	(0.23)	(0.15)	(0.03)
Northeastern	11	12	4	4	9	2
	(0.26)	(0.29)	(0.10)	(0.10)	(0.21)	(0.05)

Calculated X^2 = 23.51.
Critical X^2 at 20 degrees of freedom and 90 % confidence level = 28.4.
Critical X^2 at 20 degrees of freedom and 95 % confidence level = 31.4.

Table 13a. Tools Used by U.S. Farmers to Manage
Financial Risks, 1996

	Num	Freq
Forward cash contracts	331	0.37
Hedged-to-arrive contracts	73	0.08
Options	143	0.16
Futures	174	0.19
Joint venturing with a processor	32	0.04
Life insurance	580	0.65
Disability insurance	228	0.25
Medical insurance	569	0.63
Lock in interest rates	278	0.31
Crop insurance	501	0.56

Table 13b. Tools Used by U.S. Farmers to Manage Financial Risks by Organization, 1996

	Sole Pro		Partnerships		Corporation		
	Num	Freq	Num	Freq	Num	Freq	X^2
Forward cash contracts	108	0.38	94	0.35	40	0.40	0.54
Hedged-to-arrive contracts	21	0.07	28	0.10	10	0.10	0.61
Options	41	0.15	41	0.15	17	0.17	0.23
Futures	55	0.20	53	0.20	27	0.27	2.08
Joint venturing with a processor	10	0.04	9	0.03	2	0.02	0.50
Life insurance	176	0.63	173	0.65	67	0.67	0.42
Disability insurance	64	0.23	74	0.28	29	0.29	1.10
Medical insurance	10261		163	0.61	67	0.67	1.03
Lock in interest rates	84	0.30	89	0.33	28	0.28	0.66
Crop insurance	156	0.56	145	0.54	52	0.52	0.25

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

Table 13c. Tools Used by U.S. Farmers to Manage Financial Risks by Size, 1996

	Small		Medium		Large		
	Num	Freq	Num	Freq	Num	Freq	X^2
Forward cash contracts	75	0.25	98	0.33	158	0.53	**18.62**
Hedged-to-arrive contracts	16	0.05	17	0.06	40	0.14	5.73
Options	30	0.10	38	0.13	75	0.25	**10.04**
Futures	42	0.14	46	0.15	86	0.29	**8.90**
Joint venturing with							
a processor	6	0.02	6	0.02	20	0.07	4.37
Life insurance	180	0.60	191	0.64	209	0.71	2.70
Disability insurance	81	0.27	75	0.25	72	0.24	0.17
Medical insurance	179	0.59	189	0.63	201	0.68	1.61
Lock in interest rates	66	0.22	94	0.31	118	0.40	**7.59**
Crop insurance	149	0.49	169	0.57	183	0.62	3.19

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

Table 13d. Tools Used by U.S. Farmers to Manage Financial Risks by Region, 1996

	Western		Great Plains		Cornbelt		Southeastern		Northeastern		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X^2
Forward cash contracts	53	0.30	60	0.31	136	0.49	77	0.38	5	0.11	**35.79**
Hedged-to-arrive											
contracts	4	0.02	14	0.07	35	0.13	18	0.09	2	0.04	**9.84**
Options	21	0.12	42	0.21	52	0.19	26	0.13	2	0.04	**14.71**
Futures	25	0.14	30	0.15	70	0.25	44	0.22	5	0.11	9.43
Joint venturing with											
a processor	10	0.06	4	0.02	7	0.03	11	0.05	0	0.00	7.56
Life insurance	116	0.66	119	0.61	201	0.73	120	0.59	24	0.53	9.13
Disability insurance	41	0.23	38	0.19	98	0.36	42	0.21	9	0.20	**10.00**
Medical insurance	120	0.68	121	0.62	198	0.72	111	0.55	19	0.42	**22.56**
Lock in interest rates	57	0.32	47	0.24	91	0.33	78	0.38	5	0.11	**22.56**
Crop insurance	89	0.50	112	0.57	186	0.67	102	0.50	12	0.27	**35.90**

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

Table 14. U.S. 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	0.074	0.118	0.339	0.303	0.166
Organization					
Sole	0.068	0.118	0.319	0.305	0.190
Part	0.078	0.112	0.360	0.291	0.159
Corp	0.102	0.163	0.296	0.286	0.153

Calculated X^2= 3.36
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.089	0.086	0.366	0.277	0.182
Medium	0.072	0.134	0.321	0.300	0.172
Large	0.061	0.133	0.331	0.331	0.143

Calculated X^2 = 4.54
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.082	0.129	0.368	0.310	0.111
Great Plains	0.090	0.106	0.307	0.333	0.164
Cornbelt	0.044	0.125	0.359	0.315	0.158
Southeastern	0.070	0.111	0.332	0.271	0.216
Northeastern	0.186	0.116	0.279	0.209	0.209

Calculated X^2 = 7.61.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 15. U.S. 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
<u>All</u>	0.213	0.192	0.306	0.185	0.104
<u>Organization</u>					
Sole	0.226	0.204	0.292	0.175	0.102
Part	0.187	0.195	0.315	0.183	0.121
Corp	0.255	0.184	0.286	0.204	0.071

Calculated $X^2 = 1.27$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

	Strongly Disagree 1	2	3	4	Strongly Agree 5
<u>Size</u>					
Small	0.226	0.174	0.309	0.170	0.122
Medium	0.213	0.192	0.252	0.231	0.112
Large	0.200	0.210	0.355	0.155	0.079

Calculated $X^2 = 0.81$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

	Strongly Disagree 1	2	3	4	Strongly Agree 5
<u>Region</u>					
Western	0.226	0.202	0.292	0.173	0.107
Great Plains	0.239	0.165	0.309	0.186	0.101
Cornbelt	0.159	0.185	0.332	0.225	0.100
Southeastern	0.245	0.184	0.301	0.163	0.107
Northeastern	0.244	0.366	0.195	0.073	0.122

Calculated $X^2 = 4.99$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

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

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.165	0.153	0.262	0.235	0.185
Organization					
Sole	0.164	0.156	0.255	0.225	0.200
Part	0.167	0.155	0.256	0.248	0.174
Corp	0.163	0.143	0.255	0.245	0.194

Calculated $X^2 = 0.20$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.187	0.163	0.253	0.194	0.204
Medium	0.187	0.159	0.242	0.242	0.170
Large	0.120	0.137	0.292	0.268	0.182

Calculated $X^2 = 0.50$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.185	0.113	0.298	0.226	0.179
Great Plains	0.181	0.144	0.250	0.255	0.170
Cornbelt	0.107	0.202	0.276	0.246	0.169
Southeastern	0.186	0.141	0.211	0.241	0.221
Northeastern	0.286	0.095	0.333	0.071	0.214

