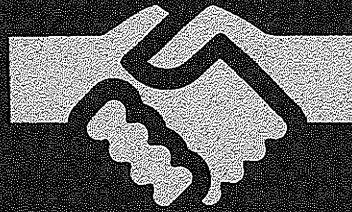
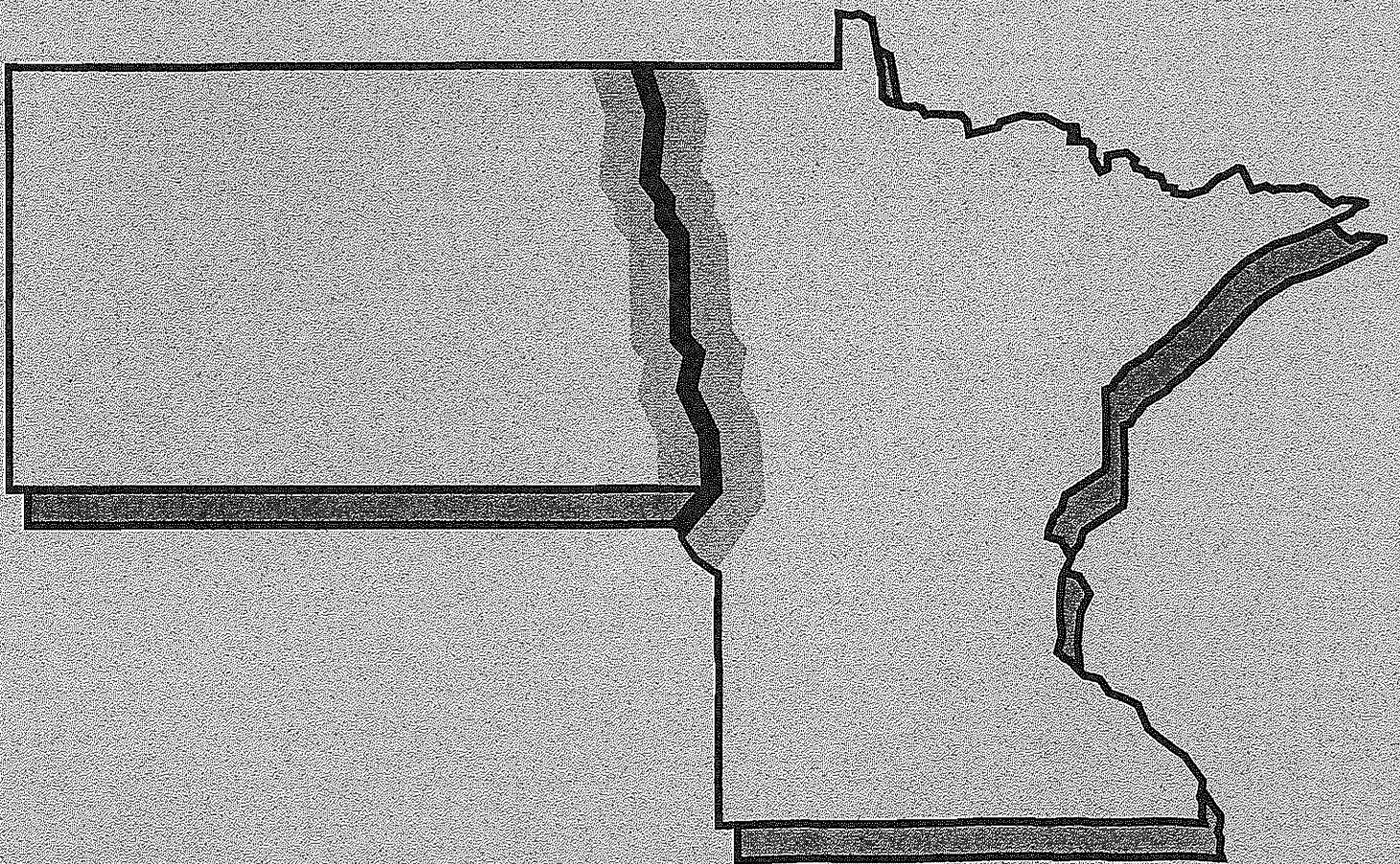


**North Dakota  
Farm and Ranch  
Business Management  
Education**



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Management  
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# 2000 Red River Valley Report







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Minnesota Farm Business Management Education  
and  
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RED RIVER VALLEY AVERAGES  
2000 ANNUAL REPORT

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2000 Red River Valley Report  
Minnesota and North Dakota Farm Business Management Education

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## ***INTRODUCTION***

This report summarizes the individual farm records of farms in the Red River Valley that are enrolled in Farm Management Education programs. The current financial status of farm operators and net returns from each crop enterprise is reported. In addition to the average of all farms, the averages for the high and low net income groups are also presented. To insure anonymity, only averages of five or more farms are reported. Regional averages reports can be used by producers for comparison purposes to identify and study the areas that may need management improvement. A review of the comparative information may reveal how certain aspects of the business or enterprises excel and help answer why they are profitable. The data contained in this report should also be useful to instructors, extension agents, bankers and agricultural consultants.

