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Financial Characteristics of North Dakota Farms

1993-1995

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Abstract

The performance of over 500 North Dakota farms, 1993-1995, 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.

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

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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:

- ① **Past performance.** The progress of a business can be monitored by construction of financial measures on a periodic basis and comparing present to past performance.
- ② **Industry benchmarks.** The average or median of a financial measure from several similar businesses provides a good point of reference. Currently, there is not a nationwide database of farm records. However, there are statewide farm record programs in some states, such as 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 1993-1995. Similar studies for 1991 and 1992 are referenced on page 25 of this report. The data are from financial summaries of farms participating in the North Dakota Farm Business

Management Education program. 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

More than 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 1993 through 1995, the financial summaries of over 500 farms each year were considered usable for this study. Table 1 shows the distribution of farms by characteristic for 1995.

Most farms were represented in all three years (1993-1995) of this study. There normally is a small turnover of participants in farm management education programs. However, in 1995 there was an increase of 60 farms, to 596, from 536 in 1994.

The farms in this study are larger and the age of the farm operators younger than the state average. In 1995, only 34% of the 32,000 farms in North Dakota had gross receipts greater than \$100,000, whereas 74% of the 596 farms in this study exceed that sales volume (median gross sales was \$166,552). The average age of farm operators in this study is 42 compared to 50 for the state average. The farms in the study are more representative of operations that provide the primary or only source of net family income. The state average includes all farms with gross sales greater than \$1,000.

DEFINITION OF FINANCIAL MEASURES

Sixteen measures of financial performance were calculated for each farm in this study. The recommendations of the farm financial standards task force for calculating the ratios were followed as closely as possible.

The farm financial standards task force 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. Depreciation was straight line over estimated life of machine.
- 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 \$20,000 charge was used per full time operator.

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 \$20,000 charge was used per full time operator. 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 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. A \$20,000 charge was used per full time operator. 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 revenue 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 revenue is the return to the operator for unpaid labor and management and equity capital used in the farm business. Net farm revenue 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 nonfarm 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 nonfarm 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 in order was calculated for each farm and sorted from strongest to weakest. 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 cropland. 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?

Caution must be used when analyzing the tables because of the small number of farms and because one characteristic does not completely categorize a farm. A small number of farms increases the possibility that results may not be representative of a farm category. In this study, for 1995, there are only 106 farms from the west region, 55 mixed enterprise farms, and 98 farms in the \$20,000 - \$39,999 net farm income category. Also for 1995, certain tables had fewer farms than indicated in Table 1. Seventy-one farms were omitted from the current liabilities and liquidity analysis because term debt was not separated into current and non-current portions; 77 farms were omitted from the repayment capacity analysis because of insufficient detail for scheduled term debt payments. The eight farms with no cropland were omitted from cropland tenure categories.

There are some strong correlations between two or more classifications, so it is difficult to associate a financial measure with an individual farm characteristic. The Red River Valley has the highest proportion, relative to other regions, of farms in the full tenant, crop enterprise, and less than 1,200 acres

categories. Is a median return on assets of 8.5% for farms in the Red River Valley associated more with geographic location, tenancy, farm type or farm size?

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 70%, which is worse than the lower quartile value of 66% (shown on table 5) for farm enterprise category. However, other factors such as profitability, land tenure, total assets, and age of operator should also be considered.

Last, 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.

The tables show a general deterioration of financial performance in 1995 that was caused by extremely poor profitability of the cow-calf enterprise throughout the state and crop production in certain locations, primarily in the south central region. Overall, two out of every ten farms had negative net farm income in 1995 compared to one in ten in the previous year.

Use caution in drawing conclusions about the effect age and land tenure has on financial performance. Older farmers and farms with the highest proportion of crop land owned were more likely to have livestock, which performed very poorly in 1995, as the major farm enterprise than were the other age and land tenure farm categories.

The better performance of the Red River Valley region in 1995 compared to 1994 and 1993 is mainly due to a change in region definition from "east" to "Red River Valley." The analysis in 1993 and 1994 for "east" North Dakota included some farms that are not in the smaller but more homogeneous "Red River Valley" area.

FARM CLASSIFICATION AND HIGHLIGHTS

ALL FARMS

Highlights

- The median measures for current assets and liabilities have increased each year from 1993 to 1995, but current liabilities have increased by a larger amount.
- The median current ratio and working capital decreased each year from 1993 to 1995. The median current ratio was 1.3 in 1995, one-fourth of all farms had a current ratio higher than 2.3, and one-fourth of all farms had a current ratio less than 0.9.
- The median total liabilities increased by \$24,756 in 1995, but the median total assets decreased slightly.
- The median debt-to-asset ratio was 51.5% in 1995, a 5.1% increase from 1993. Upper and lower quartiles were 31.9% and 69.3%, respectively.
- All median measures of profitability, repayment capacity, and financial efficiency deteriorated in 1995. Major reasons were low livestock profitability statewide and low grain yield and quality in certain areas of the state.
- The median net farm income was \$23,463 in 1995 compared to \$32,523 in 1994 and \$42,484 in 1993. Upper and lower quartiles were \$61,292 and \$3,172.
- The average net farm income of \$33,789 was over \$10,000 greater than the median, indicating large net farm income farms skewed the average.
- Median net farm income as a percent of gross revenue was 16.2%, compared to 21.7% in 1994 and 26.6% in 1993.

REGION

Farms were classified in one of four geographic region 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 Kindred and Grafton programs are not in the Red River Valley and are classified as south-central and north-central, respectively. The southern areas of both the "Red River Valley" and the "west" region are better represented than the northern areas.

Locations of North Dakota Farm Business Management programs that participated in the 1995 summaries were:

Red River Valley: Grafton, Kindred and Wahpeton
North Central: Bottineau, Devils Lake, Minot, and Rugby
South Central: Bismarck, Carrington, Enderlin, Jamestown, Napoleon and Oakes
West: Bismarck, Carson, Dickinson, Glen Ullin, and Stanley

Highlights:

- In 1995 the average size of farm ranged from Red River Valley (about 1,450 acres, nearly all cropland) to the west region (2,500 acres, about 50% cropland and 50% pasture). Farms in the north central and south central regions averaged about 1,850 acres (1,450 acres cropland) and 1,650 acres (1,250 acres cropland), respectively.
- The Red River Valley farms had much larger gross sales, assets and liabilities than the other regions.
- In 1995, almost without exception, the 16 measures of financial performance deteriorated in all regions except the Red River Valley.
- The south central region suffered from both poor livestock and crop returns and had the poorest performance by nearly every measure in 1995. Median net farm income was \$11,844, debt-to-asset 56%, return on equity -1.4%, and term debt repayment margin -\$7,003.
- The north central region had a very poor year in 1995 relative to 1994. Median net farm income dropped \$15,000 and debt-to-asset increased 5%. But in 1995 this region had substantially fewer liabilities, a median of \$172,274, and the best median current ratio, 1.5, debt-to-asset, 45.4%, operating profit margin, 22.8%, and net farm income as percent of gross revenue, 19.4%, compared to other regions of North Dakota.
- In the west financial performance overall was down only slightly from 1994 -- poor profitability of livestock farms was largely offset by the performance of crop farms.
- In the Red River Valley region the median return on assets of 8.5%, return on equity of 8.6%, and \$52,182 net farm income were nearly double that of the next highest region. Repayment capacity also was very strong relative to other regions in 1995. However, much of the increased performance in the "Red River Valley" relative to 1994 and 1993 is because a narrower geographically defined region was used in 1995.

FARM ENTERPRISE

Farms were classified as "crop" if 60% or more of total sales were from crops, and "livestock" if livestock sales accounted for 60% or more of total sales. The remaining farms were classified as "mixed."

Highlights:

- Two-thirds of the farms statewide, and over 90% of Red River Valley farms, were in the crop enterprise category. Less than 10% of all farms were in the mixed enterprise category.
- Livestock and mixed enterprise farms represented 63%, 38% and 25% of the farms in the west, south central, and north central regions, respectively.
- The median current ratio was 1.1 for livestock farms and 1.3 for crop and mixed enterprise farms.
- Median total liabilities were similar between farm types, but median total assets of crop farms were 22% higher than for livestock or mixed farms.
- Livestock and mixed farms had serious deterioration of solvency in 1995. Median debt-to-asset was about 57% compared to 49% for crop farms. Debt-to-asset exceeded 75% for about one-fourth of the livestock and mixed enterprise farms.
- Median net farm income for all types of farms were similar in 1993 (between \$40,000 and \$44,000) but by 1995 it had declined 80% to \$8,094 for livestock farms, compared to a 12% decrease to \$37,971 for crop farms.
- Median returns on assets and equity were 0.5% and -3.4% for livestock farms, respectively, compared to 7.0% and 6.6% for crop farms.
- The median asset turnover ratio of the crop farm category is consistently higher than for livestock or mixed farms.
- The median term debt replacement and capital replacement margin for livestock farms was -\$8,115 for livestock farms compared to \$8,892 for crop farms.
- The median net farm income as a percent of gross revenue, was only 6.1% for livestock farms compared to 19.4% for crop farms. Two years earlier both were over 25%.

