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Financial Characteristics of North Dakota Farms 2000-2002

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Abstract

The performance of over 500 North Dakota farms, 2000-2002, is summarized using 16 financial measures. Farms are categorized by geographic region, farm type, farm size, gross cash sales, farm tenure, net farm income, debt-to-asset, and age of farmer to analyze relationships between financial performance and farm characteristics. Farm financial trends for the 1993-2002 period are also presented.

Financial performance improved in 2002, except for the west region and livestock farms. Crop farm profit was much higher from strong prices and lower costs, although government payments declined sharply and some west and south central areas suffered drought. Median net farm income was \$38,079 in 2002, \$27,729 in 2001, and \$45,085 in 2000.

All 16 financial performance measures declined in 2001, except interest expense ratio, because of lower government subsidies, higher costs and continued low commodity prices. Performance in 2000 and 1999 was the highest since 1993 because of extraordinary government and crop insurance payments, record yields for some crops and improved beef cattle prices. Performance for the 1993-2002 period was poorest in 1997 and 1998 when over one-half of farms could not make scheduled term debt payments with the year's income.

Keywords: Farm financial management, farm management, farm income, liquidity, solvency, profitability, repayment capacity, financial efficiency, financial benchmarks, tenure, North Dakota.

INTRODUCTION

Financial statements such as the balance sheet and income statement provide a structured format to summarize financial information so it is more manageable for decision making. It is helpful to further simplify or summarize information contained in financial statements into key measures of financial performance. However, the calculation of a financial measure can be fruitless unless there is a meaningful basis of comparison to evaluate the number. Two methods of comparison are:

- ❶ **Past performance.** The progress of a business can be monitored by constructing financial measures on a periodic basis and comparing present to past performance.
- ❷ **Industry benchmarks.** The average or median of a financial measure from several similar businesses provides a good point of reference. Currently there is no nationwide database of farm records. However, there are statewide farm record programs in some states, including North Dakota. Each farm has its own unique aspects, so the most appropriate comparison would be farms that have similar enterprises and resources.

Whatever method of comparison is used, it is imperative that the procedures for construction of financial statements and performance measures are consistent over time and between farms to ensure an "apples-to-apples" comparison.

The Farm Financial Standards Task Force (FFSTF) was formed by the American Bankers Association in 1989 to develop standards for construction of financial statements and measures of financial performance in agriculture. In 1991, the task force provided recommendations for financial statement construction and the calculation of 16 measures of financial performance. These recommendations were adopted, in most part, by the North Dakota Farm Business Management Education Program and are the basis for the benchmarks presented in this publication.

The purpose of this study is to provide information to producers, lenders, educators, and others on the financial performance of a sample of North Dakota farms from 2000-2002. Similar studies for 1991 through 1999 are referenced on page 27 of this

report. Table 1 lists the median operator age, farm size and selected financial factors, 1993-2002. The data are from financial summaries of farms participating in the North Dakota Farm Business Management Education program. In this study the median and upper and lower quartiles of 16 financial performance measures are presented for all farms in the data set and for groupings of farms by characteristic such as farm type, farm size, and age of producer. The results can be used by producers and lenders to evaluate the financial performance of a farm. Also, trends can be identified and relationships between farm characteristics and financial measures can be analyzed. However, because of the small number of farms in this study, the results should be used cautiously and only be considered guidelines.

SOURCE OF DATA

About 700 farms are enrolled in the North Dakota Farm Business Management Education program. Instructors educate and assist producers in record keeping and review data for completeness and accuracy. Instructors use the Finpack farm financial management software program to generate financial summaries. From 2000-2002, the financial summaries of over 500 farms each year were considered usable for this study.

Most farms were represented in all three years (2000-2002) of this study, although there is a turnover of participants in farm management education programs and the number of farms that complete their annual records by a cutoff date varies from year to year.

The farms in this study are larger and the age of the farm operators younger than the state average. In 2002, there were 30,000 farms in North Dakota with gross agricultural sales of at least \$1,000. Only 9,100, or 30%, had gross receipts greater than \$100,000, whereas 83% of the 513 farms in this study exceed that sales volume (median gross sales was \$220,781). The farms in the study are more representative of operations that provide the primary source of net family income. The average age of farm operators in this study is 44 compared to 51 for the state average.

DEFINITION OF FINANCIAL MEASURES

Sixteen measures of financial performance were calculated for each farm in this study. The recommendations of the farm financial standards council for calculating the ratios were followed as closely as possible, from the Finpack data.

The farm financial standards council stated that a more meaningful comparison between farms is achieved with market valuation of assets, but due to fluctuations in market values the cost method (acquisition cost less accumulated depreciation) is superior for comparisons over time for an individual farm operation. In fact, a dual column balance sheet is recommended: one column to value assets by the cost approach and a second column for market valuation of assets.

The valuation method used for current assets of farms in this study depended on what was most relevant and reliable. For example, current market value was used for grain and market livestock inventories, but prepaid expenses and supplies were listed at purchase cost.

Non-current asset valuation was:

- Machinery was valued at cost minus accumulated depreciation. Annual depreciation was 10 percent of un-depreciated value.
- Purchased breeding livestock was valued at cost. Raised replacement animals were valued at a conservative market value when they enter the breeding herd. This value remains constant until the animal leaves the herd.
- Generally, land was valued at cost. However, when a farmer enrolls in the farm business program there may be a one-time revaluing of land to a conservative market value.

Assets and liabilities not associated with the farm business are excluded from the calculation of farm financial performance measures. Accrued liabilities were included on the balance sheets but deferred tax liabilities were not.

The calculations of all financial measures, unless otherwise noted, are accrual adjusted. Examples are:

- Gross farm revenue is gross cash revenue plus

the changes in crop and market livestock inventories and accounts receivable.

- Interest expense is cash interest plus the change in accrued interest.

LIQUIDITY

Current Ratio

Computation: Current assets divided by current liabilities.

Interpretation: This ratio measures the extent current assets will cover liabilities that are due during the next 12 months. The higher the ratio the more cushion the business has to meet short-run obligations without disrupting normal business operations. The current ratio's limitation as a measure of liquidity is that it does not match the timing of financial obligations with the liquidation of current assets, nor does it consider any new debt incurred or assets that may be generated during the 12 months after the balance sheet date.

Working Capital

Computation: Current assets minus current liabilities.

Interpretation: This measure shows the dollar amount that current assets can or cannot cover current liabilities. The amount of working capital necessary to provide an adequate cushion for meeting debt obligations must be related to the size of the business. Working capital as a measure of liquidity has similar limitations as the current ratio.

SOLVENCY

Debt-to-Asset

Computation: Total liabilities divided by total assets.

Interpretation: This ratio shows the proportion of assets owed to creditors. The lower the debt-to-asset ratio the higher the solvency of the

business. Solvency is a measure of risk exposure. As solvency decreases, the owner has less equity relative to debt, the ability to procure additional financing may decrease, and the business's ability to survive adverse outcomes is diminished. However, solvency should be viewed in connection with profitability. A low solvency position may be desirable if debt capital provides returns in excess of its cost.

Equity-to-Asset

Computation: Owner equity divided by total assets.

Interpretation: This ratio shows the portion of total assets represented by owner equity. It is another way of expressing solvency.

Debt-to-Equity

Computation: Total liabilities divided by owner equity.

Interpretation: This ratio shows the extent to which debt capital is combined with equity capital. It is another way of expressing solvency.

PROFITABILITY

Rate of Return on Assets (ROA)

Computation: Net farm income plus interest expense minus a charge for unpaid operator labor and management, divided by average total assets.

Interpretation: This ratio measures the pre-tax rate of return on farm assets and is used to evaluate whether assets are employed profitably in the business. Two important factors affecting this measure are valuation of assets and the charge for unpaid operator labor and management. A \$15,000 charge per full time operator plus five percent of gross revenue was used in the 2000-2002 analysis.

Rate of Return on Equity (ROE)

Computation: Net farm income minus a charge for unpaid operator labor and management, divided by average owner equity.

Interpretation: This ratio measures the pre-tax rate of return on equity capital employed in the

business. Two important factors affecting this measure are valuation of assets and the charge for unpaid operator labor and management. A \$15,000 charge per full time operator plus five percent of gross revenue was used in the 2000-2002 analysis. This ratio should be evaluated carefully and used in conjunction with other ratios when analyzing a farm business. If ROE is greater than ROA, debt capital is being employed profitably—it is earning more than it costs in interest. A high ratio may indicate an undercapitalized or highly leveraged business, and a low ratio may indicate a more conservative, high equity business.

Operating Profit Margin

Computation: Net farm income plus interest expense minus a charge for unpaid operator labor and management, divided by the value of farm production. Value of farm production is gross farm revenue less purchase of market livestock and feed.

Interpretation: This ratio measures net farm income per dollar of farm production. It is a pre-tax measure of profit margin from the employment of assets. An important factor is the charge for unpaid operator labor and management. There is a relationship between operating profit margin, asset turnover rate, and ROA. Operating profit margin multiplied by asset turnover rate equals ROA.

Net Farm Income

Computation: Net farm income is total revenue earned minus the costs incurred to generate those revenues. It is cash revenue less cash expense and depreciation plus capital adjustments (gain or loss from sale of capital assets). Accrual adjustments for changes in inventories are included to properly match revenues and expenses to the time period for which net farm income is being measured.

Interpretation: Net farm income is the return to the operator for unpaid labor and management and equity capital used in the farm business. Net farm income is an absolute amount and it is difficult to assign a standard to all farms because of differences in the amount of unpaid operator labor and equity used.

REPAYMENT CAPACITY

Term Debt Coverage Ratio

Calculation: Net farm income plus depreciation and other capital adjustments plus non-farm income plus scheduled interest on term debt minus family living expense and income taxes, divided by scheduled term debt principal and interest payments.