The Red River Valley averages reports are divided into three major categories. Explanatory notes precede the farm operators' reports and the crop reports. Tables 1 through 12 present whole farm information. The table 13 series provide performance information on crop enterprises.

The 2000 Red River Valley Report is based upon data generated by the Finan individual farm analysis completed by farm/ranch families enrolled in the Farm and Ranch Business Management Education programs in Minnesota and North Dakota. The FINPACK computer program, used for data processing, is a copyrighted software program from the Center for Farm Financial Management at the University of Minnesota in Saint Paul.

You may contact Robert E. Bollesen, Northland Technical College, Highway 1 East, Thief River Falls, MN 56701, to order a copy of this report. This report and regional reports for north central, south central and western North Dakota can be ordered for \$5 per copy from Farm Business Management, PO Box 6022, Bismarck, ND 58506-6022. A state average book which includes all North Dakota farms excluding the Red River Valley is also available.

## ***EXPLANATORY NOTES FOR THE FARM OPERATORS' REPORTS***

Tables 1 through 5 and 8 include the same number of farms, which were all of the farms whose records were judged to be of sufficient quality to be included in the overall report. Table 6 and 7, the Comparative Financial Statement, on cost and market basis, respectively, includes only sole proprietors. Partnerships and corporations are excluded because some debt is held outside of the business causing potential misinterpretations of the financial statement. The number of farms included in each of the crop tables varies because all farms do not have the same enterprises. Also, some farmers' records were complete enough to be included in the whole-farm tables, but at times, these same farmers' crop records were not complete enough to include in the respective crop tables.

Rounding of individual items for the report may have caused minor discrepancies with the printed totals which are calculated before rounding.

### **Tables 1. Detailed Farm Income Statement**

This statement is a summary of income, expenses, or resultant profit or loss from farming operations during the calendar year.

The first section of Table 1 lists cash farm income from all sources. There are three possible sources of cash income from crops. The first is income from cash sales. The second is income from crops stored under government loan programs when the loan is treated as income for the year in which the crop was stored. If the crop value has not been entered as income when it was stored, then it would be treated as cash income in the year it was sold. The third is Net Government Sales, which refers to the difference between income credited in the year a crop was stored and the actual cash income received at the time it was sold. There are two categories of cash income from livestock sales. "Raised" steer, hogs, and lambs refer to animals raised from birth to market weight on the farm. "Finished" animals refers to those purchased as feeders and fed to market weight. "Government transition payments" are the Agricultural Market Transition Act (AMTA), Market Loss Assistance (MLA) and oilseed program payments. "Other government payments" refers to all other government payments such as loan deficiency and disaster payments but not including CRP payments.

The second section of Table 1 lists cash expenses. "Labor" includes only labor hired. "Interest" includes only interest actually paid. No opportunity charges on farm equity capital or unpaid labor are included.

The difference between "Gross Cash Farm Income" and "Total Cash Expenses" is the "Net Cash Farm Income." This is net farm income on a cash basis.

The last two sections of Table 1 deal with the non-cash changes in the farm business. The "Inventory Changes" and "Depreciation and Other Capital Adjustments" sections are used to convert the cash income statement (Net Cash Farm Income) derived from the first two sections into an accrual income statement. The bottom line, labeled "Net farm Income," represents the return to the operator's and family's unpaid labor, management, and equity capital (net worth). In other words, it represents the return to all of the resources which are owned by the farm family and hence, not purchased or paid a wage. However, it does not include any debt forgiveness or asset repossessions.

### **Table 2. Inventory Changes**

This is the detailed statement of inventory changes which is summarized in Table 1. It includes beginning and ending inventories and the calculated changes.



### Table 3. Depreciation and Other Capital Adjustments

This is the detailed statement of depreciation and other capital adjustments which is summarized in Table 1. It includes beginning and ending inventories, sales, purchases, and depreciation.