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 \$166,552 and the average was \$211,605. About 47% of the farms had between \$100,000 and \$250,000 in farm sales.
- The percentage of farms in the low and high farm sales categories were similar, about 26%, which was an increase from 1994.
- Six out of ten farms in the Red River Valley had gross farm sales in excess of \$250,000 compared to two out of ten farms for the rest of the state.
- Livestock farms had lower gross sales than crop farms. Over 45% of all livestock farms were had gross sales less than \$100,000 compared to only 17% of crop farms.
- Farms with over \$250,000 sales had median total assets 3.3 times higher than farms with less than \$100,000 sales.
- There was a direct relationship between gross sales and performance for all but two of the 16 financial measures, in 1995.
- Profitability measures of farms with over \$250,000 sales have been stable from 1993-1995 but decreased significantly for farms with \$150,000-\$250,000 sales and precipitously for farms with less than \$100,000 sales.
- Median net farm income was \$7,226 for farms with less than \$100,000 sales, \$27,924 for farms with \$150,000-\$250,000 sales and \$71,688 for farms with greater than \$250,000 sales.

FARM SIZE

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

Farm size categories were: 1,200 acres or less
 1,201 acres or more

Highlights

- Farm size increased from an average 1,450 acres in Red River Valley to 2,500 acres in the west region. The pasture acreage was essentially 0 in the Red River Valley and 1,250 in the west.
- Only about 31% of the farms had less than 1,200 acres. About 73% of the farms in the crop enterprise category had acreage greater than 1,200, compared to 60% of the livestock farms.
- Seventy-five percent of farmers between the age of 35 and 45 had farms larger than 1,200 acres, compared to 69% for older farmers (greater than 45 years) and 58% for younger farmers (less than 35 years).
- Median current ratio was slightly better, 1.3 compared to 1.4 for the larger farms; working capital increased with farm size.
- From 1993 to 1995 there has been a direct relationship between farm size and farm performance as measured by solvency and profitability.
- Median debt-to-asset and net farm income for farms with greater than 1,200 acres was 50.4% and \$34,253, respectively, compared to 55.9 and \$13,007 for smaller farms.
- Debt-to-asset and net farm income for both large and small farm size categories has deteriorated significantly in the past two years.

CROPLAND TENURE

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

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

Highlights:

- Ownership of crop land was greatest in the west and least in the east. Twenty-seven percent of farms in the Red River Valley owned no cropland.
- Sixty-one percent of farm operators in the west owned more than 40% of crop land farmed compared to about 36% in the south central and north central regions and 18% in the Red River Valley.
- Operators of livestock and mixed enterprise farms own a greater portion of their crop land than operators of crop farms.
- Fifty four percent of farmers older than 45 years owned more than 40% of their crop land compared to 20% for farmers less than 35 years old.
- Farms that control land through ownership instead of through renting tend to have better current ratios.
- From 1993-1995 there has not been a clear relationship between solvency and land tenure, although in 1995 the farms that owned from 1 to 20% of their crop land had a median debt-to-asset of 59%, which was 9% higher than the median for other land tenure categories.
- Farms that own a small portion of their land (1 to 40%) have higher net farm income and rate of returns on capital than farms with no land ownership or high (greater than 40%) land ownership.
- Farms that had between 20 and 40% of land ownership had better repayment capacity in 1995 than other farms.
- Farms with a greater proportion of land rented have lower land assets and greater asset turnover ratios but higher operating expense ratios due to land rent outlay and lower interest expense ratios because of lower land debt.

NET FARM INCOME

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

Negative
\$0 - \$19,999
\$20,000 - \$39,999
\$40,000 or more

Highlights

- Thirty seven percent of farms had net farm income greater than \$40,000. Twenty-two percent of farms had negative net farm income in 1995 compared to 13% in 1994.
- Thirty eight percent of operations in the livestock farm category and 31% of farms in the south central region had negative net farm income in 1995.
- Median net farm income was \$23,463 in 1995, down about \$9,000 from 1994 and down \$19,000 from 1993.
- High median total liabilities is a consistent feature, from 1993 to 1995, of farms with negative net farm income.
- One out of every four crop farms had net farm income greater than \$75,853.
- Solvency, liquidity, repayment capacity, and financial efficiency were strongly correlated with net farm income.
- Median ROA and ROE for farmers with net farm income greater than \$40,000 was 12.4% and 16.1%, respectively. These high numbers can partially be explained by conservative valuation of assets and unpaid operator labor and management.

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:

- Thirty-four percent of the farms had a debt-to-asset ratio less than 40% debt, 42% of farms were in the 40 to 70% range, and 24% of farms had greater than 70% debt.
- Farms in the lowest debt-to-asset category had the highest median total assets and the lowest median liabilities.
- Farms in the 0 to 40% debt/asset group had very strong financial performance with median current ratio of 3.2, median operating profit of 19.4%, median net farm income of \$45,692 and median operating expense of 62.3%.
- There is a strong inverse relationship between level of debt and liquidity, repayment capacity, net farm income, and financial efficiency. As debt increases, these measures deteriorate.
- Rate of returns on assets and equity from 1993 - 1995 has been similar for the farms in the 0-40% and 41-70% debt groups, but much less for farms with greater than 70% debt.

FARMER AGE

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

34 years or more

35 - 44 years

45 years or older

Highlights:

- The greatest portion of farmers were between 35 and 45 years old; 22% of the farmers were less than 35 years and 35% were older than 45 years.
- Farmers in the west were older than in other regions of the state; only 11% were less than 35 years and 45% were older than 45 years.
- Total assets and total liabilities were similar for the older and middle age groups and much higher than for farmers less than 35 years old.
- Median current ratio was similar between age of operator categories, about 1.3.
- Young farmers have a higher percent debt-to-asset. Farmers less than 35 years old had a median debt-to-asset of 56.5% compared to 49.9% for farmers older than 45.
- The group of farm operators between 35 and 45 years old had the best median rate of return on assets, 6.2%, and rate of return on equity, 6.0%, and the oldest group of farmers had the lowest.
- The middle age group (35 to 44 years) has had the highest median net farm income each year, 1993-1995, and the oldest group of farmers had the lowest.
- The young age group of farmers had better median repayment capacity, asset turnover rate, ROA, ROE, interest expense ratio and net farm income ratio than the oldest age group. This indicates that although the older farmers in the study have more assets and less debt-to-assets, young farmers are employing assets more efficiently to generate net farm income.

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Table 1. Farm Classifications, North Dakota Farm Business Management Education Program, 1995.

| Farm Group/Category | Number of Farms (596) | Percentage |
|--------------------------|-----------------------|------------|
| Region | | |
| Red River Valley | 122 | 20.5 |
| North Central | 154 | 25.8 |
| South Central | 214 | 35.9 |
| West | 106 | 17.8 |
| Farm Enterprise | | |
| Crop | 399 | 66.9 |
| Livestock | 142 | 23.8 |
| Mixed | 55 | 9.2 |
| Farm Sales | | |
| \$99,999 or less | 155 | 26.0 |
| \$100,000 - \$249,999 | 282 | 47.3 |
| \$250,000 or over | 159 | 26.7 |
| Farm Size | | |
| 1,200 acres or less | 183 | 30.7 |
| 1,200 acres or over | 413 | 69.3 |
| Cropland Tenure | | |
| Full tenant | 122 | 20.7 |
| 1-20 percent owned | 131 | 22.3 |
| 21-40 percent owned | 117 | 19.9 |
| 41 percent or over owned | 218 | 37.1 |
| Farm Income | | |
| Negative | 132 | 22.1 |
| \$0-\$19,999 | 144 | 24.2 |
| \$20,000-\$39,999 | 98 | 16.4 |
| \$40,000 or more | 222 | 37.2 |
| Debt-to-asset Ratio | | |
| 0-40 percent | 200 | 33.6 |
| 41-70 percent | 253 | 42.4 |
| 71 percent or more | 143 | 24.0 |
| Farmer Age | | |
| 34 years or younger | 132 | 22.1 |
| 35-44 years | 256 | 43.0 |
| 45 years or older | 208 | 34.9 |