Calculated $X^2 = 15.28$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 17. U.S. 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	0.131	0.179	0.317	0.241	0.132
Organization					
Sole	0.137	0.148	0.321	0.235	0.159
Part	0.120	0.186	0.337	0.205	0.151
Corp	0.163	0.194	0.347	0.245	0.051

Calculated X^2 = 1.74
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.138	0.197	0.277	0.232	0.156
Medium	0.152	0.193	0.369	0.179	0.107
Large	0.103	0.147	0.305	0.312	0.134

Calculated X^2 = 2.30
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.076	0.170	0.351	0.251	0.152
Great Plains	0.142	0.142	0.300	0.284	0.132
Cornbelt	0.129	0.184	0.283	0.276	0.129
Southeastern	0.163	0.235	0.306	0.168	0.128
Northeastern	0.167	0.095	0.524	0.119	0.095

Calculated X^2 = 7.84.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 18. U.S. 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	0.043	0.101	0.359	0.351	0.146
Organization					
Sole	0.048	0.130	0.341	0.337	0.144
Part	0.040	0.088	0.410	0.339	0.124
Corp	0.051	0.082	0.367	0.357	0.143

Calculated X^2 = 6.30
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.056	0.088	0.368	0.344	0.144
Medium	0.039	0.123	0.354	0.333	0.151
Large	0.035	0.091	0.354	0.375	0.144

Calculated X^2 = 7.56
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.030	0.078	0.347	0.371	0.174
Great Plains	0.060	0.130	0.391	0.315	0.103
Cornbelt	0.026	0.093	0.353	0.383	0.145
Southeastern	0.057	0.103	0.371	0.314	0.155
Northeastern	0.073	0.098	0.244	0.390	0.195

Calculated X^2 = 10.17.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 19. U.S. 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	0.197	0.268	0.298	0.144	0.093
Organization					
Sole	0.327	0.218	0.280	0.087	0.087
Part	0.309	0.221	0.321	0.076	0.073
Corp	0.286	0.235	0.296	0.143	0.041

Calculated $X^2 = 4.14$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.331	0.212	0.259	0.106	0.092
Medium	0.278	0.282	0.282	0.093	0.065
Large	0.345	0.213	0.291	0.084	0.068

Calculated $X^2 = 5.73$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.357	0.216	0.281	0.094	0.053
Great Plains	0.312	0.219	0.302	0.120	0.047
Cornbelt	0.321	0.263	0.255	0.088	0.073
Southeastern	0.305	0.250	0.265	0.075	0.105
Northeastern	0.233	0.140	0.349	0.116	0.163

Calculated $X^2 = 8.54$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 20. U.S. 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	0.318	0.235	0.277	0.094	0.075
Organization					
Sole	0.193	0.296	0.263	0.161	0.088
Part	0.211	0.241	0.307	0.130	0.111
Corp	0.194	0.235	0.316	0.163	0.092

Calculated $X^2 = 2..76$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.193	0.259	0.279	0.148	0.121
Medium	0.180	0.304	0.291	0.131	0.093
Large	0.218	0.241	0.323	0.153	0.065

Calculated $X^2 = 4.26$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.141	0.253	0.312	0.182	0.112
Great Plains	0.195	0.263	0.321	0.121	0.100
Cornbelt	0.190	0.297	0.264	0.165	0.084
Southeastern	0.227	0.232	0.328	0.131	0.081
Northeastern	0.333	0.333	0.214	0.024	0.095

Calculated $X^2 = 6.550$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 21. U.S. 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	0.054	0.172	0.377	0.277	0.120
Organization					
Sole	0.062	0.157	0.343	0.292	0.146
Part	0.047	0.163	0.419	0.271	0.101
Corp	0.082	0.206	0.392	0.196	0.124

Calculated X^2 = 15.87
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.066	0.181	0.380	0.247	0.125
Medium	0.052	0.192	0.383	0.265	0.108
Large	0.044	0.143	0.369	0.317	0.126

Calculated X^2 = 18.63
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.048	0.150	0.437	0.263	0.102
Great Plains	0.059	0.176	0.335	0.314	0.117
Cornbelt	0.044	0.203	0.387	0.273	0.092
Southeastern	0.051	0.136	0.354	0.288	0.172
Northeastern	0.140	0.209	0.372	0.140	0.140

Calculated X^2 = 26.54.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 22. U.S. 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	0.156	0.221	0.400	0.153	0.070
Organization					
Sole	0.150	0.234	0.398	0.128	0.091
Part	0.143	0.259	0.371	0.166	0.062
Corp	0.146	0.219	0.438	0.167	0.031

Calculated X^2 = 6.64
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.153	0.212	0.413	0.135	0.087
Medium	0.165	0.196	0.414	0.147	0.077
Large	0.152	0.255	0.372	0.176	0.045

Calculated X^2 = 3.83
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.102	0.223	0.464	0.139	0.072
Great Plains	0.160	0.229	0.362	0.181	0.069
Cornbelt	0.148	0.218	0.417	0.144	0.074
Southeastern	0.199	0.219	0.357	0.158	0.066
Northeastern	0.214	0.214	0.405	0.119	0.048

Calculated X^2 = 7.16.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 23. U.S. Farmers' of Responses to "I Have too Much Debt in my Operation"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
<u>All</u>	0.336	0.173	0.205	0.128	0.158
<u>Organization</u>					
Sole	0.322	0.181	0.204	0.115	0.178
Part	0.333	0.147	0.233	0.124	0.163
Corp	0.388	0.163	0.235	0.153	0.061

Calculated $X^2 = 20.35$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

<u>Size</u>					
Small	0.357	0.189	0.213	0.098	0.143
Medium	0.371	0.147	0.178	0.133	0.171
Large	0.281	0.184	0.222	0.153	0.160

Calculated $X^2 = 16.88$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

<u>Region</u>					
Western	0.323	0.156	0.216	0.156	0.150
Great Plains	0.346	0.170	0.197	0.090	0.197
Cornbelt	0.330	0.195	0.195	0.146	0.135
Southeastern	0.327	0.173	0.219	0.133	0.148
Northeastern	0.429	0.119	0.190	0.048	0.214

Calculated $X^2 = 37.58$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 24. U.S. 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	0.053	0.096	0.193	0.234	0.424
Organization					
Sole	0.040	0.083	0.206	0.206	0.466
Part	0.055	0.098	0.176	0.302	0.369
Corp	0.082	0.102	0.194	0.214	0.408