Interpretation: This ratio measures the capacity of the borrower to cover all term debt payments. The more the ratio exceeds 1, the greater the margin to cover term debt payments. The business may have sufficient earnings but the timing of cashflows may not be adequate to make the payments on a timely basis. Also, the ratio does not contain any provision for replacement of capital assets.

Capital Replacement and Term Debt Repayment Margin

Calculation: Net farm income plus depreciation and other capital adjustments plus non-farm income minus family living expense, income taxes, and scheduled term debt principal payments.

Interpretation: This is a measure of the business's ability to make payments on term debt. A positive margin indicates the amount available, after making term debt payments, for acquiring capital assets or servicing additional debt. The capital replacement and term debt repayment margin is a dollar amount, so it is impossible to establish a standard for all farm businesses.

FINANCIAL EFFICIENCY

Asset Turnover

Calculation: Value of farm production divided by average total assets. Value of farm production is gross farm revenue less purchase of market livestock and feed.

Interpretation: This is a measure of how efficiently assets are used in the business. The higher the number, the more production is created per dollar of assets. Asset turnover can vary significantly by type of farm and by asset base. For example, dairy and hog farms will typically have higher asset turnovers than cow-calf or cash grain operations.

Asset turnover will probably be higher if capital assets, such as machinery and land, are rented instead of owned.

Operating Expense Ratio

Calculation: Total expense less interest and depreciation and capital adjustment divided by gross farm revenue.

Interpretation: This ratio measures how efficiently operating expenses are managed to generate gross farm revenue. The operating expense ratio will typically vary by farm type.

Depreciation Expense Ratio

Calculation: Depreciation and capital adjustments divided by gross farm revenue.

Interpretation: This ratio expresses depreciation and capital adjustment relative to gross farm revenue. It will vary by farm type and from year to year. Caution must be used when evaluating this ratio. It does not comply with the farm financial standards because the Finpack program, used to generate the farm financial summaries, calculates depreciation and capital adjustment as one number (ending inventory plus capital sales less the sum of beginning inventory and capital purchases). Therefore depreciation cannot be isolated.

Interest Expense Ratio

Calculation: Interest expense divided by gross farm revenue.

Interpretation: This ratio shows the portion of gross farm revenue necessary to cover interest expense. It is often used as a measure of financial risk.

Net Farm Income Ratio

Calculation: Net farm income divided by gross farm revenue.

Interpretation: This is a measure of how efficient the farm business is at generating net income from gross revenue. It is the portion of gross farm revenue left after operating expense, depreciation and capital adjustment, and interest expense have been removed.

INTERPRETATION OF RESULTS

Each financial measure was calculated for each farm. Farms were grouped by characteristics such as region, type of farm, and size and were sorted in order from strongest to weakest by each of the 16 financial measures. The **median** is the midpoint value of the financial measure: one-half of the farms in the category had a higher value and one-half had a lower value than the median. The **upper quartile** is the value that was exceeded by one-fourth of the farms, and the **lower quartile** is the value that was exceeded by three-fourths of the farms. (Another definition of lower quartile is the value for which one-quarter of the farms in the category had a weaker value.)

Individual farm operators and lenders can use the tables as a measure of comparison if their financial measures are calculated similarly. For example, a farm operator 30 years of age may compare his/her profitability and financial efficiency with those of other young operators. Or a lender may compare the solvency and repayment capacity of producers who rent all their crop land. The tables also can be used to look at relationships and trends. What is the relationship between age of farmer and rate of return on equity? How has operating profit margin of livestock farms changed over time?

One ratio is not sufficient to make conclusions about the overall financial performance of a farm business. For example, a crop farm may have a debt-to-asset ratio of 60%, which is worse than the median value of 50.5% (shown on table 7) for that farm enterprise category. However, other factors such as profitability, total assets, and age of operator should also be considered.

Also, a farm can be adversely affected by extraordinary circumstances. Profitability in the low quartile may not be reflective of management capability if the farm had localized bad weather that was not experienced by many other producers in the farm category.

Caution must be used when analyzing the tables because a small number of farms increases the possibility that results may not be representative of a farm category. In this study, for 2002, there are only 77 Red River Valley farms, 77 farms with

operators younger than 35 years, 80 farms with negative net farm income and 94 mixed livestock-crop enterprise farms. Performance of the Red River Valley region may not be representative of the central or northern areas of the Red River Valley because nearly all valley farms in the study are from the south.

There are some strong correlations between two or more classifications, so it is difficult to associate a financial measure with an individual farm characteristic.

For example, the profitability of livestock, in comparison to crop farming, is reflected in farm categories that had a disproportionate number of livestock farms, such as the west region, farms with greater than 40% crop land ownership, and farms with less than \$100,000 sales. Also, comparison of farms by enterprise type, farm size and gross sales can be affected by regional performance. The Red River Valley has the highest proportion, relative to other regions, of crop farms, farms of less than 1,600 acres, and farms with gross income greater than \$250,000.

Tables 1 and 2 show the trends in financial performance and characteristics of North Dakota farms, 1993-2002. The trend has been for farms to get larger and for farmers to get older. In 2002, median farm acreage and gross cash revenue were about 40% higher than in 1993. Median age of operator was 44 in 2002 compared to 39 in 1993.

Financial performance improved in 2002, except for the west region and livestock farms. Crop farm profit was much higher from strong prices and lower costs, although government payments declined sharply and some west and south central areas suffered drought.

Financial performance for the 1993-2002 period was poorest in 1997 and 1998 when one out of four farms had negative net farm income. Performance rebounded in 2000 and 1999 to the highest since 1993 because of extraordinary government and crop insurance payments, good yields for row crops and improved beef cattle prices. Financial performance in 2001 declined for all 16 measures, except interest expense ratio, because of lower government subsidies, higher costs and continued low commodity prices.

FARM CLASSIFICATION AND HIGHLIGHTS

ALL FARMS

Highlights

- Some consistent trends over the past ten years, 1993-2002, for farms enrolled in the North Dakota Farm Business Management Education Program are:
 - farms are getting larger; median acreage increased 42% to 2,033 acres, median gross revenue increased 37% and median farm assets and liabilities increased 40% and 60% to \$575,606 and \$284,828, respectively.
 - farmers are getting older; the median age increased from 39 to 44.
 - off-farm wages and salaries per farm household more than doubled.
- Median net farm income in 2002 was \$38,079, 37% higher than 2001. Higher prices and lower costs of crop production, more than offset sharply lower government payments, lower livestock profits and low yields in drought areas. Profit had declined in 2001 because of lower government subsidies and higher crop production costs.
- Financial performance was strong in 2000 and 1999, despite very low crop prices, because of extraordinary government and crop insurance payments and higher beef prices. Also, yields and acreage of corn, soybeans and sugarbeets were at record levels.
- The poorest financial performance was in 1997, 1998 and 1995 because of low cattle prices, weather related production problems with small grains in 1995 and 1997, low crop prices in 1998 and increasing crop production costs. In 1997, financial performance was poor regardless of farm type, acreage or level of gross sales.
- Median current ratio of 1.3 in 2002 was higher than 1.2 in 2001 and the 1996-1998 period, but lower than 1.4 in 2000 and 1999.
- The median debt-to-asset ratio improved to 53.3% in 2002. Solvency deteriorated in 2001 after improving in 2000 and 1999. Solvency deteriorated each year from 46.4% in 1993 to 59.4% in 1998.
- Median rates of return on equity and assets were 5.7% and 4.4%, respectively, in 2002. In the 1993-2002 period, the only years that ROE exceeded ROA, which indicated that debt capital was employed profitably, were 1993, 1999 and 2000.
- Median term debt coverage ratio was 1.3 in 2002 compared to 1.0 in 2001. During 1993-2002, only 1997 and 1998 had median term debt coverage ratio below 1.0, which indicates over one-half of the farms were not able to make all scheduled term debt payments with farm and non-farm income.
- The 6.6% interest expense as a percent of gross revenue for 2002 is the lowest in the 1993-2002 period. It has declined five consecutive years because of lower interest rates and higher gross.
- Median net farm income as a percent of gross revenue was 17.3% in 2002 and 14% in 2001. Although median gross revenue increased from \$161,426 to \$220,781 in the 1993-2002 period, median net farm income as a percent of gross revenue has generally decreased. It was the highest, 26.6%, in 1993 and lowest, averaging 10.4%, for the 1997-1998 period.

REGION

Farms are classified in one of four geographic regions in North Dakota, based on the location of their Farm Business Management program. However, farms enrolled in the Bismarck program are classified as "west or "south central" according to which side of the Missouri River the farm is located. Also, some farms that are enrolled in the Casselton and Wahpeton programs are not in the Red River Valley and are classified as south-central. The southern area of the "west" region is better represented than the northern area. The northern area of the Red River Valley has had no representation since 1997. Locations of North Dakota Farm Business Management programs that participated in the 2000-2002 summaries are:

Red River Valley: Wahpeton, Casselton (2002), and Kindred (2000, 2001)

North Central: Bottineau, Devils Lake, Garrison (2000), Minot, and Rugby

South Central: Bismarck, Carrington, Enderlin, Jamestown, and Napoleon

West: Bismarck, Dickinson, Glen Ullin, and Stanley

Highlights

- In 2002 the median farm size increased from the Red River Valley (1,539 acres, all crop land) to the west region (2,726 acres, including pasture). Median farm size was 2,068 acres (1,776 crop acres) in the north central region and 2,000 acres (1,426 crop acres) for the south central region .
- Several farm characteristics are strongly related to region. Red River Valley farms are more likely to be crop farms and typically have smaller total acreage (crop land and pasture) and percent of crop land owned, but much larger total farm sales, assets and liabilities, than farms in other regions.
- The incidence of livestock and mixed enterprise farms goes from a mere 3% in the Red River Valley to 68% in the west.
- In 2002, crop prices were sharply higher and costs were lower. However, livestock prices were lower and areas of the west and south central suffered drought. As a result, financial performance greatly improved in the Red River Valley and north central regions, slightly improved in the south central region and deteriorated in the west. Median net farm income increased by about 100% in the Red River Valley and north central regions, but declined 50% in the west.
- In 2001, all 16 measures of financial performance declined in each region except the median interest expense ratio improved in the west region. The decline was greatest in the north central region and the least in the west.
- Repayment capacity improved in 2002, except in the west. The median term debt coverage ratio in the Red River Valley and north central region was 2.3 and 1.2, compared to 1.0 and 0.7, respectively, in 2001. In the west it declined to 0.9 from 1.4 in 2001, indicating that over one-half of farms could not cover scheduled term debt payments with 2002 farm and non-farm income.
- Solvency improved in all regions in 2002, except the west. Median debt-to-asset ranged from 47.1% in the Red River Valley to 56.8% in the west. Solvency had declined in all regions in 2001 after improving in 2000.
- In 2002 net farm income as a percent of gross revenue was a strong 26% and 21.1% for the Red River Valley and north central regions, respectively, compared to less than 14% for the south central and west regions.