### Table 4. Profitability Measures

Two sections on profitability are provided. The first section shows profitability when capital assets are valued at cost. Capital assets are valued at market in the second section. Therefore net farm income includes the change in market value of capital assets that occurred during the year.

Various measures of performance are calculated for the farms in this report. In Tables 1 through 3, no opportunity costs are used. In Table 4, opportunity costs for labor, capital, management are used. The measures and their components are described below.

"Labor and management earnings" equals "Net farm income" from Table 1 minus an opportunity interest cost of 6% an average farm net worth.

"Rate of return on assets" is the "Return on farm assets" divided by "Average farm assets."

"Rate of return on equity" is the "Return of farm equity" divided by "Average farm equity."

"Operating profit margin" is the "Return on farm assets" divided by "Value of farm production."

"Asset turnover rate" is the "Value of farm production" divided by "Average farm assets."

"Interest on farm net worth" is the "Average farm equity" multiplied by a 6% opportunity interest cost charge.

"Farm interest expense" is the accrual interest cost, usually it will be different from the cash interest expense shown on Table 1.

"Value of operator's labor and management" is an opportunity cost for unpaid operator's labor and management that is used in the calculation of several financial performance measures. A value of \$12,000 per full time operator plus 5% of value of farm production.

"Return of farm assets" is calculated by adding "Farm interest expense" to "Net farm income" and then subtracting the "Value of operator's labor and management."

"Average farm assets" is the average of beginning and ending total farm assets.

"Return on farm equity" is calculated by subtracting the "Value of operator's labor and management" from "Net farm income."

"Average farm equity" is the average of beginning and ending farm net worth.

"Value of farm production" is gross cash farm income minus purchased feed and feeder livestock and adjusted for inventory changes in crops, market livestock, accounts receivable and breeding livestock.

## Table 5. Liquidity Measures

### Liquidity: Cash Basis

"Family living and taxes" is calculated cash family living plus income and social security taxes.

"Cash available for intermediate debt" on the cash basis is the sum of "Net cash farm income" and "Net nonfarm income" minus "Family living and taxes" and "Real estate principal payments."

"Average intermediate debt" is the average of beginning and ending intermediate farm liabilities.

"Years to turn over debt" is "Average intermediate debt" divided by "Cash available for intermediate debt." If the cash-based or accrual-based "Cash available for intermediate debt" is a negative number, debt repayment is not possible because of negative cash flow on a cash or accrual basis, respectively, and "Years to turn over intermediate debt" cannot be calculated.

Cash "Expense as a percent of income" is "Total cash expense" divided by "Gross cash farm income."

"Interest as a percent of income" is "Interest paid" divided by "Gross cash farm income"

### Liquidity: Accrual Basis

"Available for intermediate debt" on the accrual basis is "Net accrual operating income" plus "Net nonfarm income" minus "Family living and taxes" and "Real estate principal payments."

Accrual "Expense as a percent of income" is "Total cash expense" adjusted by inventory changes in accounts payable, accrued expense items, prepaid expenses and growing crops divided by "Gross farm income." "Gross farm revenue" is "Gross cash farm income" adjusted by changes in inventories of crops and feed, feeder livestock and accounts receivable.

"Interest as a percent of income" is "Interest paid" adjusted by changes in accrued interest for the year, divided by "Gross farm revenue."

## Tables 6 and 7. Balance Sheet

The beginning and ending net worth statements and solvency measures are presented for sole proprietors only in Tables 6 and 7. Current assets are valued at market price at the time of the inventory which is January 1, and December 31, for the beginning and ending inventories respectively. In Table 6, intermediate and long-term assets that are depreciable are valued at cost remaining (amount remaining to be depreciated, plus salvage value). Raised breeding livestock is valued at conservative market replacement costs. Land is valued at cost or conservative market value. In Table 7, the intermediate and long term assets are listed at market value, and deferred income tax liabilities are estimated.

## Table 8. Statement of Cash Flows

This statement organizes cash inflows and outflows by the following three categories: Operating activities, investing activities, and financing activities.

#### Table 9. Financial Standards Measures

This table contains the 16 measures of financial performance recommended by the Farm Financial Standards Task Force (FFSTF). The Finpack financial management program used by the North Dakota Farm Business Education in most part, but not completely, complies with the FFSTF recommendations for calculating the financial guidelines measures. The measures are calculated on an accrual basis.

##### Liquidity

"Current ratio" is "Total current farm assets" divided by "Total current farm liabilities."

"Working capital" is "Total current farm assets" less "Total current farm liabilities."