Calculated X^2 = 2.93
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.059	0.083	0.217	0.214	0.428
Medium	0.052	0.090	0.155	0.262	0.441
Large	0.048	0.117	0.206	0.227	0.402

Calculated X^2 = 4.31
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.036	0.089	0.148	0.243	0.485
Great Plains	0.032	0.089	0.116	0.279	0.484
Cornbelt	0.063	0.115	0.296	0.230	0.296
Southeastern	0.065	0.080	0.176	0.186	0.492
Northeastern	0.093	0.116	0.140	0.256	0.395

Calculated X^2 = 6.86.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 25. U.S. 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	0.147	0.173	0.449	0.158	0.073
Organization					
Sole	0.154	0.154	0.436	0.161	0.095
Part	0.143	0.198	0.461	0.151	0.047
Corp	0.104	0.219	0.448	0.156	0.073

Calculated X^2 = 4.98
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.146	0.157	0.460	0.139	0.098
Medium	0.168	0.164	0.451	0.161	0.056
Large	0.126	0.198	0.437	0.174	0.065

Calculated X^2 = 1.65
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.135	0.135	0.441	0.176	0.112
Great Plains	0.138	0.185	0.413	0.180	0.085
Cornbelt	0.140	0.181	0.491	0.155	0.033
Southeastern	0.174	0.179	0.446	0.113	0.087
Northeastern	0.146	0.195	0.390	0.220	0.049

Calculated X^2 = 1.92.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 26. U.S. 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	0.054	0.142	0.386	0.253	0.165
Organization					
Sole	0.062	0.113	0.407	0.240	0.178
Part	0.065	0.150	0.396	0.223	0.165
Corp	0.052	0.196	0.402	0.278	0.072

Calculated X^2 = 13.21
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.066	0.128	0.385	0.243	0.177
Medium	0.052	0.128	0.344	0.267	0.208
Large	0.044	0.169	0.427	0.247	0.112

Calculated X^2 = 12.53
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.029	0.124	0.494	0.206	0.147
Great Plains	0.058	0.147	0.379	0.268	0.147
Cornbelt	0.081	0.155	0.343	0.269	0.151
Southeastern	0.035	0.141	0.359	0.268	0.197
Northeastern	0.048	0.119	0.381	0.190	0.262

Calculated X^2 = 21.15.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

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

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.162	0.230	0.308	0.198	0.102
Organization					
Sole	0.156	0.234	0.301	0.208	0.100
Part	0.130	0.232	0.358	0.189	0.091
Corp	0.155	0.237	0.330	0.165	0.113

Calculated $X^2 = 6.15$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.156	0.241	0.301	0.184	0.117
Medium	0.154	0.220	0.311	0.210	0.105
Large	0.176	0.229	0.310	0.201	0.085

Calculated $X^2 = 3.68$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.216	0.210	0.317	0.168	0.090
Great Plains	0.158	0.283	0.304	0.174	0.082
Cornbelt	0.147	0.226	0.320	0.218	0.090
Southeastern	0.098	0.218	0.280	0.238	0.166
Northeastern	0.357	0.167	0.333	0.119	0.024

Calculated $X^2 = 16.67$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 28a. Sources of Farm Credit, 1996

	Num	Freq
Self-financed from earnings	406	0.45
Other farmers	10	0.01
Local commercial bank	563	0.63
Input retailer	78	0.09
Grain or feed dealer	65	0.07
Farm Credit System	243	0.27
Other	12	0.01
Family loans	130	0.14
Unrelated individuals	18	0.02
Non-local commercial banks	38	0.04
Manufacturers of farm machinery	241	0.27
Insurance company	28	0.03
Farm Service Agency	95	0.11

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	125	0.44	109	0.41	46	0.46	0.613
Other farmers	4	0.01	2	0.01	1	0.01	0.224
Local commercial bank	177	0.63	171	0.64	57	0.57	1.164
Input retailer	24	0.09	22	0.08	6	0.06	0.544
Grain or feed dealer	16	0.06	24	0.09	6	0.06	1.012
Farm Credit System	69	0.25	74	0.28	33	0.33	1.799
Other	2	0.01	3	0.01	3	0.03	1.881
Family loans	36	0.13	39	0.15	16	0.16	0.412
Unrelated individuals	3	0.01	5	0.02	1	0.01	0.358
Non-local commercial banks	8	0.03	6	0.02	9	0.09	**6.253**
Manufacturer of farm machinery	70	0.25	75	0.28	25	0.25	0.319
Insurance company	5	0.02	10	0.04	4	0.04	0.957
Farm Service Agency	36	0.13	26	0.10	3	0.03	**6.462**

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

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

	Small		Medium		Large		
	Num	Freq	Num	Freq	Num	Freq	X^2
Self financed from earnings	145	0.48	142	0.47	119	0.40	1.539
Other farmers	6	0.02	3	0.01	1	0.00	1.255
Local commercial bank	169	0.56	190	0.64	204	0.69	3.629
Input retailer	13	0.04	35	0.12	30	0.10	3.823
Grain or feed dealer	12	0.04	27	0.09	26	0.09	2.414
Farm Credit System	74	0.25	66	0.22	103	0.35	4.616
Other	7	0.02	5	0.02	0	0.00	2.181
Family loans	41	0.14	52	0.17	37	0.13	1.066
Unrelated individuals	6	0.02	7	0.02	5	0.02	0.108
Non-local commercial banks	16	0.05	10	0.03	12	0.04	0.483
Manufacturer of farm machinery	59	0.20	75	0.25	107	0.36	**7.271**
Insurance company	6	0.02	10	0.03	12	0.04	0.728
Farm Service Agency	21	0.07	36	0.12	38	0.13	2.148

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

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

	Western		Great Plains		Cornbelt		Southeastern		Northeastern		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X^2
Self financed from earnings	83	0.47	89	0.45	123	0.45	91	0.45	20	0.44	0.162
Other farmers	1	0.01	2	0.01	4	0.01	0	0.00	3	0.07	**15.285**
Local commercial bank	111	0.63	120	0.61	181	0.66	134	0.66	17	0.38	**23.133**
Input retailer	18	0.10	7	0.04	28	0.10	19	0.09	6	0.13	5.985
Grain or feed dealer	10	0.06	12	0.06	26	0.09	11	0.05	6	0.13	6.281
Farm Credit System	44	0.25	50	0.26	66	0.24	65	0.32	18	0.40	8.937
Other	4	0.02	2	0.01	2	0.01	0	0.00	4	0.09	**28.872**
Family loans	26	0.15	19	0.10	53	0.19	23	0.11	9	0.20	6.624
Unrelated individuals	5	0.03	3	0.02	6	0.02	4	0.02	0	0.00	2.682
Non-local commercial banks	9	0.05	8	0.04	13	0.05	6	0.03	2	0.04	0.650
Manufacturer of farm machinery	31	0.18	38	0.19	29	0.11	14	0.07	5	0.11	**9.513**
Insurance company	31	0.18	5	0.03	29	0.11	13	0.06	7	0.16	**18.418**
Farm Service Agency	4	0.02	20	0.10	3	0.01	2	0.01	2	0.04	**16.482**