FARM ENTERPRISE

Farms were classified as "crop" if 70% or more of total sales were from crops, and "livestock" if livestock sales accounted for 70% or more of total sales. The remaining farms were classified as "mixed."

Highlights

- In 2002, 62.4% of farms were classified as crop, 19.3% as livestock and 18.3% were mixed enterprise farms. During 1998-2001 about 64% of all farms statewide were in the crop category.
- Ninety-seven percent of Red River Valley farms, 74% of north central farms, 52% of south central farms and 31% of west region farms were classified as crop in 2002.
- Thirty-seven percent of the west region farms were classified as livestock in 2002.
- In 2000 and 1999, financial performance of all farm types was much better than in 1998. In 2001, financial performance declined for all farm types, especially crop farms, compared to 2000. In 2002 the decline continued for livestock and mixed enterprise farms, but crop farms had strong improvement in all 16 measures of financial performance.
- In 2002, median net farm income for crop farms doubled to \$60,591, but mixed enterprise and livestock farms declined by over 30% to \$17,645 and \$16,935, respectively.
- In the 1993-2002 period crop farms tended to have more total assets and liabilities and greater gross and net income than livestock and mixed enterprise farms. Profitability of livestock farms was similar to crop farms only in 1993, 1997 and 2001. Profitability of livestock and mixed farms was extremely weak in 1995-1998. In 1997 the performance of crop farms was also very poor.
- Every year, 1993-2002, crop farms had better solvency than other farm types. In 2002, crop farms had a median debt-to-asset ratio of 50.5%, mixed enterprise farms had 58.4% and livestock farms had 58.8%.
- In 2002, repayment capacity of crop farms greatly improved but livestock and mixed enterprise farms declined to where over one-half were not able to meet scheduled term debt payments with farm and non-farm income. Repayment capacity in 2001 had declined sharply for all farm types after improvements in 2000 and 1999 to the best levels since 1993.
- The median asset turnover ratio was 0.47 for crop farms, 0.29 for mixed enterprise farms and 0.22 for livestock farms in 2002. A higher ratio for crop farms is typical. Most livestock farms are beef cow-calf operations.
- Financial efficiency, as measured by the median net farm income as percent of gross revenue, was 20.8% for crop farms, 13.1% for livestock farms and 11.7% for mixed enterprise farms in 2002.
- Median interest expense as percent of gross revenue has typically been worse for livestock farms than for crop farms. This relationship held in 2002, as median interest expense as a percent of gross revenue increased to 11% for livestock farms and declined to 5.4% for crop farms .

FARM SALES

Farms were classified in one of three cash farm sales categories. Farm sales include cash receipts from crop and livestock sales, government payments, and other farm income.

The categories were: less than \$100,000
 \$100,000 to \$249,999
 \$250,000 or over

Highlights

- Median farm sales were \$220,781 in 2002. Sales per farm have increased over time; 43% of farms had sales in excess of \$250,000, compared to 23% in 1993.
- Two-thirds of Red River Valley farms had sales in excess of \$250,000, compared to 44% of south central farms, 36% of north central farms, and 34% of west region farms in 2002.
- Farms in the north central and west tend to have lower sales than other regions.
- Farm type and sales are correlated. In 2002, over one-half of crop farms had sales in excess of \$250,000 compared to only one-fifth of livestock farms.
- As expected, young farmers typically have lower sales than older farmers. However, farmers between the ages of 35 and 45 were more likely to have farm sales greater than \$250,000 than farmers older than 45 years.
- A strong relationship between gross sales and financial performance is typical. Every year, 1993-2002, median rates of return on assets and equity increased with sales volume.
- In 2002, 2001 and 2000, median current ratio improved as farm sales increased, but there was not a clear relationship between farm sales and current ratio over the 1993-1999 period.
- Farms with low sales typically have higher debt-to-asset. In 2002, median debt-to-asset was 60.5%, 55.9% and 49.4% for low, medium and high farm sale groups, respectively.
- In 2002, median net farm income was \$8,630 for farms with less than \$100,000 sales, \$32,808 for farms with \$100,000 to \$250,000 sales, and \$77,044 for farms with greater than \$250,000 sales.
- Typically, as in 2002, repayment capacity is directly related to amount of sales. However, low sale farms rely more heavily on non-farm income for repayment capacity than large sale farms. In 1997, when farms had poor profitability regardless of sales level, farms with less than \$100,000 sales had the best repayment capacity.
- From 1993-2002, farms with sales under \$100,000 had the best operating expense as percent of gross revenue, but had the worst interest expense ratio because of higher debt.

FARM SIZE

Both crop and pasture acres were included in determining farm size.

Farm size categories were: 1,600 acres or less
 1,601 acres or more

Highlights

- Because of an increase in pasture land from east to west, median total farm acreage (crop land and pasture) ranged from 1,539 in the Red River Valley (all crop land) to 2,726 in the west region. Median farm crop acreage was lowest in the west region.
- In 2002, nearly two-thirds of farms were greater than 1,600 acres, compared to one-half in 1996.
- From 1999 to 2002, mixed enterprise farms were slightly larger than crop or livestock farms.
- In 2002, 52% of farmers under 35 years old operated more than 1,600 acres compared to 38% in 2001. About 71% of farmers between 35 and 45 years old and 65% of farmers over 45 years operate more than 1,600 acres.
- As expected, farms with greater than 1,600 acres have greater assets, liabilities, sales and profitability than smaller farms. Larger farms also have better liquidity and solvency.
- In 2002, nearly all financial performance measures improved for both farm size categories, after declining in 2001. In 2000 and 1999, all financial performance measures for both farm size categories were much better than in 1998.
- Each year, 1994-1999 and 2002, the median current ratio for the large farm category was slightly better than for the small farm category. In 2001 and 2000 it was 1.3 and 1.5 for farms with greater than 1,600 acres, respectively, and 1.1 and 1.3 for smaller farms, respectively.
- In 2002, median debt-to-asset was 58.8% for farms with less than 1,600 acres and 51.5% for larger farms.
- In 2002, median net farm income improved 13% to \$20,755 for farms with less than 1,600 acres and nearly 50% to \$51,374 for farms with more than 1,600 acres.
- In 1999-2002, median term debt coverage ratio was better for farms with more than 1,600 acres than for smaller farms. However, it was better for smaller farms in the four years 1995-1998. Although smaller acreage farms generate less cash income, they tend to have more non-farm income and lower payments than larger farms.
- Financial efficiency measures of farm size groups tend to be similar. This indicates that greater profitability of farms larger than 1,600 acres is due to larger sales volume and/or greater operator labor efficiencies not lower operating expenses per dollar of sales.

CROPLAND TENURE

This is a classification of the portion of crop land that is rented. Four categories were used.

Full tenant
1-20 percent owned
21-40 percent owned
41 percent or over owned

Highlights:

- High ownership of crop land is less likely in the Red River Valley. In 2002, only one of ten of Red River Valley farms owned more than 40% of the crop land they operated, compared to three of ten farms in the north central region and four of ten farms in the south central and west regions.
- Crop land ownership increases with age. In 2002, farmers older than 45 years were three times as likely to own more than 40% of their crop land than were farmers younger than 35 years. Four of ten young farmers rented all of their crop land, compared to 12% of farmers older than 45 years old.
- Operators of livestock and mixed enterprise farms own a greater portion of their crop land than crop farms. About four of ten livestock and mixed enterprise farms own more than 40% of the crop land that they operate, compared to one-fourth of crop farms.
- Interestingly, small farms (less than 1,600 acres) were more likely to either own no crop land or to own more than 40% of crop land than were large farms (more than 1,600 acres).
- Farms that own some land, but not a lot, are typically the most profitable. Farms in the 1 to 20% crop land ownership category, followed by farms with 20-40% crop land ownership, are also most likely to be crop farms, farm more acreage, and have larger sales. In 2002, farms with 1 to 20% crop land ownership had median net farm income of \$57,002.
- During 1993 to 2002 there is no clear relationship between current ratio and land tenure except that farms with greater than 40% crop land ownership tend to have a better median current ratio.
- Farms with greater than 40% crop land ownership typically had better solvency, 1993-2002, than other crop land ownership groups. In 2002, farms with no crop land ownership had a median debt-to-asset ratio of 59.8% compared to 48% for farms with crop land ownership greater than 40%.
- In 2002, median net farm income was flat, about \$27,500, for farms with greater than 40% crop land ownership but increased 25% to 50% for other land tenure categories compared to 2001.
- The lower profit, in 2002, of farms with greater than 40% crop land ownership is associated with the fact these farms are more likely to also be in livestock, low sales, and small size farm categories and less likely to be in the Red River Region than farms in other tenure categories.
- Farms with a smaller proportion of crop land ownership have fewer land assets and land interest costs and therefore have higher asset turnover ratios and lower interest expense ratios, but because of land rent costs they have higher operating expense ratios.

NET FARM INCOME

Four levels of net farm income were used to group farms.