TABLE 2. CURRENT ASSETS AND CURRENT LIABILITIES, QUARTILE VALUES FOR 1995, MEDIAN VALUES FOR 1993 AND 1994, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

| Farm Group | 1995 | | | | | 1993 | | | | |
|--------------------------|----------------|----------------|---------|-------------|-------------|----------------|----------------|---------|-------------|-------------|
| | Upper Quartile | Lower Quartile | Median | 1994 Median | 1993 Median | Upper Quartile | Lower Quartile | Median | 1994 Median | 1993 Median |
| All Farms | 177,652 | 53,302 | 101,000 | 100,626 | 93,854 | 29,841 | 124,869 | 65,865 | 64,064 | 49,409 |
| Region | | | | | | | | | | |
| Red River Valley* | 302,834 | 100,554 | 171,980 | 131,673 | 124,660 | 62,079 | 204,695 | 124,869 | 103,798 | 77,049 |
| North Central | 138,293 | 49,521 | 83,445 | 89,261 | 71,192 | 23,218 | 84,042 | 46,948 | 33,296 | 27,941 |
| South Central | 148,996 | 40,301 | 85,731 | 93,687 | 94,001 | 29,146 | 119,956 | 65,865 | 66,385 | 48,727 |
| West | 168,711 | 54,529 | 95,255 | 92,986 | 100,519 | 27,302 | 109,162 | 54,073 | 47,105 | 38,645 |
| Farm Enterprise | | | | | | | | | | |
| Crop | 201,989 | 65,431 | 116,570 | 114,905 | 99,673 | 35,226 | 139,951 | 74,159 | 68,357 | 50,409 |
| Livestock | 117,991 | 34,006 | 58,272 | 79,470 | 78,867 | 23,218 | 101,814 | 46,593 | 50,010 | 43,637 |
| Mixed | 125,147 | 50,880 | 87,119 | 85,127 | 80,473 | 33,589 | 111,519 | 69,827 | 65,990 | 50,118 |
| Farm Sales | | | | | | | | | | |
| \$99,999 or less | 59,220 | 22,141 | 40,274 | 51,385 | 39,672 | 14,986 | 50,968 | 27,302 | 23,860 | 17,220 |
| \$100,000-\$249,999 | 145,013 | 66,681 | 102,249 | 100,457 | 95,806 | 40,490 | 109,916 | 69,197 | 64,064 | 49,409 |
| \$250,000 or over | 366,256 | 159,574 | 253,972 | 244,439 | 194,018 | 81,545 | 240,962 | 165,810 | 150,602 | 118,789 |
| Farm Size | | | | | | | | | | |
| 1,200 acres or less | 89,151 | 28,717 | 53,058 | 67,605 | 56,924 | 18,614 | 75,286 | 38,914 | 37,611 | 33,147 |
| 1,201 acres or over | 218,189 | 74,602 | 125,147 | 129,027 | 118,384 | 41,372 | 146,082 | 83,637 | 75,295 | 57,177 |
| Cropland Tenure | | | | | | | | | | |
| Full tenant | 172,298 | 42,103 | 83,831 | 89,236 | 78,043 | 19,305 | 119,956 | 57,154 | 62,493 | 50,409 |
| 1-20 percent owned | 184,372 | 65,431 | 110,079 | 123,680 | 99,673 | 44,189 | 156,842 | 95,003 | 90,801 | 65,490 |
| 21-40 percent owned | 200,689 | 88,535 | 121,288 | 132,161 | 106,573 | 48,949 | 139,182 | 87,588 | 69,838 | 58,691 |
| 41 percent or over owned | 165,763 | 44,075 | 81,931 | 88,405 | 90,915 | 27,008 | 109,471 | 52,421 | 45,700 | 36,444 |
| Net Farm Income | | | | | | | | | | |
| Negative | 93,134 | 29,726 | 52,916 | 74,900 | 72,024 | 33,662 | 114,213 | 62,724 | 97,777 | 90,775 |
| \$0-\$19,999 | 110,029 | 34,629 | 66,491 | 63,359 | 39,672 | 22,125 | 91,313 | 53,153 | 50,855 | 34,564 |
| \$20,000-\$39,999 | 126,915 | 64,253 | 97,885 | 85,063 | 62,244 | 27,008 | 106,879 | 54,073 | 41,630 | 36,181 |
| \$40,000 or more | 313,304 | 118,425 | 187,747 | 152,582 | 130,158 | 42,000 | 168,232 | 97,210 | 73,414 | 52,305 |
| Debt-to-Asset Ratio | | | | | | | | | | |
| 0-40 percent | 254,333 | 73,859 | 125,147 | 114,598 | 116,737 | 15,614 | 73,254 | 33,588 | 28,281 | 31,166 |
| 41-70 percent | 177,921 | 53,592 | 108,656 | 99,755 | 92,264 | 46,277 | 159,491 | 91,794 | 76,232 | 61,395 |
| 71 percent or more | 111,079 | 34,629 | 59,376 | 73,262 | 60,758 | 44,337 | 141,662 | 77,037 | 90,801 | 69,523 |
| Farmer Age | | | | | | | | | | |
| 34 years or younger | 129,517 | 38,791 | 73,955 | 80,515 | 74,684 | 19,804 | 106,973 | 46,834 | 49,837 | 36,444 |
| 35-44 years | 202,707 | 64,852 | 118,549 | 117,883 | 103,598 | 37,025 | 147,100 | 70,121 | 70,063 | 50,214 |
| 45 years or older | 165,763 | 52,849 | 92,968 | 93,763 | 93,854 | 34,620 | 116,939 | 71,035 | 56,520 | 52,907 |

*Data for 1993 and 1994 were for "East" North Dakota which included some farms that are not in the Red River Valley region.

TABLE 3. LIQUIDITY MEASURES, QUARTILE VALUES FOR 1995, MEDIAN VALUES FOR 1993 AND 1994, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS.

| Farm Group | 1995 | | | 1994 Median | 1993 Median | 1995 | | | 1994 Median | 1993 Median | |
|--------------------------|-------------------|-------------------|--------|----------------|----------------|---------------------|-------------------|---------|----------------|----------------|--------|
| | Upper Quartile | Lower Quartile | Median | | | Upper Quartile | Lower Quartile | Median | | | |
| All Farms Region | 2.3 | 0.9 | 1.3 | 1.4 | 1.5 | Working Capital(\$) | | | | | 33,387 |
| Red River Valley* | 2.0 | 0.9 | 1.2 | 1.2 | 1.2 | 71,207 | -10,086 | 18,984 | 27,598 | 33,387 | 33,387 |
| North Central | 2.8 | 0.9 | 1.5 | 2.0 | 1.8 | 99,771 | -7,279 | 32,034 | 24,458 | 23,665 | 23,665 |
| South Central | 1.8 | 0.7 | 1.1 | 1.2 | 1.5 | 77,017 | -7,941 | 22,151 | 43,017 | 38,495 | 38,495 |
| West | 2.8 | 1.0 | 1.4 | 1.7 | 1.9 | 42,992 | -18,337 | 6,422 | 20,597 | 32,794 | 32,794 |
| Farm Enterprise | | | | | | 80,055 | 1,301 | 35,951 | 39,677 | 50,807 | 50,807 |
| Crop | 2.5 | 0.8 | 1.3 | 1.4 | 1.6 | 88,829 | -10,821 | 32,034 | 33,149 | 34,369 | 34,369 |
| Livestock | 1.9 | 0.8 | 1.1 | 1.4 | 1.5 | 39,871 | -10,185 | 7,429 | 19,276 | 36,317 | 36,317 |
| Mixed | 1.8 | 0.9 | 1.3 | 1.3 | 1.4 | 52,868 | -2,884 | 17,656 | 20,048 | 25,717 | 25,717 |
| Farm Sales | | | | | | | | | | | |
| \$99,999 or less | 2.3 | 0.7 | 1.3 | 1.5 | 1.4 | 23,827 | -8,028 | 7,085 | 19,505 | 15,571 | 15,571 |
| \$100,000-\$249,999 | 2.1 | 0.8 | 1.2 | 1.5 | 1.7 | 64,168 | -11,040 | 20,068 | 26,928 | 39,857 | 39,857 |
| \$250,000 or over | 2.6 | 0.9 | 1.4 | 1.4 | 1.5 | 175,485 | -9,443 | 67,607 | 73,245 | 66,388 | 66,388 |
| Farm Size | | | | | | | | | | | |
| 1,200 acres or less | 2.2 | 0.7 | 1.2 | 1.4 | 1.4 | 33,766 | -11,318 | 7,085 | 18,186 | 16,695 | 16,695 |
| 1,201 acres or over | 2.4 | 0.9 | 1.3 | 1.5 | 1.7 | 90,632 | -10,086 | 33,822 | 38,879 | 48,779 | 48,779 |
| Cropland Tenure | | | | | | | | | | | |
| Full tenant | 2.6 | 0.9 | 1.3 | 1.3 | 1.3 | 51,854 | -5,012 | 10,112 | 22,868 | 21,535 | 21,535 |
| 1-20 percent owned | 1.7 | 0.8 | 1.2 | 1.2 | 1.3 | 58,860 | -21,995 | 18,280 | 21,262 | 32,713 | 32,713 |
| 21-40 percent owned | 2.0 | 0.8 | 1.4 | 1.6 | 1.7 | 108,254 | -13,423 | 42,534 | 42,918 | 42,115 | 42,115 |
| 41 percent or over owned | 2.6 | 0.9 | 1.4 | 1.7 | 1.9 | 80,055 | -7,941 | 20,068 | 29,997 | 42,430 | 42,430 |
| Net Farm Income | | | | | | | | | | | |
| Negative | 1.1 | 0.6 | 0.8 | 0.8 | 0.9 | 5,412 | -35,245 | -10,771 | -14,126 | -7,473 | -7,473 |
| \$0-\$19,999 | 1.7 | 0.8 | 1.2 | 1.1 | 1.0 | 35,027 | -13,423 | 8,820 | 7,795 | 8,213 | 8,213 |
| \$20,000-\$39,999 | 2.5 | 0.9 | 1.4 | 1.6 | 1.4 | 55,320 | -4,221 | 22,456 | 27,595 | 17,222 | 17,222 |
| \$40,000 or more | 4.2 | 1.2 | 1.7 | 2.0 | 2.2 | 155,901 | 31,904 | 78,755 | 72,849 | 61,634 | 61,634 |
| Debt-to-Asset Ratio | | | | | | | | | | | |
| 0-40 percent | 7.0 | 1.7 | 3.2 | 3.1 | 3.1 | 178,800 | 35,974 | 86,105 | 76,815 | 71,042 | 71,042 |
| 41-70 percent | 1.5 | 0.9 | 1.2 | 1.4 | 1.4 | 49,071 | -8,578 | 16,624 | 22,084 | 27,312 | 27,312 |
| 71 percent or more | 1.0 | 0.6 | 0.8 | 0.9 | 0.9 | 2,666 | -38,403 | -15,043 | -8,511 | -5,294 | -5,294 |
| Farmer Age | | | | | | | | | | | |
| 34 years or younger | 3.0 | 0.9 | 1.3 | 1.4 | 1.4 | 49,071 | -4,221 | 9,506 | 21,262 | 29,873 | 29,873 |
| 35-44 years | 2.1 | 0.9 | 1.3 | 1.5 | 1.7 | 83,445 | -9,264 | 32,832 | 37,301 | 36,317 | 36,317 |
| 45 years or older | 2.1 | 0.8 | 1.2 | 1.4 | 1.4 | 66,389 | -14,545 | 17,451 | 25,611 | 35,372 | 35,372 |