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

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

	Weighted Average
Require less financial information	5.67
Line of credit is to large for local lenders	8.38
Lower interest rates	3.00
Repayment schedule timed to meet cash flow	4.35
Personal relationship with retailer	5.50
Location	6.60
Faster decisions	5.22
Flexibility in event of repayment problems	5.51
Ability to fix interest rates	4.94
Get discounts on purchases	4.58

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	Corporation	X^2
	-----------Weighted Average----------			
Require less financial information	5.79	5.53	5.64	20.156
Line of credit is to large for local lenders	8.07	8.72	7.89	23.623
Lower interest rates	2.99	3.20	2.94	10.416
Repayment schedule timed to meet cash flow	4.25	4.31	4.81	18.779
Personal relationship with retailer	5.65	5.29	5.91	23.986
Location	6.74	6.40	6.73	17.233
Faster decisions	5.05	5.27	5.05	20.233
Flexibility in event of repayment problems	5.44	5.42	5.96	13.903
Ability to fix interest rates	5.17	4.93	4.61	17.840
Get discounts on purchases	4.86	4.41	3.98	17.532

Critical X^2 at 18 degrees of freedom and 90 % confidence level = 26.0
Critical X^2 at 18 degrees of freedom and 95 % confidence level = 28.9.

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

	Small	Medium	Large	X^2
	--------Weighted Average-------			
Require less financial information	5.57	5.71	5.72	9.51
Line of credit is to large for local lenders	8.35	8.68	8.10	11.75
Lower interest rates	2.99	3.05	2.97	8.22
Repayment schedule timed to meet cash flow	4.26	4.46	4.33	11.34
Personal relationship with retailer	5.39	5.42	5.69	10.68
Location	6.43	6.56	6.79	11.43
Faster decisions	5.08	5.20	5.39	9.25
Flexibility in event of repayment problems	5.50	5.41	5.62	12.83
Ability to fix interest rates	4.83	5.21	4.78	12.42
Get discounts on purchases	4.40	4.60	4.75	6.31

Critical X^2 at 18 degrees of freedom and 90 % confidence level = 26.0.
Critical X^2 at 18 degrees of freedom and 95 % confidence level = 28.9.

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

	Western	Great Plains	Cornbelt	South	North	X^2
	-----------------Weighted Average--------------					
Require less financial information	5.56	5.70	5.91	5.34	5.96	**52.26**
Line of credit is to large for local lenders	8.44	8.37	8.36	8.40	7.96	**181.14**
Lower interest rates	2.71	2.96	2.61	3.53	4.48	**99.83**
Repayment schedule timed to meet cash flow	4.26	4.38	4.61	3.91	5.00	**62.69**
Personal relationship with retailer	5.21	5.66	5.57	5.64	5.78	46.73
Location	6.78	6.53	6.68	6.56	6.00	**74.48**
Faster decisions	5.21	5.22	5.62	4.96	4.11	**58.16**
Flexibility in event of repayment problems	5.81	5.55	5.61	5.17	5.30	**51.56**
Ability to fix interest rates	5.46	5.08	4.92	5.13	5.42	**68.98**
Get discounts on purchases	5.03	4.85	4.12	4.62	4.96	**66.47**

Critical X^2 at 36 degrees of freedom and 90 % confidence level = 47.2.
Critical X^2 at 36 degrees of freedom and 95 % confidence level = 51.0.

Table 30a. Financial Services Used by U.S. Farmers, 1996

	Num	Freq
Tax accounting services	168	0.19
Marketing advisory services	73	0.08
Offer wire transfer of funds	97	0.11
Business management consulting	76	0.08
Investment services	109	0.12
Short-term equipment rental	52	0.06
Estate planning and trust services	77	0.09
Equipment leasing	104	0.12
Insurance services	148	0.16
Other	3	0.00

Table 30b. Financial Services Used by U.S. Farmers by Organization, 1996

	Sole Pro		Partnerships		Corporation		X^2
	Num	Freq	Num	Freq	Num	Freq	
Tax accounting services	47	0.17	50	0.19	23	0.23	1.318
Marketing advisory services	21	0.07	25	0.09	9	0.09	0.249
Offer wire transfer of funds	30	0.11	25	0.09	15	0.15	1.704
Business management consulting	22	0.08	25	0.09	10	0.10	0.300
Investment services	24	0.09	31	0.12	21	0.21	**7.142**
Short-term equipment rental	17	0.06	15	0.06	4	0.04	0.791
Estate planning and trust services	13	0.05	28	0.10	17	0.17	**8.027**
Equipment leasing	23	0.08	34	0.13	18	0.18	4.280
Insurance services	40	0.14	51	0.19	19	0.19	1.059
Other	1	0.00	0	0.00	1	0.01	1.142

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

Table 30c. Financial Services Used by U.S. Farmers by Size, 1996

	Small		Medium		Large		
	Num	Freq	Num	Freq	Num	Freq	X^2
Tax accounting services	61	0.20	51	0.17	56	0.19	0.328
Marketing advisory services	22	0.07	23	0.08	28	0.09	0.357
Offer wire transfer of funds	25	0.08	26	0.09	46	0.16	3.441
Business management consulting	25	0.08	22	0.07	29	0.10	0.391
Investment services	38	0.13	38	0.13	33	0.11	0.141
Short-term equipment rental	16	0.05	21	0.07	15	0.05	0.419
Estate planning and trust services	26	0.09	23	0.08	28	0.09	0.199
Equipment leasing	27	0.09	37	0.12	40	0.14	1.105
Insurance services	48	0.16	46	0.15	54	0.18	0.337
Other	0	0.00	1	0.00	2	0.01	0.680