Negative
\$0 - \$24,999
\$25,000 - \$49,999
\$50,000 or more

Highlights

- Median net farm income rebounded to \$38,079 in 2002 after falling to \$27,729 in 2001. It had increased to \$45,085 in 2000 and \$42,009 in 1999 following two extremely low years, \$19,491 in 1998 and \$14,290 in 1997.
- The Red River Valley region had the highest median net farm income every year from 1993 to 2002, except for 1993 and 1998.
- In 2002, and from 1993-2000, crop farms have been more profitable than livestock or mixed enterprise farms. In 2002, median net farm income was \$60,591 for crop farms, \$17,645 for mixed enterprise farms and \$16,935 for livestock farms. In 2001, net farm income was similar by farm type.
- The typical strong associations between net farm income and farm sales and farm size were greatly reduced in 1997.
- In 2002, nearly 70% of the farms with sales greater than \$250,000 had net farm income greater than \$50,000. Eighty-five percent of farms with sales less than \$100,000, had net farm income below \$25,000.
- In 2002, one-half of farms larger than 1,600 acres had net farm income greater than \$50,000, compared to one-fourth of smaller farms.
- During the 1993-2000 period, farmers between the ages of 35 to 45 years were more profitable than farmers that were younger or older. However, in 2001 older farmers had similar net farm income as farmers in the 35 to 45 age group and in 2002 the younger farmers had similar net farm income as the 35 to 45 age group.
- Solvency, liquidity, repayment capacity, and financial efficiency were strongly correlated with net farm income.
- In 2002 and from 1996-2000, low debt farms (less than 40% debt-to-asset) were three to four times as likely to have net farm income in excess of \$50,000 than high debt farms (greater than 70% debt). In 2001, low debt farms were five times more likely to have net farm income greater than \$50,000.

DEBT-TO-ASSET RATIO

Three ranges of debt-to-asset ratio were used to group farms.

- 0 - 40 percent
- 41 - 70 percent
- 71 percent or more

Highlights

- Median debt-to-asset improved to 53.3% in 2002 after deteriorating to 55.5% in 2001. Solvency had declined each year from 1994 to 1998 prior to improving in 1999 and 2000.
- There is a strong inverse relationship between level of debt and liquidity, repayment capacity, profitability and financial efficiency measures. As debt-to-asset increases, these measures deteriorate.
- In 2002, farms in the low debt category had the best median current ratio, 2.9, interest percent ratio, 3.9%, and term debt coverage ratio, 2.6, compared to any of the 26 farm categories used in this study.
- Median net farm income for the low, medium, and high debt categories in 2002 was \$60,244, \$42,612 and \$16,044, respectively.
- In 2002, only 7% of farms with low debt had negative net farm income compared to 32% of high debt farms.
- Red River Valley farms, crop farms, large farms (greater than 1,600 acres) and farms with high sales (greater than \$250,000 sales) had lower median debt-to-asset than other regions, farm types, farm size and farm sales groups, respectively, during the years 1996-2002.
- About 33% of farms with sales less than \$100,000 sales were in the high debt group compared to 21% of farms that had sales greater than \$250,000.
- As expected, percent debt-to-asset tended to decrease as age of farmer increased.

FARMER AGE

Three groups were used to classify farms by age of operator:

34 years or less
35 - 44 years
45 years or older

Highlights

- In 2002, 15% of farm operators were under 35 years old and 35% were between 35 and 45 years old. The percent of farmers older than 45 has steadily increased from 27% in 1993 to 51% in 2002.
- Prior to 1999, the age of farmers tended to increase slightly from east to west, but from 1999 to 2002 the age distribution of farm operators has been similar for all regions.
- Farmers in the middle age group typically had more total farm liabilities, higher gross sales, larger farms and were more profitable than the younger or older age groups. However, in 2001, net farm income was similar between the middle and older age groups and in 2002 it was similar between the middle and young age groups.
- Median total assets were greatest, 1993-2002, for farm operators older than 45 years and least for farmers under 35 years old. However, median total assets of the middle age group of farmers (35 to 45 years) is close to the asset level of the older farmer group.
- As expected, as the age of the farm operator increases there is a higher percent of the crop land in the farm that is owned, and the percent of farm debt tends to decrease. In 2002, median debt-to-asset was 63.8% for farmers less than 35 years old, 57.2% for farmers in the 35 to 45 age group and 48.5% for farmers older than 45.
- The younger farmers had the best median current ratio in 2002, 1.4, and in 2001, 1998 and 1997, at 1.3. In 2000 the median current ratio was 1.4 for all age groups and in 1996, 1994 and 1993 the middle age group had the best liquidity measures.
- In 2002, median net farm income increased to \$38,632 for farmers under 35 years, \$38,596 for farmers between 35 and 45 years old and \$35,396 for farmers older than 45 years. The largest increase was for farmers under 35 years old.
- In each year, 1993-2002, the young age group of farmers employed assets more efficiently than farmers older than 45 years. The young group had better median measures of ROA, ROE, term debt repayment coverage ratio, asset turnover and interest expense and net farm income as percent of gross revenue despite having much fewer total assets and higher debt-to-asset.

TABLE 1. MEDIAN FARM SIZE, FARM OPERATOR AGE, AND FINANCIAL FACTORS OF FARMS PARTICIPATING IN THE NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM, 1993-2002.

	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993
Number of Farms	513	532	553	539	535	560	551	596	536	539
	-----Median-----									
Age of Operator	44	44	44	43	42	42	41	41	40	39
Farm Size (acres)	2,033	1,937	1,916	1,921	1,882	1,729	1,601	1,576	1,517	1,429
Gross Cash Revenue	220,781	216,697	205,659	190,676	173,972	179,052	177,152	165,134	162,427	161,426
Total Farm Assets	575,606	543,860	549,636	520,094	499,496	485,094	469,587	438,289	439,749	409,839
Total Farm Liabilities	284,828	287,068	274,640	266,401	270,802	263,406	251,480	225,793	201,037	178,509
Current Ratio	1.3	1.2	1.4	1.4	1.2	1.2	1.2	1.3	1.4	1.5
Working Capital	29,099	21,910	36,612	29,643	12,095	11,207	19,042	18,984	27,598	33,387
Debt-to-asset (%)	53.3	55.5	53.9	55.5	59.4	58.6	55.6	51.5	49.8	46.4
Rate of Return on Farm Assets (%)	5.7	4.1	7.6	8.4	4.0	2.5	6.5	4.7	6.4	8.6
Rate of Return on Farm Equity (%)	4.4	3.2	7.7	9.0	0.0	-1.4	4.9	2.2	5.8	10.1
Operating Profit Margin (%)	14.5	12.1	20.6	21.6	11.5	8.3	17.3	14.5	17.9	23.7
Net Farm Income	38,079	27,729	45,085	42,009	19,491	14,290	31,063	23,463	32,523	42,484
Term Debt Coverage Ratio	1.3	1.0	1.6	1.5	0.9	0.7	1.2	1.1	1.3	1.9
Term Debt & Capital Repayment Margin (\$)	10,628	301	17,768	17,973	-2,680	-8,995	5,024	1,652	7,069	17,634
Asset Turnover Ratio	0.37	0.38	0.42	0.38	0.36	0.34	0.39	0.36	0.4	0.4
Operating Expense Ratio (%)	68.8	70.9	63.3	61.2	71.9	73.3	66.0	67.4	64.9	60.9
Depreciation Expense Ratio (%)	5.6	5.9	5.3	5.7	5.7	6.0	5.6	5.7	4.7	4.6
Interest Expense Ratio (%)	6.6	7.6	7.8	8.4	9.6	9.9	8.9	8.8	7.6	6.9
Net Farm Income Ratio (%)	17.3	14.0	21.7	22.4	12.7	8.1	18.0	16.2	21.7	26.6

TABLE 2. PERCENT DISTRIBUTION OF FARMS BY FARM GROUP CATEGORY, NORTH DAKOTA FARM BUSINESS MANAGEMENT PROGRAM, 1993-2002.

Farm Group/Category	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993
All Farms	513	532	553	539	535	560	551	596	536	539
-----Percentage-----										
Region										
Red River Valley	15.0	15.0	13.0	12.8	12.7	17.0	16.7	20.5	23.3	23.0
North Central	35.5	37.0	36.2	36.2	36.1	31.8	30.3	25.8	25.2	26.7
South Central	29.0	28.2	30.2	30.2	33.1	33.6	33.9	35.9	35.1	31.9
West	20.5	19.7	20.6	20.8	18.1	17.7	19.1	17.8	16.4	18.4
Farm Enterprise										
Crop	62.4	64.1	63.3	64.6	63.9	65.4	66.4	66.9	68.5	66.4
Livestock	19.3	18.0	19.9	20.0	20.6	17.5	17.2	23.8	22.8	23.0
Mixed	18.3	17.9	16.8	15.4	15.5	17.1	16.3	9.2	8.8	10.6
Farm Sales										
\$99,999 or less	17.2	16.4	17.7	20.0	23.2	20.7	26.3	26.0	24.1	23.0
\$100,000 - \$249,999	40.0	41.5	43.8	44.0	45.6	46.4	43.6	47.3	51.9	53.6
\$250,000 or over	42.9	42.1	38.5	36.0	31.2	32.9	30.1	26.7	24.1	23.3
Farm Size										
1,600 acres or less	34.9	36.1	36.3	36.0	39.3	44.3	50.1	30.7*	34.1	35.8
1,600 acres or over	65.1	63.9	63.7	64.0	60.7	55.7	49.9	69.3*	65.9	64.2
Cropland Tenure										
Full tenant	20.4	20.1	17.1	17.8	18.2	19.6	20.8	20.7	22.0	23.1
1-20 percent owned	26.1	26.7	26.2	23.2	26.1	25.2	23.0	22.3	19.0	17.5
21-40 percent owned	23.0	20.0	22.2	24.7	21.8	20.7	20.8	19.9	20.3	22.5
41 percent or over owned	30.5	33.3	34.4	34.2	33.8	34.5	35.4	37.1	38.6	36.9
Farm Income										
Negative	15.6	21.2	10.3	8.0	25.6	29.5	18.0	22.1	12.9	9.6
\$0-\$24,999	23.4	25.9	20.6	23.2	29.7	32.1	25.0	24.2**	23.7	18.2
\$25,000 - \$49,000	18.9	22.6	23.5	25.6	20.4	21.4	20.9	16.4**	21.5	20.2
\$50,000 or more	42.1	30.3	45.6	43.2	24.3	17.0	36.1	37.2**	42.0	57.9
Debt-to-asset Ratio										
0-40 percent	30.8	26.9	29.3	28.8	24.3	28.4	28.9	33.6	35.8	39.1
41-70 percent	41.5	43.8	45.9	44.5	41.9	39.1	42.6	42.4	45.1	44.0
71 percent or more	27.7	29.3	24.8	26.7	33.8	32.5	28.5	24.0	19.0	16.9
Farmer Age										
34 years or younger	15.0	14.8	15.0	17.8	18.5	20.0	18.7	22.1	25.6	26.8
35-44 years	34.5	36.8	40.0	39.7	41.9	40.9	44.3	43.0	43.7	46.1
45 years or older	50.5	48.3	45.0	42.5	39.6	39.1	37.0	34.9	30.8	27.2

* For 1993-1995 farm sizes were 1,200 acres or less, and 1,201 acres or more.