*Data for 1993 and 1994 were for "East" North Dakota which included some farms that are not in the Red River Valley region.

TABLE 4. TOTAL ASSETS AND TOTAL LIABILITIES, QUARTILE VALUES FOR 1995, MEDIAN VALUES FOR 1993 AND 1994, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

| Farm Group | 1995 | | | | 1995 | | | | Total Farm Liabilities(\$) |
|--------------------------|----------------|----------------|---------|-------------|----------------|----------------|---------|-------------|----------------------------|
| | Upper Quartile | Lower Quartile | Median | 1993 Median | Upper Quartile | Lower Quartile | Median | 1994 Median | |
| All Farms | 692,686 | 293,097 | 438,289 | 409,839 | 118,460 | 327,675 | 225,793 | 201,037 | 178,509 |
| Region | | | | | | | | | |
| Red River Valley* | 912,389 | 367,229 | 631,888 | 459,642 | 178,559 | 462,656 | 276,831 | 254,985 | 206,958 |
| North Central | 624,203 | 287,426 | 387,133 | 344,742 | 96,437 | 266,796 | 172,274 | 150,871 | 146,988 |
| South Central | 608,937 | 239,249 | 398,423 | 403,989 | 116,305 | 321,950 | 228,127 | 210,598 | 195,205 |
| West | 703,886 | 306,855 | 445,350 | 422,735 | 106,975 | 337,525 | 215,661 | 200,486 | 189,001 |
| Farm Enterprise | | | | | | | | | |
| Crop | 735,606 | 316,936 | 476,350 | 411,637 | 117,662 | 329,279 | 225,861 | 206,000 | 175,470 |
| Livestock | 533,273 | 263,148 | 388,618 | 414,860 | 124,257 | 308,839 | 224,552 | 200,486 | 197,819 |
| Mixed | 646,468 | 231,741 | 383,432 | 389,195 | 122,552 | 323,764 | 242,295 | 164,014 | 150,503 |
| Farm Sales | | | | | | | | | |
| \$99,999 or less | 333,228 | 142,999 | 244,335 | 217,301 | 57,427 | 223,082 | 122,925 | 108,089 | 86,146 |
| \$100,000-\$249,999 | 600,011 | 322,804 | 436,671 | 413,614 | 128,996 | 298,070 | 224,552 | 208,911 | 178,917 |
| \$250,000 or over | 1,089,774 | 608,937 | 810,458 | 725,920 | 233,024 | 495,006 | 354,220 | 334,666 | 297,519 |
| Farm Size | | | | | | | | | |
| 1,200 acres or less | 432,345 | 163,681 | 291,635 | 286,184 | 76,391 | 248,565 | 163,385 | 151,299 | 130,441 |
| 1,201 acres or over | 789,780 | 355,685 | 528,231 | 489,825 | 135,578 | 359,222 | 254,365 | 226,071 | 205,866 |
| Cropland Tenure | | | | | | | | | |
| Full tenant | 466,908 | 143,411 | 285,465 | 207,892 | 52,100 | 247,328 | 128,130 | 132,692 | 98,028 |
| 1-20 percent owned | 676,694 | 291,921 | 408,936 | 364,802 | 122,086 | 352,261 | 233,540 | 210,105 | 182,093 |
| 21-40 percent owned | 728,917 | 378,879 | 522,952 | 465,993 | 158,290 | 340,211 | 255,021 | 248,565 | 226,161 |
| 41 percent or over owned | 785,574 | 336,773 | 518,368 | 496,044 | 134,535 | 330,138 | 237,886 | 212,186 | 199,234 |
| Net Farm Income | | | | | | | | | |
| Negative | 477,542 | 197,793 | 328,333 | 368,075 | 135,578 | 330,138 | 237,657 | 264,255 | 237,381 |
| \$0-\$19,999 | 518,368 | 174,431 | 333,228 | 279,651 | 77,029 | 298,070 | 170,094 | 165,825 | 143,029 |
| \$20,000-\$39,999 | 583,224 | 298,981 | 379,101 | 319,904 | 125,612 | 298,223 | 209,426 | 170,410 | 154,241 |
| \$40,000 or more | 969,826 | 444,809 | 662,061 | 532,453 | 128,996 | 362,177 | 239,166 | 213,130 | 184,685 |
| Debt-to-Asset Ratio | | | | | | | | | |
| 0-40 percent | 840,812 | 321,607 | 533,273 | 478,960 | 42,000 | 194,969 | 100,375 | 107,176 | 100,104 |
| 41-70 percent | 703,886 | 309,236 | 490,970 | 414,931 | 171,699 | 379,608 | 265,277 | 240,457 | 229,212 |
| 71 percent or more | 447,942 | 201,754 | 326,595 | 301,211 | 203,106 | 373,740 | 272,332 | 274,983 | 239,972 |
| Farmer Age | | | | | | | | | |
| 34 years or younger | 440,154 | 163,196 | 319,704 | 288,422 | 66,117 | 259,519 | 160,642 | 168,891 | 144,435 |
| 35-44 years | 725,894 | 314,666 | 493,364 | 424,325 | 129,140 | 350,739 | 239,209 | 210,598 | 191,462 |
| 45 years or older | 749,317 | 330,912 | 490,188 | 517,844 | 128,516 | 337,170 | 236,824 | 218,616 | 201,048 |

*Data for 1993 and 1994 were for "East" North Dakota which included some farms that are not in the Red River Valley region.
TABLE 5. SOLVENCY MEASURES, QUARTILE VALUES FOR 1995, MEDIAN VALUES FOR 1993 AND 1994, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

| Farm Group | 1995 | | | 1995 | | | 1995 | | | 1993 | | |
|--------------------------|----------------|----------------|--------|----------------|----------------|--------|----------------|----------------|--------|----------------|----------------|--------|
| | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median |
| All Farms | 31.9 | 69.3 | 51.5 | 49.8 | 46.4 | | | | | | | |
| Region | | | | | | | | | | | | |
| Red River Valley* | 37.5 | 68.3 | 52.9 | 53.4 | 49.7 | | | | | | | |
| North Central | 28.8 | 61.8 | 45.4 | 41.3 | 43.7 | | | | | | | |
| South Central | 34.4 | 74.3 | 56.0 | 51.4 | 46.9 | | | | | | | |
| West | 33.5 | 67.8 | 49.8 | 48.7 | 43.6 | | | | | | | |
| Farm Enterprise | | | | | | | | | | | | |
| Crop | 29.1 | 66.5 | 49.2 | 47.9 | 44.5 | | | | | | | |
| Livestock | 37.8 | 74.4 | 56.5 | 52.8 | 50.9 | | | | | | | |
| Mixed | 44.5 | 75.8 | 57.4 | 50.2 | 47.7 | | | | | | | |
| Farm Sales | | | | | | | | | | | | |
| \$99,999 or less | 32.8 | 74.4 | 55.9 | 52.3 | 47.4 | | | | | | | |
| \$100,000-\$249,999 | 33.4 | 70.7 | 51.3 | 48.9 | 45.3 | | | | | | | |
| \$250,000 or over | 29.6 | 65.4 | 49.1 | 50.1 | 46.0 | | | | | | | |
| Farm Size | | | | | | | | | | | | |
| 1,200 acres or less | 35.6 | 72.6 | 55.4 | 53.8 | 47.5 | | | | | | | |
| 1,201 acres or over | 31.1 | 67.5 | 50.4 | 47.5 | 45.3 | | | | | | | |
| Cropland Tenure | | | | | | | | | | | | |
| Full tenant | 24.6 | 68.3 | 49.0 | 53.8 | 48.8 | | | | | | | |
| 1-20 percent owned | 36.4 | 74.4 | 59.0 | 52.4 | 47.4 | | | | | | | |
| 21-40 percent owned | 34.5 | 65.4 | 49.9 | 50.7 | 50.3 | | | | | | | |
| 41 percent or over owned | 29.8 | 67.2 | 50.4 | 44.1 | 42.8 | | | | | | | |
| Net Farm Income | | | | | | | | | | | | |
| Negative | 53.4 | 89.0 | 70.7 | 63.3 | 62.1 | | | | | | | |
| \$0-\$19,999 | 29.7 | 72.0 | 54.4 | 55.7 | 52.3 | | | | | | | |
| \$20,000-\$39,999 | 38.9 | 68.3 | 53.9 | 47.4 | 51.3 | | | | | | | |
| \$40,000 or more | 23.3 | 55.6 | 40.6 | 42.9 | 39.6 | | | | | | | |
| Debt-to-Asset Ratio | | | | | | | | | | | | |
| 0-40 percent | -- | -- | -- | -- | -- | | | | | | | |
| 41-70 percent | -- | -- | -- | -- | -- | | | | | | | |
| 71 percent | -- | -- | -- | -- | -- | | | | | | | |
| Farmer Age | | | | | | | | | | | | |
| 34 years or younger | 31.7 | 72.8 | 56.5 | 55.9 | 50.2 | | | | | | | |
| 35-44 years | 34.4 | 67.9 | 51.6 | 49.7 | 47.4 | | | | | | | |
| 45 years or older | 29.8 | 68.7 | 49.9 | 44.4 | 43.8 | | | | | | | |