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

Table 30d. Financial Services Used by U.S. Farmers by Region, 1996

	Western		Great Plains		Cornbelt		Southeast		Northeast		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X^2
Tax accounting services	43	0.24	36	0.18	44	0.16	30	0.15	15	0.33	**13.915**
Marketing advisory services	16	0.09	18	0.09	18	0.07	19	0.09	2	0.04	2.633
Offer wire transfer of funds	23	0.13	19	0.10	30	0.11	19	0.09	6	0.13	1.354
Business management consulting	18	0.10	14	0.07	27	0.10	12	0.06	5	0.11	2.395
Investment services	26	0.15	26	0.13	34	0.12	20	0.10	3	0.07	3.966
Short-term equipment rental	11	0.06	7	0.04	19	0.07	10	0.05	5	0.11	5.322
Estate planning and trust services	21	0.12	17	0.09	23	0.08	10	0.05	6	0.13	5.063
Equipment leasing	26	0.15	15	0.08	31	0.11	24	0.12	8	0.18	5.265
Insurance services	46	0.26	30	0.15	44	0.16	20	0.10	8	0.18	**9.685**
Other	0	0.00	2	0.01	1	0.00	0	0.00	0	0.00	4.090

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

Table 31. U.S. 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	0.069	0.120	0.337	0.319	0.155
Organization					
Sole	0.066	0.099	0.377	0.308	0.150
Part	0.062	0.133	0.328	0.312	0.164
Corp	0.092	0.112	0.286	0.347	0.163

Calculated X^2 = 3.44
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.081	0.137	0.351	0.277	0.154
Medium	0.066	0.132	0.316	0.351	0.135
Large	0.061	0.092	0.345	0.328	0.174

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

Region					
Western	0.059	0.082	0.329	0.353	0.176
Great Plains	0.081	0.156	0.290	0.360	0.113
Cornbelt	0.074	0.122	0.332	0.332	0.140
Southeastern	0.061	0.111	0.404	0.253	0.172
Northeastern	0.073	0.146	0.293	0.220	0.268

Calculated X^2 = 7.81.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 32. U.S. 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	0.147	0.171	0.254	0.228	0.201
Organization					
Sole	0.141	0.149	0.283	0.223	0.204
Part	0.125	0.208	0.243	0.220	0.204
Corp	0.196	0.144	0.196	0.309	0.155

Calculated X^2 = 2.89
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.138	0.166	0.215	0.242	0.239
Medium	0.172	0.161	0.287	0.226	0.154
Large	0.130	0.187	0.261	0.215	0.208

Calculated X^2 = 1.32
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.164	0.170	0.261	0.224	0.182
Great Plains	0.120	0.142	0.251	0.230	0.257
Cornbelt	0.131	0.187	0.255	0.232	0.195
Southeastern	0.164	0.174	0.267	0.221	0.174
Northeastern	0.214	0.190	0.167	0.238	0.190

Calculated X^2 = 1.35.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 33. Amount of Additional Debt That U.S. 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	200	203	62	15	191	178	32
	(0.23)	(0.23)	(0.07)	(0.02)	(0.22)	(0.19)	(0.03)
Organization							
Sole	69	66	79	35	10	11	3
	(0.25)	(0.24)	(0.29)	(0.13)	(0.04)	(0.04)	(0.01)
Part	60	52	58	57	17	10	4
	(0.23)	(0.20)	(0.23)	(0.22)	(0.07)	(0.04)	(0.02)
Corp	15	11	20	30	14	5	3
	(0.15)	(0.11)	(0.20)	(0.31)	(0.14)	(0.05)	(0.03)

Calculated X^2 = 25.06
Critical X^2 at 12 degrees of freedom and 90 % confidence level = 18.5
Critical X^2 at 12 degrees of freedom and 95 % confidence level = 21.0

Size							
Small	86	72	71	37	16	7	2
	(0.30)	(0.25)	(0.24)	(0.13)	(0.06)	(0.02)	(0.01)
Medium	70	82	55	54	18	7	3
	(0.24)	(0.28)	(0.19)	(0.19)	(0.06)	(0.02)	(0.01)
Large	44	37	77	74	28	16	10
	(0.15)	(0.13)	(0.27)	(0.26)	(0.10)	(0.06)	(0.04)

Calculated X^2 = 22.29
Critical X^2 at 12 degrees of freedom and 90 % confidence level = 18.5
Critical X^2 at 12 degrees of freedom and 95 % confidence level = 21.0

Region							
Western	34	27	34	44	21	8	4
	(0.20)	(0.16)	(0.20)	(0.26)	(0.12)	(0.05)	(0.02)
Great Plains	52	41	49	25	12	4	4
	(0.28)	(0.22)	(0.26)	(0.13)	(0.06)	(0.02)	(0.02)
Cornbelt	58	63	62	54	16	10	3
	(0.22)	(0.24)	(0.23)	(0.20)	(0.06)	(0.04)	(0.01)
Southeastern	42	49	47	37	11	8	4
	(0.21)	(0.25)	(0.24)	(0.19)	(0.06)	(0.04)	(0.02)
Northeastern	14	11	11	5	2	0	0
	(0.33)	(0.26)	(0.26)	(0.12)	(0.05)	(0.00)	(0.00)

Calculated X^2 = 28.03.
Critical X^2 at 24 degrees of freedom and 90 % confidence level = 33.2.
Critical X^2 at 24 degrees of freedom and 95 % confidence level = 36.4.

Table 34a. Reasons Given for Expansion Plans of U.S. Farmers, 1996

	Num	Freq
Does not apply to my operation	312	0.25
To accommodate a family member	118	0.10
To accommodate a non-family member	5	0.00
To generate larger annual sales	395	0.32
To capture economies of scale	223	0.18
To obtain more favorable marketing contracts	110	0.09
Others	75	0.06

Table 34b. Reasons Given for Expansion Plans of U.S. Farmers by Organization, 1996

	Sole Pro		Partnerships		Corporation		X^2
	Num	Freq	Num	Freq	Num	Freq	
Does not apply to my operation	107	0.29	91	0.25	26	0.17	4.841
To accommodate a family member	28	0.08	36	0.10	16	0.10	0.453
To accommodate a non-family member	2	0.01	1	.00	1	0.01	0.139
To generate larger annual sales	121	0.32	125	0.35	50	0.32	0.226
To capture economies of scale	64	0.18	63	0.18	34	0.22	0.681
To obtain more favorable marketing contracts	29	0.08	24	0.07	20	0.13	0.387
Others	13	0.04	19	0.05	11	0.07	1.003

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

Table 34c. Reasons Given for Expansion Plans of U.S. Farmers by Size, 1996

	Small		Medium		Large		
	Num	Freq	Num	Freq	Num	Freq	X^2
Does not apply to my operation	121	0.32	111	0.28	80	0.18	5.315
To accommodate a family member	30	0.08	33	0.08	55	0.12	1.384
To accommodate a non-family member	2	0.01	1	0.00	2	0.00	0.099
To generate larger annual sales	107	0.28	138	0.34	150	0.33	1.043
To capture economies of scale	62	0.16	66	0.16	95	0.21	1.049
To obtain more favorable marketing contracts	30	0.08	37	0.09	43	0.10	0.198
Others	31	0.08	18	0.05	26	0.06	1.185