** For 1993-1995 farm income categories were negative, \$0-\$19,999, \$20,000-\$39,999, and \$40,000 or more.

TABLE 3. FARM CLASSIFICATIONS AND PERCENT DISTRIBUTION OF FARM TYPES WITHIN REGIONS, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM, 2002.

Farm Group Category	Number of Farms (513)	Percentage	Farm Group Category Breakout by Region			
			Red River Valley	North Central	South Central	West
Region			77	182	149	105
Red River Valley	77	15.0				
North Central	182	35.5				
South Central	149	29.0				
West	105	20.5				
Farm Enterprise			-----percentage-----			
Crop	320	62.4	97.4	73.6	52.3	31.4
Livestock	99	19.3	0.0	15.4	21.5	37.1
Mixed	94	18.3	2.6	11.0	26.2	31.4
Farm Sales						
\$99,999 or less	88	17.2	3.9	15.9	18.8	26.7
\$100,000 - \$249,999	205	40.0	28.6	47.8	36.9	39.0
\$250,000 or over	220	42.9	67.5	36.3	44.3	34.3
Farm Size						
1,600 acres or less	179	34.9	54.5	30.8	35.6	26.7
1,600 acres or over	334	65.1	45.5	69.2	64.4	73.3
Cropland Tenure						
Full tenant	104	20.4	20.8	20.4	18.9	22.3
1-20 percent owned	133	26.1	42.9	26.0	23.0	18.4
21-40 percent owned	117	23.0	26.0	24.3	20.3	22.3
41 percent or over owned	155	30.5	10.4	29.3	37.8	36.9
Farm Income						
Negative	80	15.6	2.6	12.1	19.5	25.7
\$0 - \$24,999	120	23.4	6.5	24.7	28.2	26.7
\$25,000 - \$49,999	97	18.9	10.4	20.9	16.1	25.7
\$50,000 or more	216	42.1	80.5	42.3	36.2	21.9
Debt-to-asset Ratio						
0 - 40 percent	158	30.8	33.8	31.3	30.2	28.6
41 - 70 percent	213	41.5	53.2	39.6	38.3	41.0
71 percent or more	142	27.7	13.0	29.1	31.5	30.5
Farmer Age						
34 years or younger	77	15.0	13.0	17.6	12.8	15.2
35 - 44 years	177	34.5	32.5	33.5	33.6	39.0
45 years or older	259	50.5	54.5	48.9	53.7	45.7

TABLE 4. CURRENT ASSETS AND CURRENT LIABILITIES, QUARTILE VALUES FOR 2002, MEDIAN VALUES FOR 2000 AND 2001, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

Farm Group	2002					2002				
	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median
	Current Farm Assets (\$)					Current Farm Liabilities (\$)				
All Farms	253,461	77,069	146,374	138,633	136,837	47,774	171,315	96,972	98,804	87,013
Region										
Red River Valley	371,736	154,211	247,720	218,795	236,860	79,788	235,733	136,693	142,996	141,932
North Central	236,450	77,446	141,307	116,444	126,638	46,882	150,521	95,961	81,555	82,048
South Central	220,126	64,295	131,429	136,612	123,374	47,161	174,158	94,943	108,956	91,274
West	202,959	68,133	125,104	136,788	120,156	31,250	134,183	64,012	75,340	59,820
Farm Enterprise										
Crop	282,888	93,364	169,025	148,129	150,353	52,058	177,202	103,524	109,535	102,677
Livestock	171,305	47,058	99,712	97,498	98,770	31,370	137,544	70,069	64,165	55,334
Mixed	214,569	72,859	126,351	128,620	125,378	51,773	164,467	100,783	88,542	79,493
Farm Sales										
\$99,999 or less	68,076	25,452	42,635	49,310	40,449	15,214	63,385	34,119	36,285	29,744
\$100,000-\$249,999	177,239	77,485	120,752	112,004	117,014	47,376	132,036	86,753	85,064	79,739
\$250,000 or over	373,672	163,765	253,626	239,022	260,491	95,470	259,382	151,073	161,967	148,322
Farm Size										
1,600 acres or less	142,277	38,784	78,479	79,543	69,423	29,180	103,334	57,013	62,810	50,498
1,601 acres or over	298,838	116,898	180,336	173,123	180,742	66,255	202,256	116,177	120,587	114,145
Cropland Tenure										
Full tenant	177,174	59,832	113,401	119,612	116,889	29,991	121,436	64,012	95,195	77,095
1-20 percent owned	298,838	116,929	180,251	164,345	194,846	77,334	220,660	125,517	135,648	125,253
21-40 percent owned	321,957	111,723	186,585	160,467	145,050	70,069	216,982	113,800	98,804	100,788
41 percent or over owned	196,929	58,294	118,110	119,701	114,797	34,403	142,525	73,688	76,604	61,000
Net Farm Income										
Negative	131,429	37,311	70,059	94,872	64,400	36,798	158,310	85,919	107,881	86,037
\$0-\$24,999	137,728	42,635	90,214	99,781	70,294	41,514	114,980	73,485	72,810	49,474
\$25,000-\$49,999	186,562	75,601	122,456	138,655	108,461	37,814	146,288	74,938	83,694	78,983
\$50,000 or more	366,675	163,765	247,720	248,026	207,229	74,947	213,860	118,407	113,230	112,845
Debt-to-Asset Ratio										
0-40 percent	327,754	112,341	186,562	206,953	167,765	22,279	103,524	59,617	53,985	46,912
41-70 percent	256,941	80,736	157,204	142,660	148,176	61,923	191,202	113,583	109,535	100,788
71 percent or more	178,868	54,365	105,000	96,521	101,864	57,013	200,606	116,177	124,404	112,349
Farmer Age										
34 years or younger	155,378	40,809	89,091	93,994	107,907	29,806	104,486	66,255	69,441	57,124
35-44 years	268,077	93,240	173,409	157,724	176,192	57,537	204,746	115,480	116,895	110,689
45 years or older	266,687	77,485	149,757	139,414	132,415	49,503	163,192	95,989	101,486	84,868

TABLE 5. LIQUIDITY MEASURES, QUARTILE VALUES FOR 2002, MEDIAN VALUES FOR 2000 AND 2001, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS.

Farm Group	2002			2001 Median	2000 Median	2002			2001 Median	2000 Median
	Upper Quartile	Lower Quartile	Median			Upper Quartile	Lower Quartile	Median		
	Current Ratio					Working Capital(\$)				
All Farms	2.2	0.9	1.3	1.2	1.4	98,219	-5,494	29,099	21,910	36,612
Region										
Red River Valley	2.7	1.1	1.4	1.3	1.4	178,094	18,813	70,108	31,973	63,837
North Central	1.9	1.0	1.2	1.2	1.5	75,751	-5,605	21,826	15,037	39,058
South Central	2.0	0.9	1.2	1.2	1.3	78,800	-15,001	19,647	18,343	26,294
West	2.5	1.0	1.4	1.4	1.5	75,974	-915	30,991	38,517	38,621
Farm Enterprise										
Crop	2.5	1.0	1.3	1.2	1.3	117,117	-3,589	33,688	17,967	35,412
Livestock	1.7	0.9	1.3	1.4	1.6	62,426	-2,627	22,995	24,571	36,351
Mixed	1.9	0.9	1.3	1.3	1.5	72,377	-16,496	27,339	33,710	41,449
Farm Sales										
\$99,999 or less	1.8	0.7	1.2	1.2	1.2	25,094	-10,798	9,428	9,413	6,748
\$100,000-\$249,999	2.1	0.9	1.3	1.2	1.4	68,901	-7,024	24,032	20,527	33,056
\$250,000 or over	2.5	1.1	1.4	1.3	1.5	162,774	10,235	64,141	52,266	80,410
Farm Size										
1,600 acres or less	2.0	0.8	1.2	1.1	1.3	45,441	-9,783	11,354	10,450	12,996
1,601 acres or over	2.3	1.0	1.3	1.3	1.5	122,281	640	45,370	36,621	54,071
Cropland Tenure										
Full tenant	1.9	0.9	1.3	1.2	1.3	59,100	-7,832	23,030	13,223	31,131
1-20 percent owned	2.0	1.0	1.2	1.1	1.4	106,801	-4,074	37,543	21,209	47,683
21-40 percent owned	2.0	0.9	1.3	1.2	1.4	129,743	-7,307	28,583	25,878	34,797
41 percent or over owned	2.8	1.0	1.3	1.4	1.5	90,285	-2,326	29,879	29,378	36,612
Net Farm Income										
Negative	1.3	0.6	0.9	0.8	0.9	13,860	-41,125	-9,933	-16,275	-13,485
\$0-\$24,999	1.7	0.8	1.1	1.2	1.2	29,254	-15,897	6,891	10,450	11,327
\$25,000-\$49,999	2.0	1.0	1.3	1.3	1.3	51,940	-5,605	21,826	28,335	26,891
\$50,000 or more	3.1	1.2	1.6	1.9	1.8	178,958	36,526	78,800	103,880	88,463
Debt-to-Asset Ratio										
0-40 percent	6.8	1.8	2.9	3.5	3.4	225,287	48,469	113,342	123,086	111,695
41-70 percent	1.6	1.0	1.3	1.2	1.3	68,679	3,134	29,679	21,947	35,969
71 percent or more	1.1	0.7	0.9	0.9	1.0	10,404	-38,986	-10,144	-13,188	-2,987
Farmer Age										
34 years or younger	2.2	1.0	1.4	1.3	1.4	67,732	-915	24,438	22,047	29,454
35-44 years	2.0	0.9	1.3	1.2	1.4	90,285	-6,573	30,429	18,293	42,198
45 years or older	2.4	0.9	1.3	1.2	1.4	109,241	-5,656	29,254	25,448	33,244