*Data for 1993 and 1994 were for "East" North Dakota which included some farms that are not in the Red River Valley region.

TABLE 6. RATE OF RETURN ON ASSETS AND RATE OF RETURN ON EQUITY PROFITABILITY MEASURES, QUARTILE VALUES FOR 1995, MEDIAN VALUES FOR 1993 AND 1994, NORTH DAKOTA PARTICIPANTS

| Farm Group | 1995 | | | 1993 Median | 1994 | | | 1993 Median | 1995 | | | 1994 Median | 1993 Median |
|--------------------------|----------------|----------------|--------|-------------|----------------|----------------|--------|-------------|----------------|----------------|--------|-------------|-------------|
| | Upper Quartile | Lower Quartile | Median | | Upper Quartile | Lower Quartile | Median | | Upper Quartile | Lower Quartile | Median | | |
| All Farms | 11.2 | -1.0 | 4.7 | 6.4 | 8.6 | 4.7 | 6.4 | 8.6 | 13.7 | -9.1 | 2.2 | 5.8 | 10.1 |
| Region | | | | | | | | | | | | | |
| Red River Valley* | 14.7 | 3.6 | 8.5 | 8.3 | 4.6 | 8.5 | 8.3 | 4.6 | 21.7 | 0.0 | 8.6 | 10.9 | 2.1 |
| North Central | 10.4 | -0.7 | 4.8 | 8.6 | 8.6 | 4.8 | 8.6 | 8.6 | 12.7 | -4.0 | 3.1 | 10.0 | 10.3 |
| South Central | 8.1 | -4.0 | 2.1 | 4.1 | 9.6 | 2.1 | 4.1 | 9.6 | 9.3 | -20.1 | -1.4 | 1.1 | 10.8 |
| West | 10.7 | 0.5 | 4.5 | 5.2 | 11.3 | 4.5 | 5.2 | 11.3 | 12.1 | -5.7 | 3.2 | 3.2 | 13.9 |
| Farm Enterprise | | | | | | | | | | | | | |
| Crop | 13.1 | 1.5 | 7.0 | 8.3 | 8.8 | 7.0 | 8.3 | 8.8 | 17.0 | -2.6 | 6.6 | 10.0 | 10.1 |
| Livestock | 4.8 | -3.6 | 0.5 | 4.1 | 8.4 | 0.5 | 4.1 | 8.4 | 2.4 | -21.8 | -3.4 | 0.5 | 10.4 |
| Mixed | 6.8 | -4.0 | 3.1 | 4.3 | 8.9 | 3.1 | 4.3 | 8.9 | 6.1 | -15.6 | -1.2 | 1.3 | 9.8 |
| Farm Sales | | | | | | | | | | | | | |
| \$99,999 or less | 3.7 | -8.0 | -1.6 | 2.3 | 5.1 | -1.6 | 2.3 | 5.1 | 0.0 | -28.6 | -7.3 | 0.0 | 2.7 |
| \$100,000-\$249,999 | 11.4 | -0.2 | 5.2 | 7.0 | 9.6 | 5.2 | 7.0 | 9.6 | 13.5 | -6.2 | 2.9 | 6.2 | 11.4 |
| \$250,000 or over | 14.5 | 5.1 | 9.0 | 9.1 | 9.6 | 9.0 | 9.1 | 9.6 | 20.1 | 2.6 | 9.3 | 11.4 | 10.7 |
| Farm Size | | | | | | | | | | | | | |
| 1,200 acres or less | 7.6 | -3.2 | 2.8 | 4.5 | 6.7 | 2.8 | 4.5 | 6.7 | 5.6 | -19.7 | -0.7 | 1.6 | 5.3 |
| 1,201 acres or over | 12.2 | 0.1 | 6.1 | 7.3 | 9.6 | 6.1 | 7.3 | 9.6 | 16.1 | -4.6 | 4.8 | 7.2 | 11.4 |
| Cropland Tenure | | | | | | | | | | | | | |
| Full tenant | 14.0 | -8.0 | 3.4 | 4.9 | 7.9 | 3.4 | 4.9 | 7.9 | 18.5 | -22.0 | 0.0 | 3.2 | 6.8 |
| 1-20 percent owned | 12.9 | 0.5 | 6.4 | 11.1 | 11.0 | 6.4 | 11.1 | 11.0 | 16.8 | -7.7 | 4.4 | 13.2 | 12.9 |
| 21-40 percent owned | 13.1 | 2.9 | 7.7 | 8.1 | 8.5 | 7.7 | 8.1 | 8.5 | 17.5 | -1.6 | 8.5 | 8.4 | 9.4 |
| 41 percent or over owned | 7.6 | -1.0 | 3.7 | 5.1 | 8.3 | 3.7 | 5.1 | 8.3 | 7.9 | -8.6 | 0.0 | 3.1 | 9.4 |
| Net Farm Income | | | | | | | | | | | | | |
| Negative | -2.7 | -13.7 | -6.5 | -3.7 | -7.2 | -6.5 | -3.7 | -7.2 | -11.8 | -49.7 | -25.7 | -19.5 | -22.2 |
| \$0-\$19,999 | 3.6 | -0.9 | 1.3 | 0.9 | 1.3 | 1.3 | 0.9 | 1.3 | -1.1 | -10.0 | -3.4 | -4.4 | -3.6 |
| \$20,000-\$39,999 | 8.1 | 4.0 | 5.5 | 6.5 | 6.8 | 5.5 | 6.5 | 6.8 | 9.2 | 2.1 | 3.5 | 5.1 | 4.6 |
| \$40,000 or more | 17.6 | 8.9 | 12.4 | 13.2 | 13.7 | 12.4 | 13.2 | 13.7 | 28.3 | 9.3 | 16.1 | 18.2 | 20.1 |
| Debt-to-Asset Ratio | | | | | | | | | | | | | |
| 0-40 percent | 12.2 | 0.8 | 6.3 | 7.1 | 9.6 | 6.3 | 7.1 | 9.6 | 13.6 | -0.8 | 6.4 | 7.3 | 10.8 |
| 41-70 percent | 12.2 | 0.5 | 5.7 | 7.5 | 8.5 | 5.7 | 7.5 | 8.5 | 17.8 | -7.4 | 3.5 | 7.7 | 10.3 |
| 71 percent or more | 5.8 | -8.0 | -0.1 | 4.6 | 4.8 | -0.1 | 4.6 | 4.8 | 0.1 | -51.8 | -9.2 | 0.0 | -2.8 |
| Farmer Age | | | | | | | | | | | | | |
| 34 years or younger | 12.2 | -2.7 | 4.4 | 9.2 | 10.8 | 4.4 | 9.2 | 10.8 | 14.9 | -19.7 | 1.7 | 11.1 | 12.9 |
| 35-44 years | 13.1 | 0.2 | 6.2 | 7.8 | 9.7 | 6.2 | 7.8 | 9.7 | 17.0 | -3.2 | 6.0 | 7.9 | 12.4 |
| 45 years or older | 8.1 | -2.1 | 3.6 | 4.3 | 7.0 | 3.6 | 4.3 | 7.0 | 8.5 | -11.8 | 0.0 | 1.9 | 6.2 |

*Data for 1993 and 1994 were for "East" North Dakota which included some farms that are not in the Red River Valley region.