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

Table 34d. Reasons Given for Expansion Plans of U.S. Farmers by Region, 1996

	Western		Great Plains		Cornbelt		Southeastern		Northeastern		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X^2
Does not apply to my operation	54	0.21	74	0.30	93	0.24	72	0.25	19	0.35	5.831
To accommodate a family member	31	0.12	19	0.08	38	0.10	27	0.09	3	0.06	3.068
To accommodate a non-family member	3	0.01	0	0.00	1	0.00	0	0.00	1	0.02	4.089
To generate larger annual sales	85	0.33	80	0.32	121	0.31	93	0.32	16	0.29	0.480
To capture economies of scale	45	0.18	38	0.15	80	0.21	51	0.18	9	0.16	1.030
To obtain more favorable marketing contracts	27	0.11	21	0.09	32	0.08	29	0.10	1	0.02	6.787
Others	10	0.04	15	0.06	25	0.06	19	0.07	6	0.11	4.107

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

Table 35. U.S. Farmers' Responses to "Farmers Need to Put Their Profits into Off-farm Investments"

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.118	0.183	0.391	0.215	0.093
Organization					
Sole	0.120	0.193	0.361	0.223	0.102
Part	0.112	0.151	0.432	0.232	0.073
Corp	0.153	0.184	0.408	0.194	0.061

Calculated X^2 = 2.57
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.122	0.170	0.403	0.188	0.118
Medium	0.114	0.190	0.356	0.232	0.107
Large	0.119	0.188	0.413	0.225	0.055

Calculated X^2 = 4.24
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.116	0.169	0.384	0.238	0.093
Great Plains	0.097	0.172	0.425	0.215	0.091
Cornbelt	0.110	0.216	0.366	0.212	0.095
Southeastern	0.141	0.181	0.392	0.201	0.085
Northeastern	0.175	0.075	0.425	0.200	0.125

Calculated X^2 = 11.02.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

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

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.192	0.204	0.349	0.180	0.075
Organization					
Sole	0.184	0.232	0.327	0.173	0.085
Part	0.203	0.199	0.379	0.148	0.070
Corp	0.189	0.189	0.358	0.189	0.074

Calculated $X^2 = 0.56$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.200	0.232	0.332	0.146	0.089
Medium	0.217	0.199	0.364	0.161	0.059
Large	0.160	0.181	0.352	0.232	0.075

Calculated $X^2 = 0.44$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.192	0.198	0.335	0.204	0.072
Great Plains	0.171	0.198	0.364	0.203	0.064
Cornbelt	0.157	0.221	0.356	0.195	0.071
Southeastern	0.240	0.194	0.347	0.143	0.077
Northeastern	0.286	0.190	0.310	0.071	0.143

Calculated $X^2 = 3.71$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 37. U.S. 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	0.045	0.112	0.310	0.255	0.278
Organization					
Sole	0.042	0.117	0.292	0.277	0.273
Part	0.059	0.110	0.302	0.278	0.251
Corp	0.031	0.156	0.333	0.208	0.271

Calculated X^2 = 13.43
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.053	0.113	0.348	0.234	0.252
Medium	0.035	0.099	0.330	0.255	0.280
Large	0.045	0.122	0.254	0.275	0.303

Calculated X^2 = 8.78
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.036	0.126	0.347	0.251	0.240
Great Plains	0.027	0.093	0.302	0.236	0.341
Cornbelt	0.048	0.123	0.331	0.238	0.260
Southeastern	0.062	0.077	0.272	0.313	0.277
Northeastern	0.053	0.237	0.237	0.184	0.289

Calculated X^2 = 23.76.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 38. U.S. 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	0.241	0.235	0.292	0.126	0.106
Organization					
Sole	0.228	0.228	0.295	0.131	0.119
Part	0.266	0.250	0.273	0.121	0.090
Corp	0.250	0.271	0.271	0.115	0.094

Calculated $X^2 = 0.13$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.279	0.233	0.261	0.127	0.099
Medium	0.220	0.213	0.326	0.142	0.099
Large	0.223	0.258	0.289	0.110	0.120

Calculated $X^2 = 0.68$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.220	0.250	0.286	0.119	0.125
Great Plains	0.237	0.199	0.301	0.156	0.108
Cornbelt	0.243	0.239	0.306	0.112	0.101
Southeastern	0.258	0.253	0.278	0.119	0.093
Northeastern	0.250	0.225	0.250	0.150	0.125

Calculated $X^2 = 0.66$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 39. U.S. 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	0.045	0.033	0.109	0.264	0.549
Organization					
Sole	0.040	0.036	0.142	0.230	0.551
Part	0.035	0.023	0.094	0.273	0.574
Corp	0.061	0.010	0.112	0.327	0.490

Calculated $X^2 = 3.93$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.068	0.025	0.110	0.242	0.555
Medium	0.031	0.042	0.132	0.251	0.544
Large	0.038	0.031	0.086	0.298	0.548

Calculated $X^2 = 2.22$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.036	0.018	0.078	0.281	0.587
Great Plains	0.059	0.027	0.130	0.232	0.551
Cornbelt	0.041	0.056	0.130	0.304	0.470
Southeastern	0.036	0.020	0.086	0.223	0.635
Northeastern	0.098	0.024	0.122	0.268	0.488

Calculated $X^2 = 6.97$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 40. U.S. 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	0.090	0.203	0.451	0.172	0.084
Organization					
Sole	0.089	0.207	0.450	0.166	0.089
Part	0.107	0.190	0.468	0.159	0.075
Corp	0.083	0.250	0.469	0.146	0.052

Calculated X^2 = 15.40
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.076	0.213	0.502	0.116	0.094
Medium	0.100	0.196	0.473	0.160	0.071
Large	0.093	0.201	0.381	0.239	0.087

Calculated X^2 = 13.58
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.061	0.207	0.457	0.177	0.098
Great Plains	0.114	0.205	0.405	0.205	0.070
Cornbelt	0.087	0.234	0.453	0.162	0.064
Southeastern	0.089	0.177	0.458	0.172	0.104
Northeastern	0.122	0.098	0.585	0.073	0.122

Calculated X^2 = 20.46.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 41. U.S. 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	0.166	0.200	0.238	0.244	0.152
Organization					
Sole	0.169	0.180	0.265	0.224	0.162
Part	0.178	0.190	0.233	0.256	0.143
Corp	0.227	0.289	0.216	0.175	0.093