TABLE 6. TOTAL ASSETS AND TOTAL LIABILITIES, QUARTILE VALUES FOR 2002, MEDIAN VALUES FOR 2000 AND 2001 NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

Farm Group	2002					2002				
	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median
	Total Farm Assets(\$)					Total Farm Liabilities(\$)				
All Farms	916,698	366,820	575,606	543,860	549,636	166,147	447,162	284,828	287,068	274,640
Region										
Red River Valley	1,422,033	511,184	799,018	833,862	714,742	209,873	562,849	361,852	389,476	368,246
North Central	807,694	368,349	553,297	508,048	517,231	173,241	416,037	286,991	262,075	256,791
South Central	836,345	345,114	523,601	525,730	527,892	130,796	447,968	273,946	296,070	267,315
West	875,559	331,191	551,016	549,193	527,146	151,493	431,868	256,435	259,034	254,486
Farm Enterprise										
Crop	977,987	401,134	618,089	576,724	595,034	155,210	447,162	290,160	292,847	282,791
Livestock	720,683	344,874	494,570	477,006	468,560	159,402	420,011	271,254	260,389	251,888
Mixed	810,262	361,222	551,016	539,633	509,242	185,796	470,132	269,502	281,070	262,145
Farm Sales										
\$99,999 or less	414,792	157,711	301,602	290,499	279,141	71,208	241,262	146,272	164,005	157,532
\$100,000-\$249,999	656,512	345,385	488,074	459,624	472,070	164,945	357,996	250,838	256,410	254,484
\$250,000 or over	1,281,884	642,823	927,396	915,842	886,118	262,763	625,053	418,345	403,818	395,491
Farm Size										
1,600 acres or less	561,390	245,247	361,453	367,137	356,698	110,757	312,028	200,076	200,384	193,362
1,601 acres or over	1,058,306	473,123	719,557	700,265	668,915	212,358	518,814	336,264	340,189	330,960
Cropland Tenure										
Full tenant	470,961	203,942	328,887	316,279	308,388	96,818	271,097	189,523	216,630	183,999
1-20 percent owned	895,045	453,757	607,928	562,851	569,119	212,358	472,223	319,892	329,254	299,497
21-40 percent owned	1,114,584	489,249	694,326	629,079	585,240	219,529	544,794	359,771	316,698	313,931
41 percent or over owned	995,065	406,133	680,366	657,631	601,338	159,402	447,292	277,186	305,929	261,302
Net Farm Income										
Negative	611,138	257,079	406,133	438,396	472,397	130,241	483,090	269,502	305,098	370,415
\$0-\$24,999	561,390	303,345	441,854	396,498	345,274	145,434	359,771	241,262	240,288	205,453
\$25,000-\$49,999	773,618	359,456	510,078	517,755	443,632	161,437	416,037	257,052	261,083	229,179
\$50,000 or more	1,240,901	581,616	849,715	915,842	722,070	192,993	544,794	321,507	329,900	317,271
Debt-to-Asset Ratio										
0-40 percent	1,141,907	500,263	774,403	717,702	667,285	69,374	260,738	161,437	144,037	131,578
41-70 percent	962,797	368,349	611,138	618,779	576,111	210,858	510,926	319,043	319,826	311,697
71 percent or more	580,793	293,401	442,935	383,308	395,686	250,838	528,583	391,933	354,597	366,913
Farmer Age										
34 years or younger	542,474	227,607	353,399	344,575	375,419	110,733	318,132	215,018	222,508	210,959
35-44 years	927,396	397,822	594,629	563,957	569,119	190,400	518,814	323,045	314,602	300,828
45 years or older	1,012,261	441,854	644,594	628,784	598,700	155,521	449,032	277,186	287,950	276,267

TABLE 7. SOLVENCY MEASURES, QUARTILE VALUES FOR 2002, MEDIAN VALUES FOR 2000 AND 2001, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS.

Farm Group	2002					2002					2002				
	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median
	Debt-to-Asset (%)					Equity-to-Asset (%)					Debt-to-Equity				
All Farms	35.1	72.7	53.3	55.5	53.9	64.9	27.3	46.7	44.5	46.1	0.5	2.7	1.1	1.2	1.2
Region															
Red River Valley	35.2	60.3	47.1	49.9	49.9	64.8	39.7	52.9	50.1	50.1	0.5	1.5	0.9	1.0	1.0
North Central	34.2	73.3	55.2	58.0	52.7	65.8	26.7	44.8	42.0	47.3	0.5	2.7	1.2	1.4	1.1
South Central	32.2	77.9	53.9	56.4	55.0	67.8	22.1	46.1	43.6	45.0	0.5	3.5	1.2	1.3	1.2
West	39.8	74.7	56.8	54.9	54.6	60.2	25.3	43.2	45.1	45.4	0.7	3.0	1.3	1.2	1.2
Farm Enterprise															
Crop	32.3	68.2	50.5	55.2	52.5	67.7	31.8	49.5	44.8	47.5	0.5	2.1	1.0	1.2	1.1
Livestock	41.0	74.8	58.8	56.2	54.9	59.0	25.2	41.2	43.8	45.1	0.7	3.0	1.4	1.3	1.2
Mixed	41.2	80.0	58.4	55.3	55.5	58.8	20.0	41.6	44.7	44.5	0.7	4.0	1.4	1.2	1.2
Farm Sales															
\$99,999 or less	43.6	74.8	60.5	62.4	60.7	56.4	25.2	39.5	37.6	39.3	0.8	3.0	1.5	1.7	1.5
\$100,000-\$249,999	38.6	75.6	55.9	59.5	55.8	61.4	24.4	44.1	40.5	44.2	0.6	3.1	1.3	1.5	1.3
\$250,000 or over	31.3	67.0	49.4	51.4	49.4	68.7	33.0	50.6	48.6	50.6	0.5	2.0	1.0	1.1	1.0
Farm Size															
1,600 acres or less	39.9	76.4	58.8	63.3	59.0	60.1	23.6	41.2	36.7	41.0	0.7	3.2	1.4	1.7	1.4
1,601 acres or over	34.9	70.1	51.5	51.8	52.2	65.1	29.9	48.5	48.2	47.8	0.5	2.3	1.1	1.1	1.1
Cropland Tenure															
Full tenant	39.9	78.7	59.8	63.8	60.4	60.1	21.3	40.2	36.2	39.6	0.7	3.7	1.5	1.8	1.5
1-20 percent owned	39.0	71.9	53.9	56.6	54.9	61.0	28.1	46.1	43.4	45.1	0.6	2.6	1.2	1.3	1.2
21-40 percent owned	35.1	73.3	53.7	53.4	53.8	64.9	26.7	46.3	46.6	46.2	0.5	2.7	1.2	1.1	1.2
41 percent or over owned	28.3	67.2	48.0	51.4	50.6	71.7	32.8	52.0	48.6	49.4	0.4	2.0	0.9	1.1	1.0
Net Farm Income															
Negative	52.9	91.8	74.8	71.2	80.2	47.1	8.2	25.2	28.8	19.8	1.1	11.2	3.0	2.5	4.1
\$0-\$24,999	41.1	74.2	61.6	64.4	64.7	58.9	25.8	38.4	35.6	35.3	0.7	2.9	1.6	1.8	1.8
\$25,000-\$49,999	39.3	74.8	55.9	57.1	57.9	60.7	25.2	44.1	42.9	42.1	0.6	3.0	1.3	1.3	1.4
\$50,000 or more	27.3	58.6	44.2	43.3	45.9	72.7	41.4	55.8	56.7	54.1	0.4	1.4	0.8	0.8	0.8
Debt-to-Asset Ratio															
0-40 percent	10.0	33.5	23.4	24.7	24.6	90.0	66.5	76.6	75.3	75.4	0.1	0.5	0.3	0.3	0.3
41-70 percent	46.9	62.1	55.1	54.7	55.0	53.1	37.9	44.9	45.3	45.0	0.9	1.6	1.2	1.2	1.2
71 percent	75.9	96.1	83.4	85.5	86.6	24.1	3.9	16.6	14.5	13.4	3.1	24.6	5.0	5.9	6.5
Farmer Age															
34 years or younger	47.5	82.8	63.8	64.3	59.7	52.5	17.2	36.2	35.7	40.3	0.9	4.8	1.8	1.8	1.5
35-44 years	40.4	75.5	57.2	56.0	55.0	59.6	24.5	42.8	44.0	45.0	0.7	3.1	1.3	1.3	1.2
45 years or older	28.1	66.0	48.5	51.4	51.4	71.9	34.0	51.5	48.6	48.6	0.4	1.9	0.9	1.1	1.1

TABLE 8. RATE OF RETURN ON ASSETS AND RATE OF RETURN ON EQUITY PROFITABILITY MEASURES, QUARTILE VALUES FOR 2002, MEDIAN VALUES FOR 2000 AND 2001, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS.