TABLE 7. OPERATING PROFIT MARGIN AND NET FARM INCOME PROFITABILITY MEASURES, QUARTILE VALUES FOR 1995, MEDIAN VALUES FOR 1993 AND 1994, NORTH DAKOTA FARM

| Farm Group | 1995 | | | 1993 Median | 1995 | | | 1994 Median | 1993 Median |
|--------------------------|----------------|----------------|--------|-------------|----------------|----------------|---------|-------------|-------------|
| | Upper Quartile | Lower Quartile | Median | | Upper Quartile | Lower Quartile | Median | | |
| All Farms Region | 26.1 | -3.8 | 14.5 | 17.9 | 23.7 | 61,292 | 3,172 | 23,463 | 42,484 |
| Red River Valley* | 26.8 | 9.1 | 17.8 | 17.4 | 10.6 | 92,262 | 13,440 | 52,182 | 21,675 |
| North Central | 25.4 | -3.9 | 15.5 | 22.8 | 26.8 | 56,777 | 7,949 | 26,297 | 46,138 |
| South Central | 21.6 | -13.6 | 7.5 | 11.0 | 23.2 | 42,057 | -7,342 | 11,844 | 43,001 |
| West | 29.7 | -1.5 | 19.4 | 21.1 | 35.1 | 54,883 | 9,275 | 27,589 | 50,827 |
| Farm Enterprise | | | | | | | | | |
| Crop | 26.8 | 3.9 | 17.0 | 19.7 | 20.7 | 75,853 | 11,060 | 37,971 | 43,540 |
| Livestock | 23.7 | -22.8 | 2.8 | 17.0 | 31.1 | 23,557 | -6,276 | 8,094 | 40,460 |
| Mixed | 22.0 | -16.6 | 10.7 | 12.9 | 26.9 | 28,657 | -11,176 | 12,538 | 41,709 |
| Farm Sales | | | | | | | | | |
| \$99,999 or less | 13.7 | -35.5 | -4.9 | 10.7 | 14.4 | 16,163 | -7,538 | 7,226 | 21,492 |
| \$100,000-\$249,999 | 27.3 | 0.4 | 15.5 | 18.3 | 27.2 | 54,857 | 5,748 | 27,924 | 48,939 |
| \$250,000 or over | 27.6 | 13.3 | 20.7 | 22.2 | 21.2 | 123,579 | 30,874 | 71,688 | 61,297 |
| Farm Size | | | | | | | | | |
| 1,200 acres or less | 20.0 | -10.4 | 9.1 | 13.3 | 15.9 | 29,533 | -389 | 13,007 | 22,871 |
| 1,201 acres or over | 27.0 | 0.8 | 17.1 | 20.4 | 27.0 | 74,997 | 6,390 | 34,253 | 52,268 |
| Cropland Tenure | | | | | | | | | |
| Full tenant | 20.4 | -14.3 | 5.9 | 9.8 | 15.5 | 56,210 | -2,421 | 15,683 | 23,436 |
| 1-20 percent owned | 22.1 | 2.0 | 14.0 | 20.9 | 20.5 | 66,860 | 6,161 | 30,874 | 49,571 |
| 21-40 percent owned | 27.3 | 7.9 | 19.8 | 21.0 | 20.9 | 68,419 | 12,963 | 44,811 | 43,601 |
| 41 percent or over owned | 28.1 | -4.9 | 15.7 | 22.3 | 30.9 | 50,482 | -440 | 18,638 | 46,961 |
| Net Farm Income | | | | | | | | | |
| Negative | -10.8 | -53.9 | -23.9 | -13.1 | -14.0 | -- | -- | -- | -- |
| \$0-\$19,999 | 11.3 | -3.9 | 4.3 | 2.8 | 3.9 | -- | -- | -- | -- |
| \$20,000-\$39,999 | 20.1 | 12.0 | 16.0 | 17.9 | 17.6 | -- | -- | -- | -- |
| \$40,000 or more | 35.5 | 21.7 | 27.3 | 30.5 | 34.3 | -- | -- | -- | -- |
| Debt-to-Asset Ratio | | | | | | | | | |
| 0-40 percent | 28.6 | 3.1 | 19.4 | 22.8 | 28.2 | 89,187 | 14,201 | 45,692 | 56,767 |
| 41-70 percent | 26.8 | 2.0 | 16.3 | 17.8 | 22.8 | 62,573 | 6,390 | 26,172 | 39,394 |
| 71 percent or more | 14.5 | -22.4 | -0.3 | 8.8 | 11.8 | 20,070 | -16,835 | 2,110 | 17,304 |
| Farmer Age | | | | | | | | | |
| 34 years or younger | 24.3 | -4.7 | 12.3 | 19.2 | 23.1 | 51,727 | 5,748 | 18,655 | 40,083 |
| 35-44 years | 27.3 | 0.4 | 16.3 | 19.0 | 25.2 | 71,688 | 7,949 | 33,195 | 48,545 |
| 45 years or older | 25.5 | -10.1 | 13.3 | 16.4 | 24.5 | 53,730 | -4,892 | 15,417 | 36,795 |

*Data for 1993 and 1994 were for "East" North Dakota which included some farms that are not in the Red River Valley region.

TABLE 8. REPAYMENT CAPACITY MEASURES, QUARTILE VALUES FOR 1995, MEDIAN VALUES FOR 1993 AND 1994, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM

| Farm Group | 1995 | | | 1994 Median | 1995 | | | 1994 Median | 1993 Median | 1995 | | | 1994 Median | 1993 Median | |
|--------------------------|----------------|----------------|--------|-------------|----------------|----------------|---------|-------------|-------------|----------------|----------------|---------|-------------|-------------|---------|
| | Upper Quartile | Lower Quartile | Median | | Upper Quartile | Lower Quartile | Median | | | Upper Quartile | Lower Quartile | Median | | | |
| All Farms | 2.1 | 0.2 | 1.1 | 1.3 | 1.9 | 2.1 | 0.2 | 1.1 | 1.3 | 1.9 | 28,765 | -19,980 | 1,652 | 7,069 | 17,634 |
| Region | | | | | | | | | | | | | | | |
| Red River Valley* | 2.9 | 0.4 | 1.5 | 1.5 | 0.8 | 50,400 | -19,980 | 17,375 | 12,449 | 0.8 | 50,400 | -19,980 | 17,375 | 12,449 | -5,226 |
| North Central | 2.0 | 0.2 | 1.0 | 1.9 | 2.7 | 22,103 | -16,627 | -530 | 15,355 | 2.7 | 22,103 | -16,627 | -530 | 15,355 | 20,874 |
| South Central | 2.2 | 0.0 | 0.8 | 0.9 | 1.9 | 18,100 | -29,955 | -7,003 | -2,046 | 1.9 | 18,100 | -29,955 | -7,003 | -2,046 | 20,427 |
| West | 2.1 | 0.5 | 1.1 | 1.0 | 2.0 | 21,816 | -13,109 | 2,932 | 614 | 2.0 | 21,816 | -13,109 | 2,932 | 614 | 23,340 |
| Farm Enterprise | | | | | | | | | | | | | | | |
| Crop | 3.0 | 0.4 | 1.3 | 1.6 | 1.9 | 40,398 | -14,479 | 8,892 | 13,346 | 1.9 | 40,398 | -14,479 | 8,892 | 13,346 | 17,871 |
| Livestock | 1.5 | 0.1 | 0.6 | 0.8 | 1.9 | 8,618 | -24,775 | -8,115 | -3,604 | 1.9 | 8,618 | -24,775 | -8,115 | -3,604 | 17,373 |
| Mixed | 1.6 | 0.1 | 1.0 | 1.2 | 1.8 | 17,927 | -30,409 | 57 | 5,083 | 1.8 | 17,927 | -30,409 | 57 | 5,083 | 17,603 |
| Farm Sales | | | | | | | | | | | | | | | |
| \$99,999 or less | 2.0 | 0.1 | 0.8 | 1.2 | 2.2 | 9,784 | -17,349 | -3,828 | 4,316 | 2.2 | 9,784 | -17,349 | -3,828 | 4,316 | 12,441 |
| \$100,000-\$249,999 | 1.9 | 0.2 | 1.0 | 1.3 | 1.9 | 21,632 | -23,523 | -530 | 5,775 | 1.9 | 21,632 | -23,523 | -530 | 5,775 | 21,062 |
| \$250,000 or over | 3.2 | 0.5 | 1.7 | 1.5 | 1.5 | 82,559 | -17,640 | 32,617 | 21,564 | 1.5 | 82,559 | -17,640 | 32,617 | 21,564 | 20,240 |
| Farm Size | | | | | | | | | | | | | | | |
| 1,200 acres or less | 2.6 | 0.3 | 1.1 | 1.2 | 1.6 | 17,927 | -13,825 | 1,894 | 4,212 | 1.6 | 17,927 | -13,825 | 1,894 | 4,212 | 5,741 |
| 1,201 acres or over | 2.3 | 0.2 | 1.0 | 1.4 | 1.9 | 36,910 | -24,869 | 1,144 | 10,347 | 1.9 | 36,910 | -24,869 | 1,144 | 10,347 | 21,853 |
| Cropland Tenure | | | | | | | | | | | | | | | |
| Full tenant | 2.9 | 0.0 | 1.0 | 1.2 | 1.5 | 21,447 | -19,980 | 228 | 3,132 | 1.5 | 21,447 | -19,980 | 228 | 3,132 | 5,185 |
| 1-20 percent owned | 2.3 | 0.0 | 1.0 | 1.6 | 1.8 | 31,234 | -27,889 | -407 | 16,614 | 1.8 | 31,234 | -27,889 | -407 | 16,614 | 16,212 |
| 21-40 percent owned | 2.7 | 0.4 | 1.4 | 1.5 | 1.9 | 38,224 | -12,939 | 12,117 | 11,347 | 1.9 | 38,224 | -12,939 | 12,117 | 11,347 | 19,343 |
| 41 percent or over owned | 2.0 | 0.3 | 1.0 | 1.2 | 1.9 | 20,832 | -19,422 | 423 | 4,212 | 1.9 | 20,832 | -19,422 | 423 | 4,212 | 20,418 |
| Net Farm Income | | | | | | | | | | | | | | | |
| Negative | 0.4 | -0.6 | 0.0 | -0.1 | 0.1 | -14,149 | -51,021 | -30,409 | -31,705 | 0.1 | -14,149 | -51,021 | -30,409 | -31,705 | -40,704 |
| \$0-\$19,999 | 1.6 | 0.2 | 0.8 | 0.4 | 1.0 | 6,310 | -19,422 | -4,067 | -8,444 | 1.0 | 6,310 | -19,422 | -4,067 | -8,444 | 1,130 |
| \$20,000-\$39,999 | 2.1 | 0.7 | 1.2 | 1.3 | 1.4 | 18,690 | -7,914 | 5,499 | 7,638 | 1.4 | 18,690 | -7,914 | 5,499 | 7,638 | 7,230 |
| \$40,000 or more | 3.9 | 1.3 | 2.3 | 2.3 | 2.6 | 78,873 | 12,486 | 38,837 | 31,970 | 2.6 | 78,873 | 12,486 | 38,837 | 31,970 | 36,983 |
| Debt-to-Asset Ratio | | | | | | | | | | | | | | | |
| 0-40 percent | 5.2 | 0.9 | 2.4 | 2.1 | 3.6 | 57,926 | -1,465 | 18,690 | 16,664 | 3.6 | 57,926 | -1,465 | 18,690 | 16,664 | 30,543 |
| 41-70 percent | 1.8 | 0.4 | 1.1 | 1.3 | 1.4 | 24,479 | -17,203 | 2,838 | 7,069 | 1.4 | 24,479 | -17,203 | 2,838 | 7,069 | 12,575 |
| 71 percent or more | 1.0 | -0.4 | 0.2 | 0.4 | 1.1 | -1,087 | -44,559 | -20,780 | -12,173 | 1.1 | -1,087 | -44,559 | -20,780 | -12,173 | 4,256 |
| Farmer Age | | | | | | | | | | | | | | | |
| 34 years or younger | 2.9 | 0.3 | 1.1 | 1.5 | 2.1 | 15,336 | -16,101 | 1,700 | 12,200 | 2.1 | 15,336 | -16,101 | 1,700 | 12,200 | 14,819 |
| 35-44 years | 2.7 | 0.5 | 1.2 | 1.4 | 1.9 | 37,258 | -13,533 | 9,784 | 7,565 | 1.9 | 37,258 | -13,533 | 9,784 | 7,565 | 20,427 |
| 45 years or older | 1.9 | 0.0 | 0.8 | 1.2 | 1.5 | 21,632 | -29,819 | -4,734 | 3,132 | 1.5 | 21,632 | -29,819 | -4,734 | 3,132 | 16,247 |