Calculated $X^2 = 0.82$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

	Strongly Disagree 1	2	3	4	Strongly Agree 5
Size					
Small	0.202	0.178	0.247	0.230	0.143
Medium	0.147	0.196	0.227	0.259	0.171
Large	0.148	0.227	0.241	0.244	0.141

Calculated $X^2 = 2.52$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

	Strongly Disagree 1	2	3	4	Strongly Agree 5
Region					
Western	0.176	0.158	0.261	0.248	0.158
Great Plains	0.112	0.193	0.219	0.289	0.187
Cornbelt	0.173	0.199	0.239	0.246	0.143
Southeastern	0.172	0.232	0.242	0.217	0.136
Northeastern	0.286	0.262	0.214	0.143	0.095

Calculated $X^2 = 3.43$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

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

	Strongly Disagree 1	2	3	4	Strongly Agree 5
All	0.184	0.244	0.194	0.207	0.170
Organization					
Sole	0.162	0.202	0.210	0.217	0.210
Part	0.199	0.266	0.188	0.207	0.141
Corp	0.165	0.309	0.134	0.258	0.134

Calculated X^2 = 5.78
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

	1	2	3	4	5
Size					
Small	0.174	0.241	0.184	0.181	0.220
Medium	0.202	0.237	0.216	0.199	0.146
Large	0.176	0.255	0.183	0.241	0.145

Calculated X^2 = 2.81
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

	1	2	3	4	5
Region					
Western	0.179	0.244	0.202	0.208	0.167
Great Plains	0.243	0.265	0.146	0.200	0.146
Cornbelt	0.144	0.222	0.215	0.259	0.159
Southeastern	0.191	0.237	0.211	0.160	0.201
Northeastern	0.167	0.333	0.167	0.119	0.214

Calculated X^2 = 8.76.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 43. U.S. 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	0.534	0.219	0.122	0.068	0.057
Organization					
Sole	0.551	0.186	0.124	0.077	0.062
Part	0.553	0.249	0.109	0.058	0.031
Corp	0.423	0.247	0.165	0.082	0.082

Calculated $X^2 = 34.22$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.583	0.174	0.128	0.062	0.052
Medium	0.523	0.240	0.118	0.070	0.049
Large	0.497	0.243	0.120	0.072	0.068

Calculated $X^2 = 41.31$
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.512	0.214	0.149	0.077	0.048
Great Plains	0.534	0.217	0.101	0.085	0.063
Cornbelt	0.520	0.240	0.129	0.052	0.059
Southeastern	0.574	0.203	0.107	0.066	0.051
Northeastern	0.524	0.190	0.143	0.071	0.071

Calculated $X^2 = 69.27$.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 44. U.S. 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	0.066	0.131	0.361	0.260	0.182
Organization					
Sole	0.047	0.153	0.376	0.223	0.201
Part	0.066	0.128	0.322	0.291	0.194
Corp	0.084	0.105	0.347	0.295	0.168

Calculated X^2 = 7.83
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.087	0.143	0.371	0.213	0.185
Medium	0.059	0.112	0.371	0.255	0.203
Large	0.052	0.138	0.341	0.310	0.159

Calculated X^2 = 6.90
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.054	0.090	0.335	0.329	0.192
Great Plains	0.069	0.165	0.372	0.239	0.154
Cornbelt	0.063	0.149	0.383	0.257	0.149
Southeastern	0.061	0.097	0.357	0.245	0.240
Northeastern	0.143	0.190	0.286	0.167	0.214

Calculated X^2 = 9.81.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 45. U.S. 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	0.210	0.278	0.292	0.102	0.118
<u>Organization</u>					
Sole	0.192	0.277	0.299	0.092	0.140
Part	0.210	0.296	0.300	0.082	0.113
Corp	0.227	0.237	0.340	0.124	0.072

Calculated X^2 = 3.02
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

<u>Size</u>					
Small	0.185	0.276	0.283	0.129	0.126
Medium	0.229	0.275	0.282	0.106	0.109
Large	0.215	0.284	0.311	0.073	0.118

Calculated X^2 = 3.17
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

<u>Region</u>					
Western	0.220	0.268	0.286	0.137	0.089
Great Plains	0.158	0.257	0.317	0.126	0.142
Cornbelt	0.189	0.333	0.278	0.093	0.107
Southeastern	0.260	0.245	0.321	0.066	0.107
Northeastern	0.286	0.214	0.167	0.095	0.238

Calculated X^2 = 7.89.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 46. U.S. 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	0.110	0.151	0.351	0.241	0.147
Organization					
Sole	0.108	0.149	0.325	0.254	0.164
Part	0.094	0.154	0.382	0.236	0.134
Corp	0.156	0.125	0.333	0.260	0.125

Calculated X^2 = 2.45
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Size					
Small	0.125	0.149	0.302	0.235	0.189
Medium	0.122	0.122	0.397	0.233	0.125
Large	0.084	0.181	0.352	0.254	0.129

Calculated X^2 = 3.76
Critical X^2 at 2 degrees of freedom and 90 % confidence level = 4.61
Critical X^2 at 2 degrees of freedom and 95 % confidence level = 5.96

Region					
Western	0.110	0.184	0.362	0.209	0.135
Great Plains	0.120	0.169	0.295	0.240	0.175
Cornbelt	0.104	0.170	0.356	0.241	0.130
Southeastern	0.102	0.096	0.381	0.264	0.157
Northeastern	0.143	0.071	0.381	0.262	0.143

Calculated X^2 = 6.72.
Critical X^2 at 4 degrees of freedom and 90 % confidence level = 7.78.
Critical X^2 at 4 degrees of freedom and 95 % confidence level = 9.45.

Table 47a. Financial Services Desired by U.S. Farmers, 1996

	Num	Freq
Tax accounting services	94	0.10
Marketing advisory services	157	0.18
Offer wire transfer of funds	34	0.04
Business management consulting	113	0.13
Investment services	134	0.15
Short-term equipment rental	133	0.15
Estate planning and trust services	131	0.15
Equipment leasing	122	0.14
Insurance services	50	0.06
Other	3	0.00

Table 47b. Financial Services Desired by U.S. Farmers by Organization, 1996

	Sole Pro		Partnerships		Corporation		X^2
	Num	Freq	Num	Freq	Num	Freq	
Tax accounting services	34	0.12	31	0.12	8	0.08	1.053
Marketing advisory services	57	0.20	46	0.17	17	0.17	0.461
Offer wire transfer of funds	14	0.05	12	0.04	6	0.06	0.246
Business management consulting	40	0.14	31	0.12	17	0.17	1.207
Investment services	49	0.17	46	0.17	14	0.14	0.538
Short-term equipment rental	41	0.15	45	0.17	10	0.10	2.019
Estate planning and trust services	40	0.14	37	0.14	14	0.14	0.077
Equipment leasing	47	0.17	39	0.15	9	0.09	2.731
Insurance services	22	0.08	12	0.04	8	0.08	1.250
Other	1	0.00	1	0.00	0	0.00	0.032