Farm Group	2002					2002				
	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median
	Return on Farm Assets(%)					Return on Equity(%)				
All Farms	10.7	0.8	5.7	4.1	7.6	15.5	-3.8	4.4	3.2	7.7
Region										
Red River Valley	15.3	7.1	11.4	6.3	9.5	25.1	7.2	17.8	6.8	12.7
North Central	11.4	1.1	6.6	3.3	8.4	15.6	-3.0	6.7	1.4	8.7
South Central	8.5	-0.1	4.0	3.3	6.6	10.4	-6.6	1.1	2.5	5.8
West	6.8	-1.0	2.3	5.0	7.5	6.7	-6.7	0.0	6.4	7.6
Farm Enterprise										
Crop	13.7	2.7	8.0	4.0	8.3	21.5	0.0	8.9	2.6	8.8
Livestock	5.5	-0.3	2.8	4.5	6.8	4.7	-6.9	0.0	4.1	5.9
Mixed	7.3	-2.7	2.2	4.2	7.0	7.3	-16.8	-1.2	3.8	6.5
Farm Sales										
\$99,999 or less	3.5	-3.5	0.8	0.3	3.4	0.0	-17.6	-5.6	-4.6	0.0
\$100,000-\$249,999	8.9	0.1	4.7	3.6	8.0	11.0	-4.9	2.8	3.8	8.2
\$250,000 or over	12.7	4.5	8.4	5.4	9.9	20.3	1.5	9.7	4.3	11.0
Farm Size										
1,600 acres or less	9.7	-0.5	3.6	2.7	6.6	13.9	-9.7	0.0	2.1	5.4
1,601 acres or over	11.1	1.7	6.4	4.6	8.5	15.7	-1.2	6.0	3.5	9.2
Cropland Tenure										
Full tenant	15.8	-1.3	6.5	3.7	10.1	24.5	-6.5	4.6	5.1	9.2
1-20 percent owned	14.0	1.8	8.3	4.0	10.4	22.4	-0.8	9.7	2.9	13.2
21-40 percent owned	10.6	1.8	6.3	4.7	7.3	15.5	-1.9	4.7	3.1	6.8
41 percent or over owned	7.2	0.3	3.6	4.0	6.5	7.6	-6.0	1.6	2.8	5.7
Net Farm Income										
Negative	-2.0	-7.8	-4.1	-4.7	-3.5	-8.4	-54.0	-21.5	-21.2	-28.3
\$0-\$24,999	3.0	-0.1	1.1	1.6	2.9	-0.8	-7.8	-3.8	-3.4	-2.3
\$25,000-\$49,999	8.6	4.1	5.9	5.5	7.2	10.5	1.3	5.5	4.8	6.5
\$50,000 or more	15.3	7.9	11.1	9.3	12.3	24.8	8.7	15.5	11.3	17.2
Debt-to-Asset Ratio										
0-40 percent	11.7	1.8	6.8	5.1	7.9	13.5	1.3	7.1	4.9	8.3
41-70 percent	11.4	1.4	6.5	4.9	8.5	17.8	-4.4	6.4	2.8	10.3
71 percent or more	9.0	-2.3	3.5	0.7	5.7	8.0	-26.5	0.0	-3.6	0.0
Farmer Age										
34 years or younger	16.7	1.0	9.9	4.3	9.7	32.1	-2.7	15.7	4.8	13.3
35-44 years	11.7	1.1	6.4	4.1	9.0	18.1	-3.8	6.0	4.1	10.5
45 years or older	8.5	0.6	4.9	4.1	6.1	9.9	-4.4	2.8	2.5	5.1

TABLE 9. OPERATING PROFIT MARGIN AND NET FARM INCOME PROFITABILITY MEASURES, QUARTILE VALUES FOR 2002, MEDIAN VALUES FOR 2000 AND 2001, NORTH DAKOTA FARM BUSINESS MANAGEMENT PROGRAM PARTICIPANTS.

Farm Group	2002					2002				
	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median
	Operating Profit Margin(%)					Net Farm Income(\$)				
All Farms	24.6	2.8	14.5	12.1	20.6	83,894	11,664	38,079	27,729	45,085
Region										
Red River Valley	30.7	13.9	23.4	13.6	17.7	155,941	55,734	92,958	41,629	78,759
North Central	26.2	5.4	15.6	9.5	22.6	86,063	14,484	43,967	22,230	46,219
South Central	21.3	-0.5	11.9	11.7	17.6	69,308	3,591	27,498	22,167	37,923
West	21.3	-4.4	8.8	15.9	23.2	45,648	-151	23,019	34,531	40,388
Farm Enterprise										
Crop	26.6	6.3	16.4	10.1	18.9	106,240	22,287	60,591	28,042	50,700
Livestock	23.1	-0.7	12.5	17.1	23.2	35,396	1,736	16,935	24,917	29,446
Mixed	21.5	-9.6	8.2	13.2	23.2	57,002	-4,355	17,645	29,405	42,241
Farm Sales										
\$99,999 or less	15.7	-15.7	4.2	5.3	11.3	17,938	-6,521	8,630	8,299	13,806
\$100,000-\$249,999	25.1	0.7	13.9	11.7	22.6	53,784	5,486	32,808	23,515	42,484
\$250,000 or over	27.0	10.8	18.1	13.4	21.3	132,544	39,753	77,044	56,278	89,862
Farm Size										
1,600 acres or less	23.4	-2.3	11.4	8.5	18.6	49,834	1,657	20,755	18,392	29,055
1,601 acres or over	25.2	6.2	16.2	12.8	22.3	97,830	18,764	51,374	34,498	57,202
Cropland Tenure										
Full tenant	22.8	-4.5	13.0	6.5	17.1	69,933	7,196	33,509	22,230	36,518
1-20 percent owned	24.2	4.9	15.6	9.7	18.6	103,425	23,397	57,002	30,936	66,495
21-40 percent owned	28.0	6.2	14.4	12.2	20.8	99,425	16,935	40,870	30,720	48,086
41 percent or over owned	24.2	1.3	15.7	16.1	23.1	65,760	2,709	27,449	27,729	38,035
Net Farm Income										
Negative	-5.4	-36.6	-15.8	-13.1	-10.7	-4,771	-28,774	-9,590	-14,514	-14,170
\$0-\$24,999	9.8	-0.5	4.4	4.6	9.6	18,701	6,499	13,325	12,959	15,110
\$25,000-\$49,999	21.9	10.6	14.4	15.6	18.2	42,612	30,892	36,687	34,572	37,471
\$50,000 or more	31.0	18.3	24.6	22.5	28.4	135,141	69,153	92,958	81,200	93,316
Debt-to-Asset Ratio										
0-40 percent	28.8	6.7	19.6	17.8	22.7	117,298	25,159	60,244	52,196	62,244
41-70 percent	25.1	4.7	15.7	13.4	22.1	85,611	13,886	42,612	32,069	52,075
71 percent or more	17.5	-6.8	8.8	1.8	12.3	42,864	-3,917	16,044	7,123	20,710
Farmer Age										
34 years or younger	28.1	3.9	19.1	10.9	22.6	90,411	12,969	38,632	22,622	39,634
35-44 years	24.2	4.2	13.9	12.2	20.7	92,247	7,758	38,596	29,405	54,045
45 years or older	23.5	2.5	14.4	12.2	20.0	75,293	12,071	35,396	28,428	39,868

TABLE 10. REPAYMENT CAPACITY MEASURES, QUARTILE VALUES FOR 2002, MEDIAN VALUES FOR 2000 AND 2001, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS.

Farm Group	2002					2002				
	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median
	Term Debt Coverage Ratio					Term Debt and Capital Repayment Margin(\$)				
All Farms	2.5	0.6	1.3	1.0	1.6	44,427	-15,426	10,628	301	17,768
Region										
Red River Valley	3.1	1.6	2.3	1.0	2.0	100,813	31,712	53,135	3,029	44,270
North Central	2.3	0.6	1.2	0.7	1.6	41,407	-17,732	5,393	-10,636	16,771
South Central	2.4	0.6	1.3	1.1	1.3	37,984	-14,926	9,771	1,897	9,768
West	1.4	0.2	0.9	1.4	1.6	17,493	-29,630	-4,645	11,547	22,620
Farm Enterprise										
Crop	3.1	0.8	1.6	0.9	1.6	62,052	-4,981	26,345	-4,888	19,483
Livestock	1.4	0.4	0.9	1.3	1.4	10,008	-24,179	-5,337	6,688	8,981
Mixed	1.9	0.3	0.9	1.2	1.6	19,716	-28,715	-3,849	6,108	18,082
Farm Sales										
\$99,999 or less	1.6	0.2	0.9	1.0	1.2	9,027	-16,721	-3,749	-908	2,912
\$100,000-\$249,999	2.1	0.4	1.2	0.9	1.5	28,941	-21,449	6,693	-3,511	15,156
\$250,000 or over	3.1	1.0	1.7	1.2	1.9	84,147	-2,719	37,984	7,509	43,577
Farm Size										
1,600 acres or less	2.3	0.4	1.2	1.0	1.3	31,137	-14,799	5,393	-908	5,110
1,601 acres or over	2.5	0.7	1.4	1.1	1.7	54,418	-15,718	16,604	2,611	25,435
Cropland Tenure										
Full tenant	3.1	0.5	1.3	1.0	1.6	37,622	-14,326	6,693	1,391	10,574
1-20 percent owned	2.4	0.7	1.5	1.0	1.7	58,218	-13,287	20,041	-2,103	24,260
21-40 percent owned	2.4	0.6	1.4	1.0	1.6	49,801	-19,221	17,907	556	18,737
41 percent or over owned	2.1	0.6	1.2	1.1	1.5	30,200	-15,641	7,673	1,698	16,637
Net Farm Income										
Negative	0.7	-0.3	0.1	0.1	0.3	-8,705	-53,144	-29,042	-32,998	-17,844
\$0-\$24,999	1.2	0.2	0.7	0.7	1.0	5,393	-25,197	-9,929	-10,455	-1,313
\$25,000-\$49,999	1.9	0.7	1.3	1.2	1.4	21,452	-12,724	9,246	5,196	14,069
\$50,000 or more	3.6	1.5	2.4	2.0	2.3	94,990	28,941	53,846	40,021	53,344
Debt-to-Asset Ratio										
0-40 percent	4.7	1.4	2.6	2.2	2.9	87,025	7,850	33,184	24,844	38,650
41-70 percent	2.1	0.7	1.3	1.0	1.5	42,269	-12,070	11,572	560	18,868
71 percent or more	1.3	0.2	0.7	0.6	0.9	10,974	-30,982	-14,192	-16,403	-4,083
Farmer Age										
34 years or younger	2.8	0.8	1.6	1.1	2.0	-11,080	43,579	15,880	1,483	20,558
35-44 years	2.4	0.5	1.3	1.0	1.6	-24,179	49,427	8,473	-1,743	22,620
45 years or older	2.4	0.6	1.3	1.0	1.4	-14,723	41,407	10,605	165	12,533