*Data for 1993 and 1994 were for "East" North Dakota which included some farms that are not in the Red River Valley region.

TABLE 9. ASSET TURNOVER AND OPERATING EXPENSE AND DEPRECIATION EXPENSE EFFICIENCY MEASURES (AS A PERCENTAGE OF GROSS FARM INCOME), QUARTILE VALUES FOR 1993, 1994, AND 1995
MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

| Farm Group | 1995 | | | 1994 | | | 1993 | | | 1995 | | | 1994 | | | 1993 | | |
|--------------------------|----------------|----------------|--------|----------------|----------------|--------|----------------|----------------|--------|----------------|----------------|--------|----------------|----------------|--------|----------------|----------------|--------|
| | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median |
| All Farms | .55 | .24 | .36 | 0.4 | 0.4 | 0.4 | 57.8 | 79.3 | 67.4 | 64.9 | 60.9 | 2.4 | 10.5 | 5.7 | 4.7 | 4.6 | | |
| Red River Valley* | .70 | .35 | .48 | 0.5 | 0.5 | 0.5 | 61.6 | 79.9 | 70.2 | 70.0 | 76.2 | 1.4 | 6.2 | 4.0 | 3.3 | 4.4 | | |
| North Central | .49 | .21 | .36 | 0.4 | 0.4 | 0.4 | 57.3 | 75.2 | 65.4 | 57.7 | 53.3 | 2.3 | 10.5 | 4.7 | 4.9 | 3.3 | | |
| South Central | .57 | .20 | .35 | 0.4 | 0.4 | 0.4 | 59.6 | 83.6 | 70.8 | 67.8 | 60.8 | 3.0 | 13.9 | 7.9 | 6.0 | 6.7 | | |
| West | .39 | .21 | .28 | 0.3 | 0.3 | 0.3 | 54.5 | 72.6 | 62.3 | 60.8 | 52.3 | 2.3 | 10.4 | 6.8 | 5.9 | 3.3 | | |
| Farm Enterprise | .63 | .32 | .45 | 0.4 | 0.4 | 0.4 | 58.3 | 78.1 | 67.2 | 64.5 | 62.7 | 2.1 | 8.6 | 4.6 | 4.8 | 4.3 | | |
| Crop | .31 | .14 | .21 | 0.3 | 0.3 | 0.3 | 57.2 | 80.5 | 68.6 | 66.8 | 57.1 | 3.0 | 19.9 | 9.8 | 3.9 | 5.4 | | |
| Livestock | .43 | .19 | .29 | 0.3 | 0.3 | 0.3 | 57.7 | 77.7 | 71.7 | 63.7 | 58.9 | 3.8 | 15.1 | 7.8 | 6.0 | 4.3 | | |
| Mixed | | | | | | | | | | | | | | | | | | |
| Farm Sales | | | | | | | | | | | | | | | | | | |
| \$99,999 or less | .38 | .16 | .24 | 0.3 | 0.4 | 0.4 | 54.9 | 81.2 | 67.3 | 60.1 | 54.7 | 2.0 | 19.1 | 8.8 | 4.8 | 4.2 | | |
| \$100,000-\$249,999 | .54 | .27 | .37 | 0.4 | 0.4 | 0.4 | 57.8 | 78.6 | 66.9 | 64.9 | 58.9 | 2.3 | 9.8 | 5.8 | 4.7 | 4.5 | | |
| \$250,000 or over | .64 | .34 | .46 | 0.5 | 0.4 | 0.4 | 60.2 | 78.6 | 69.2 | 68.3 | 69.5 | 2.5 | 8.0 | 4.5 | 4.7 | 5.0 | | |
| Farm Size | | | | | | | | | | | | | | | | | | |
| 1,200 acres or less | .55 | .21 | .34 | 0.4 | 0.4 | 0.4 | 57.3 | 79.6 | 69.2 | 65.5 | 63.6 | 1.8 | 11.3 | 6.0 | 4.3 | 4.6 | | |
| 1,201 acres or over | .55 | .26 | .37 | 0.4 | 0.4 | 0.4 | 58.3 | 78.8 | 67.2 | 64.9 | 60.4 | 2.5 | 10.3 | 5.6 | 4.9 | 4.7 | | |
| Cropland Tenure | | | | | | | | | | | | | | | | | | |
| Full tenant | .83 | .37 | .61 | 0.6 | 0.6 | 0.6 | 62.2 | 87.3 | 73.2 | 72.3 | 66.7 | 1.3 | 9.7 | 4.8 | 4.8 | 5.0 | | |
| 1-20 percent owned | .65 | .37 | .50 | 0.6 | 0.6 | 0.6 | 62.0 | 82.7 | 71.1 | 64.9 | 65.8 | 1.4 | 8.6 | 4.4 | 3.8 | 4.3 | | |
| 21-40 percent owned | .52 | .32 | .41 | 0.4 | 0.3 | 0.3 | 57.6 | 75.3 | 65.1 | 64.5 | 62.4 | 2.4 | 10.0 | 5.6 | 5.2 | 4.0 | | |
| 41 percent or over owned | .32 | .17 | .24 | 0.3 | 0.3 | 0.3 | 54.2 | 76.6 | 65.0 | 59.8 | 53.3 | 3.2 | 12.8 | 7.2 | 6.1 | 4.9 | | |
| Net Farm Income | | | | | | | | | | | | | | | | | | |
| Negative | .42 | .16 | .26 | 0.3 | 0.4 | 0.4 | 77.6 | 101.1 | 90.2 | 89.5 | 93.7 | 5.4 | 20.3 | 11.7 | 8.4 | 8.2 | | |
| \$0-\$19,999 | .56 | .20 | .30 | 0.3 | 0.4 | 0.4 | 61.6 | 79.4 | 72.6 | 72.7 | 71.5 | 2.5 | 11.3 | 6.6 | 5.4 | 6.4 | | |
| \$20,000-\$39,999 | .52 | .26 | .38 | 0.4 | 0.4 | 0.4 | 57.8 | 74.1 | 66.4 | 62.0 | 61.6 | 1.8 | 9.4 | 5.0 | 4.8 | 5.2 | | |
| \$40,000 or more | .62 | .34 | .44 | 0.4 | 0.4 | 0.4 | 52.4 | 67.1 | 60.6 | 56.5 | 54.2 | 1.7 | 6.8 | 4.0 | 3.9 | 3.4 | | |
| Debt-to-Asset Ratio | | | | | | | | | | | | | | | | | | |
| 0-40 percent | .46 | .22 | .33 | 0.3 | 0.4 | 0.4 | 52.8 | 71.7 | 62.3 | 58.1 | 54.2 | 2.5 | 10.2 | 5.6 | 5.5 | 4.5 | | |
| 41-70 percent | .55 | .25 | .39 | 0.4 | 0.4 | 0.4 | 57.9 | 78.2 | 67.1 | 65.9 | 63.4 | 2.2 | 10.1 | 5.3 | 4.4 | 4.6 | | |
| 71 percent or more | .59 | .23 | .38 | 0.5 | 0.4 | 0.4 | 66.1 | 92.5 | 75.3 | 71.4 | 68.4 | 2.5 | 12.3 | 6.3 | 5.1 | 4.3 | | |
| Farmer Age | | | | | | | | | | | | | | | | | | |
| 34 years or younger | .65 | .32 | .48 | 0.5 | 0.5 | 0.5 | 58.8 | 77.8 | 67.4 | 63.9 | 60.6 | 1.3 | 10.0 | 4.4 | 4.2 | 4.0 | | |
| 35-44 years | .57 | .28 | .38 | 0.4 | 0.4 | 0.4 | 57.6 | 78.8 | 67.1 | 65.1 | 61.3 | 2.6 | 10.4 | 5.7 | 4.1 | 4.4 | | |
| 45 years or older | .44 | .17 | .29 | 0.3 | 0.3 | 0.3 | 57.8 | 80.8 | 68.3 | 64.5 | 60.8 | 2.9 | 11.4 | 6.7 | 6.7 | 5.1 | | |