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

Table 47c. Financial Services Desired by U.S. Farmers by Size, 1996

	Small		Medium		Large		X^2
	Num	Freq	Num	Freq	Num	Freq	
Tax Accounting services	26	0.09	31	0.10	37	0.13	0.808
Marketing advisory services	40	0.13	48	0.16	69	0.23	3.731
Offer wire transfer of funds	13	0.04	11	0.04	10	0.03	0.123
Business management consulting	31	0.10	32	0.11	50	0.17	2.491
Investment services	44	0.15	34	0.11	56	0.19	2.257
Short-term equipment rental	37	0.12	42	0.14	54	0.18	1.496
Estate planning and trust services	32	0.11	45	0.15	54	0.18	2.364
Equipment leasing	35	0.12	38	0.13	49	0.17	1.153
Insurance services	16	0.05	19	0.06	15	0.05	0.179
Other	0	0.00	0	0.00	1	0.00	0.676

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

Table 47d. Financial Services Desired by U.S. Farmers by Region, 1996

	Western		Great Plains		Cornbelt		Southeastern		Northeastern		X^2
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	
Tax Accounting services	19	0.11	26	0.13	23	0.08	23	0.11	3	0.07	2.965
Marketing advisory services	29	0.16	39	0.20	46	0.17	37	0.18	6	0.13	1.694
Offer wire transfer of funds	10	0.06	7	0.04	5	0.02	11	0.05	1	0.02	3.481
Business management consulting	22	0.12	28	0.14	32	0.12	28	0.14	3	0.07	3.561
Investment services	25	0.14	23	0.12	39	0.14	39	0.19	8	0.18	2.830
Short-term equipment rental	19	0.11	28	0.14	42	0.15	36	0.18	8	0.18	2.632
Estate planning and trust services	34	0.19	25	0.13	36	0.13	33	0.16	3	0.07	7.462
Equipment leasing	15	0.08	27	0.14	40	0.14	35	0.17	5	0.11	3.962
Insurance services	11	0.06	12	0.06	7	0.03	19	0.09	1	0.02	7.005
Other	1	0.01	0	0.00	2	0.01	0	0.00	0	0.00	1.989

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

Table 48a. U.S. Farmers' Reactions to Changes in Government Programs, 1996

	Num	Freq
Prompting farmers to diversify into livestock or new crops	5	0.01
Make farmers more optimistic about the future	146	0.16
Make farmers more cautious of debt	210	0.23
Prompting farmers to use marketing tools	361	0.40
Encourage farmers retirement	210	0.23
Encourage farmers to expand	123	0.14
Makes farmers to focus on earning a premium for products	180	0.20
Encourage farmers to diversify investments outside agriculture	278	0.31
Gives farmers incentives to contract his production	251	0.28
Has little impact	180	0.20
Other	315	0.35

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

	Sole Pro Num	Sole Pro Freq	Partnerships Num	Partnerships Freq	Corporation Num	Corporation Freq	X^2
Prompting farmers to diversify into livestock or new crops	1	0.00	0	0.00	1	0.01	1.142
Make farmers more optimistic about the future	52	0.19	43	0.16	8	0.08	4.961
Make farmers more cautious of debt	65	0.23	66	0.25	20	0.20	0.638
Prompting farmers to use marketing tools	108	0.38	107	0.40	32	0.32	1.526
Encourage farmers retirement	68	0.24	71	0.26	21	0.21	0.837
Encourage farmers to expand	38	0.14	35	0.13	15	0.15	0.172
Makes farmers to focus on earning a premium for products	58	0.21	51	0.19	22	0.22	0.271
Encourage farmers to diversify investments outside agriculture	92	0.33	86	0.32	20	0.20	5.077
Gives farmers incentives to contract his production	83	0.30	72	0.27	27	0.27	0.226
Has little impact	60	0.21	60	0.22	14	0.14	2.691
Other	102	0.36	84	0.31	39	0.39	1.316

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

Table 48c. U.S. 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	1	0.00	0	0.00	4	0.01	1.779
Make farmers more optimistic about the future	38	0.13	43	0.14	65	0.22	3.629
Make farmers more cautious of debt	67	0.22	77	0.26	66	0.22	0.459
Prompting farmers to use marketing tools	106	0.35	125	0.42	130	0.44	1.763
Encourage farmers retirement	47	0.16	68	0.23	95	0.32	**7.652**
Encourage farmers to expand	43	0.14	43	0.14	37	0.13	0.186
Makes farmers to focus on earning a premium for products	59	0.20	56	0.19	65	0.22	0.352
Encourage farmers to diversify investments outside agriculture	78	0.26	95	0.32	105	0.35	2.213
Gives farmers incentives to contract his production	76	0.25	97	0.32	78	0.26	1.512
Has little impact	46	0.15	49	0.15	85	0.29	**7.555**
Other	119	0.39	101	0.34	95	0.32	1.286

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

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

	Western		Great Plains		Cornbelt		Southeastern		Northeastern		
	Num	Freq	Num	Freq	Num	Freq	Num	Freq	Num	Freq	X^2
–Prompting farmers to diversify into livestock or new crops	1	0.01	1	0.01	3	0.01	0	0.00	0	0.00	1.919
Make farmers more optimistic about the future	22	0.12	51	0.26	34	0.12	35	0.17	4	0.09	**13.592**
Make farmers more cautious of debt	48	0.27	47	0.24	63	0.23	41	0.20	11	0.24	1.402
Prompting farmers to use marketing tools	66	0.37	77	0.39	112	0.41	89	0.44	17	0.38	1.153
Encourage farmers retirement	29	0.16	47	0.24	81	0.29	48	0.24	5	0.11	**12.379**
Encourage farmers to expand	25	0.14	33	0.17	21	0.08	33	0.16	11	0.24	**10.937**
Makes farmers to focus on earning a premium for products	36	0.20	44	0.22	63	0.23	30	0.15	7	0.16	3.730
Encourage farmers to diversify investments outside agriculture	52	0.29	54	0.28	93	0.34	71	0.35	8	0.18	9.065
Gives farmers incentives to contract his production	43	0.24	50	0.26	78	0.28	68	0.33	12	0.27	2.568
Has little impact	21	0.12	38	0.19	69	0.25	48	0.24	4	0.09	**13.911**
Other	61	0.34	67	0.34	83	0.30	53	0.26	13	0.29	2.397

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