TABLE 11. ASSET TURNOVER AND OPERATING EXPENSE AND DEPRECIATION EXPENSE EFFICIENCY MEASURES (AS A PERCENTAGE OF GROSS FARM INCOME), QUARTILE VALUES FOR 2002, MEDIAN VALUES FOR 2000 AND 2001, FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS.

Farm Group	2002					2002					2002				
	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median
	Asset Turnover					Operating Expense(%)					Depreciation Expense (%)				
All Farms	.54	.25	.37	.38	.42	59.6	78.0	68.8	70.9	63.3	2.9	9.8	5.6	5.9	5.3
Region															
Red River Valley	.62	.42	.50	.47	.51	55.0	71.4	64.2	72.2	69.2	3.4	7.2	5.0	5.7	4.7
North Central	.58	.26	.38	.37	.39	58.9	78.1	67.6	72.4	61.5	2.3	7.0	4.2	4.8	4.5
South Central	.51	.24	.35	.37	.43	60.6	78.0	70.4	70.9	66.8	4.1	12.4	8.4	6.7	5.8
West	.39	.21	.26	.33	.33	61.4	81.3	71.1	63.8	60.4	1.1	11.7	6.4	7.8	5.8
Farm Enterprise															
Crop	.65	.33	.47	.45	.49	58.6	75.3	67.2	72.7	65.1	3.3	8.6	5.5	5.7	5.4
Livestock	.27	.17	.22	.23	.26	59.9	81.0	70.4	60.3	59.8	-3.5	12.2	5.0	6.7	5.2
Mixed	.38	.22	.29	.31	.33	61.7	82.7	73.2	67.6	60.9	1.8	11.9	6.5	6.5	5.0
Farm Sales															
\$99,999 or less	.32	.13	.21	.24	.26	57.7	86.4	67.5	65.9	59.6	-0.1	15.3	5.3	6.2	6.3
\$100,000-\$249,999	.48	.25	.35	.35	.39	59.9	79.2	69.4	69.3	61.0	2.4	9.9	5.5	6.0	4.9
\$250,000 or over	.62	.32	.46	.44	.50	59.7	75.9	68.6	72.1	67.5	3.3	8.6	5.7	5.7	5.2
Farm Size															
1,600 acres or less	.50	.22	.34	.35	.39	57.7	78.9	67.5	70.3	62.8	2.4	10.0	5.7	5.7	5.5
1,601 acres or over	.55	.26	.39	.39	.43	59.9	77.0	68.8	70.9	63.7	3.0	9.2	5.5	6.1	5.1
Cropland Tenure															
Full tenant	.84	.36	.49	.57	.56	59.1	79.8	69.0	73.9	66.3	2.5	9.5	5.6	6.0	4.5
1-20 percent owned	.67	.38	.49	.49	.54	61.0	78.2	70.4	75.2	67.1	3.1	8.2	5.0	5.9	4.8
21-40 percent owned	.50	.27	.38	.36	.41	60.3	76.7	69.7	71.5	63.6	3.0	8.9	5.3	5.0	5.6
41 percent or over owned	.31	.19	.24	.26	.28	56.2	76.2	66.4	65.1	59.5	1.8	11.7	6.2	6.2	5.7
Net Farm Income															
Negative	.37	.13	.25	.31	.25	78.3	102.1	86.5	88.2	85.9	3.4	15.9	8.9	9.4	8.3
\$0-\$24,999	.40	.20	.26	.37	.32	64.7	79.9	73.1	75.2	68.7	2.3	11.2	6.3	5.7	5.9
\$25,000-\$49,999	.56	.26	.38	.37	.43	60.9	75.0	69.3	66.8	63.0	1.6	8.6	4.2	5.9	5.4
\$50,000 or more	.62	.34	.48	.43	.48	55.1	67.9	61.9	63.6	59.6	3.2	7.3	5.2	4.9	4.2
Debt-to-Asset Ratio															
0-40 percent	.44	.25	.33	.32	.37	55.1	73.0	63.1	65.7	59.8	4.0	10.2	6.7	6.7	6.2
41-70 percent	.55	.25	.40	.38	.41	60.0	75.1	67.9	68.9	62.4	2.1	8.9	4.6	5.8	5.0
71 percent or more	.70	.24	.42	.45	.46	66.9	85.4	75.8	78.6	71.0	2.5	9.2	5.2	5.7	4.1
Farmer Age															
34 years or younger	.77	.30	.50	.46	.48	55.6	75.7	65.5	72.3	63.3	0.5	6.5	3.3	4.9	4.2
35-44 years	.61	.26	.39	.40	.48	59.7	78.9	70.3	71.1	64.6	2.5	9.1	5.3	6.4	5.0
45 years or older	.47	.23	.32	.33	.35	60.3	76.7	68.6	69.1	62.4	3.4	10.3	6.3	6.0	5.9

TABLE 12. INTEREST EXPENSE AND FARM INCOME EFFICIENCY MEASURES (AS A PERCENTAGE OF GROSS FARM INCOME), QUARTILE VALUES FOR 2002, MEDIAN VALUES FOR 2000 AND 2001, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS.

Farm Group	2002					2002				
	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median	Upper Quartile	Lower Quartile	Median	2001 Median	2000 Median
	Interest Expense(%)					Net Farm Income (%)				
All Farms	3.9	10.4	6.6	7.6	7.8	28.2	7.0	17.3	14.0	21.7
Region										
Red River Valley	2.9	6.5	4.2	6.1	5.7	34.2	15.4	26.0	14.1	19.9
North Central	4.2	11.0	7.0	8.4	8.0	30.0	9.2	21.1	13.5	24.8
South Central	3.7	10.3	6.6	7.6	7.4	23.5	3.7	13.9	12.8	17.8
West	4.6	13.7	8.4	8.2	9.7	21.6	-0.6	12.7	17.7	22.3
Farm Enterprise										
Crop	3.4	8.2	5.4	7.1	6.5	30.1	10.1	20.8	12.5	20.8
Livestock	6.0	15.8	11.0	8.9	11.2	21.6	1.8	13.1	18.5	23.0
Mixed	5.4	13.8	9.2	9.0	8.8	23.1	-3.0	11.7	16.4	24.4
Farm Sales										
\$99,999 or less	5.7	23.3	12.2	11.1	12.0	22.2	-10.2	12.9	14.4	18.4
\$100,000-\$249,999	4.1	11.3	7.0	8.4	8.5	28.8	4.2	17.0	14.9	24.5
\$250,000 or over	3.5	8.0	5.4	6.5	6.0	28.2	10.5	18.9	13.8	20.1
Farm Size										
1,600 acres or less	3.8	12.4	7.4	8.3	8.2	28.8	1.8	17.2	14.0	22.1
1,601 acres or over	3.9	9.5	6.3	7.4	7.3	28.1	8.5	17.3	13.9	21.5
Cropland Tenure										
Full tenant	3.0	7.9	4.6	6.6	5.3	28.1	4.8	19.2	14.4	20.4
1-20 percent owned	3.8	8.4	5.5	6.7	6.2	28.8	7.8	17.3	11.4	20.7
21-40 percent owned	4.6	9.9	7.1	8.3	8.2	28.8	8.5	16.5	12.7	21.3
41 percent or over owned	4.8	14.8	9.0	10.3	10.6	26.8	3.4	16.9	16.5	24.6
Net Farm Income										
Negative	6.8	22.3	12.3	12.0	15.9	-3.0	-24.9	-8.2	-10.2	-7.5
\$0-\$24,999	5.7	13.6	8.6	8.2	11.6	16.0	4.8	8.5	8.5	10.2
\$25,000-\$49,999	3.9	10.4	7.0	7.7	7.3	24.9	12.8	17.7	18.3	19.6
\$50,000 or more	2.6	7.0	4.7	5.4	5.9	34.9	19.9	27.6	25.0	30.3
Debt-to-Asset Ratio										
0-40 percent	1.5	5.3	3.4	3.9	4.0	35.2	15.1	26.3	22.7	29.2
41-70 percent	5.0	11.3	7.7	8.8	8.5	27.8	9.2	18.4	14.9	21.8
71 percent or more	6.8	14.5	9.5	9.8	11.3	17.0	-2.3	8.7	3.3	13.0
Farmer Age										
34 years or younger	3.7	9.2	5.5	6.8	6.9	35.0	10.1	25.4	14.8	24.5
35-44 years	4.2	10.7	7.0	7.7	7.2	27.6	4.9	16.1	13.8	21.7
45 years or older	3.8	10.8	6.7	8.1	8.5	26.3	7.3	16.9	13.8	20.3

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