*Data for 1993 and 1994 were for "East" North Dakota which included some farms that are not in the Red River Valley region.

TABLE 10. INTEREST EXPENSE AND FARM INCOME EFFICIENCY MEASURES (AS A PERCENTAGE OF GROSS FARM INCOME), QUARTILE VALUES FOR 1995, MEDIAN VALUES FOR 1993 AND 1994, NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

| Farm Group | 1995 | | | 1994 | | | 1993 | | | 1995 | | |
|--------------------------|----------------|----------------|--------|----------------|----------------|--------|----------------|----------------|--------|----------------|----------------|--------|
| | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median | Upper Quartile | Lower Quartile | Median |
| All Farms | 4.9 | 12.9 | 8.8 | 7.6 | 6.9 | 6.9 | 27.5 | 2.2 | 16.2 | 21.7 | 26.6 | 26.6 |
| Region | | | | | | | | | | | | |
| Red River Valley* | 4.3 | 10.5 | 7.0 | 6.7 | 6.0 | 6.0 | 26.9 | 7.2 | 18.6 | 18.6 | 12.7 | 12.7 |
| North Central | 3.7 | 12.9 | 8.4 | 7.4 | 6.8 | 6.8 | 30.2 | 6.1 | 19.4 | 29.0 | 33.6 | 33.6 |
| South Central | 5.1 | 13.7 | 8.9 | 8.2 | 6.9 | 6.9 | 22.3 | -4.8 | 10.5 | 16.3 | 25.3 | 25.3 |
| West | 6.9 | 15.1 | 10.3 | 10.0 | 7.9 | 7.9 | 31.2 | 7.2 | 18.3 | 23.8 | 35.4 | 35.4 |
| Farm Enterprise | | | | | | | | | | | | |
| Crop | 4.0 | 10.8 | 7.5 | 6.8 | 6.4 | 6.4 | 29.2 | 6.6 | 19.4 | 22.5 | 25.5 | 25.5 |
| Livestock | 7.3 | 19.9 | 12.7 | 10.3 | 8.5 | 8.5 | 19.0 | -7.7 | 6.1 | 15.9 | 27.7 | 27.7 |
| Mixed | 6.2 | 15.0 | 10.1 | 8.8 | 8.1 | 8.1 | 23.8 | -19.4 | 8.4 | 21.7 | 27.2 | 27.2 |
| Farm Sales | | | | | | | | | | | | |
| \$99,999 or less | 6.0 | 18.9 | 12.5 | 8.3 | 7.1 | 7.1 | 24.7 | -11.8 | 11.2 | 23.4 | 29.4 | 29.4 |
| \$100,000-\$249,999 | 5.4 | 12.7 | 8.9 | 8.7 | 7.5 | 7.5 | 28.9 | 2.8 | 16.5 | 21.3 | 28.3 | 28.3 |
| \$250,000 or over | 3.6 | 9.7 | 6.3 | 5.9 | 5.9 | 5.9 | 26.1 | 8.2 | 18.5 | 21.7 | 18.5 | 18.5 |
| Farm Size | | | | | | | | | | | | |
| 1,200 acres or less | 4.9 | 13.7 | 9.2 | 8.2 | 6.7 | 6.7 | 24.8 | -0.8 | 14.8 | 21.9 | 25.3 | 25.3 |
| 1,201 acres or over | 4.8 | 12.7 | 8.5 | 7.2 | 6.9 | 6.9 | 27.9 | 3.2 | 17.0 | 21.7 | 27.3 | 27.3 |
| Cropland Tenure | | | | | | | | | | | | |
| Full tenant | 2.5 | 9.3 | 5.5 | 5.1 | 4.5 | 4.5 | 26.0 | -2.5 | 13.7 | 16.5 | 21.8 | 21.8 |
| 1-20 percent owned | 5.0 | 10.1 | 7.5 | 6.5 | 6.0 | 6.0 | 25.9 | 2.8 | 16.8 | 23.8 | 21.8 | 21.8 |
| 21-40 percent owned | 5.6 | 11.2 | 8.8 | 8.5 | 7.7 | 7.7 | 28.0 | 8.4 | 18.7 | 22.5 | 22.1 | 22.1 |
| 41 percent or over owned | 6.8 | 17.1 | 11.4 | 10.6 | 8.6 | 8.6 | 29.1 | -0.8 | 15.1 | 23.1 | 32.5 | 32.5 |
| Net Farm Income | | | | | | | | | | | | |
| Negative | 9.2 | 21.3 | 13.7 | 12.9 | 9.1 | 9.1 | -5.1 | -32.3 | -15.8 | -8.3 | -9.7 | -9.7 |
| \$0-\$19,999 | 5.6 | 14.0 | 9.7 | 9.6 | 8.6 | 8.6 | 15.5 | 3.8 | 9.2 | 9.6 | 10.8 | 10.8 |
| \$20,000-\$39,999 | 5.5 | 12.9 | 8.6 | 8.8 | 8.2 | 8.2 | 25.7 | 13.6 | 17.8 | 22.6 | 24.0 | 24.0 |
| \$40,000 or more | 3.2 | 8.9 | 6.0 | 5.5 | 6.2 | 6.2 | 36.7 | 22.2 | 28.0 | 32.4 | 35.1 | 35.1 |
| Debt-to-Asset Ratio | | | | | | | | | | | | |
| 0-40 percent | 1.6 | 7.5 | 4.0 | 4.5 | 4.5 | 4.5 | 34.7 | 15.3 | 24.6 | 29.1 | 34.7 | 34.7 |
| 41-70 percent | 6.5 | 13.8 | 9.2 | 9.1 | 8.5 | 8.5 | 26.1 | 3.2 | 16.4 | 18.9 | 21.5 | 21.5 |
| 71 percent or more | 9.1 | 17.2 | 12.1 | 11.0 | 9.2 | 9.2 | 12.0 | -14.2 | 1.8 | 10.5 | 15.1 | 15.1 |
| Farmer Age | | | | | | | | | | | | |
| 34 years or younger | 3.7 | 12.2 | 7.3 | 6.1 | 6.0 | 6.0 | 28.5 | 4.4 | 19.1 | 22.7 | 27.2 | 27.2 |
| 35-44 years | 4.4 | 12.1 | 8.0 | 7.8 | 7.2 | 7.2 | 28.7 | 5.2 | 16.8 | 22.2 | 27.3 | 27.3 |
| 45 years or older | 5.9 | 15.1 | 10.1 | 9.3 | 8.3 | 8.3 | 25.6 | -3.8 | 12.7 | 16.6 | 24.3 | 24.3 |

*Data for 1993 and 1994 were for "East" North Dakota which included some farms that are not in the Red River Valley region.