##### Solvency

"Farm debt to asset ratio" is "Total farm liabilities" divided by "Total farm assets."

"Farm equity to asset ratio" is "Total farm assets" minus "Total farm liabilities," divided by "Total farm assets."

"Farm debt to equity ratio" is "Total farm liabilities," divided by the result of "Total farm assets" minus "Total farm liabilities."

##### Profitability

"Rate of return on farm assets" is "Net farm income" plus "interest expense" minus "Value of operator's labor and management," divided by the average of beginning and ending "Total farm assets."

"Rate of return on farm equity" is "Net farm income" minus "Value of operator's labor and management," divided by the average of beginning and ending farm net worth.

"Operating profit margin" is "Net farm income" plus "interest expense" minus "Value of operator's labor and management," divided by "Value of farm production."

##### Repayment Capacity

"Term debt coverage ratio" is "Net farm income" plus "depreciation and other capital adjustments" plus "Net nonfarm income" plus scheduled interest on term debt minus "Family living and taxes," divided by scheduled term debt principal and interest payments.

"Capital replacement margin" is "Net farm income" plus "Depreciation and other capital adjustments" plus "Net nonfarm income" minus "Family living and taxes" and scheduled term debt principal payments.

##### Efficiency

"Asset turnover rate" is "Value of farm production" divided by the average of beginning and ending "Total farm assets."

"Operating expense ratio" is total expense less "Farm interest expense" and "Depreciation and capital adjustment," divided by "Gross farm revenue."

"Depreciation expense ratio" is "Depreciation and capital adjustments" divided by "Gross farm revenue."

"Interest expense ratio" is "Farm interest expense" divided by "Gross farm revenue"

"Net farm income ratio" is "Net farm income" divided by "Gross farm revenue."

Table 10. Crop Production and Marketing Summary

This table contains three sections. The first section reports average acreage by land use. The next two sections show average price received and average yields for major crops. These tables are sorted on the basis of "Net farm income."

Table 11. Household and Personal Expenses

For those farms that keep records, the household and personal expenses are summarized in Table 11. The farms are grouped in the same ranking as in Table 1. Not all farms keep these records, therefore, the numbers may be different for each group. Averages are determined by the number of farms keeping these records. Table 8 presents calculated family living and includes all farms. Income tax paid is also shown on Table 8 and includes all farms.

Table 12. Operator Information, Nonfarm Summary

Table 12 reports the average for the number of operators per farm, the operator's age, and the number of years farming. This table also reports the income from nonfarm income, but the figure reported is the average over all farms not just those reporting nonfarm income.



## Financial Guideline Measures

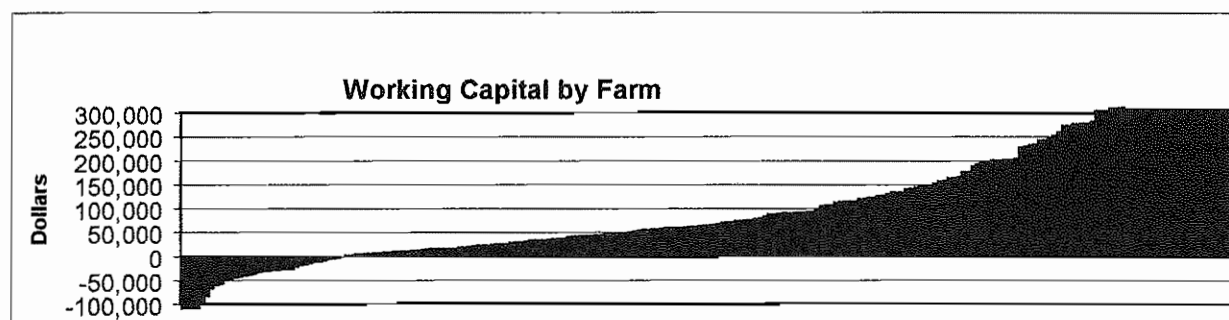
The Farm Financial Standards Task Force recommended the use of sixteen financial measures to evaluate a farm's financial position and financial performance. These measures are grouped by Liquidity, Solvency, Profitability, Repayment Capacity and Efficiency.

### Liquidity

Liquidity is the ability of the farm business to meet financial obligations in a timely manner, without disrupting normal business operations.

**Current Ratio:** The current ratio shows the value of current assets relative to current liabilities. It measures the extent current farm assets, if liquidated, would cover liabilities that are due during the next 12 months. The higher the ratio, the safer the short term position.

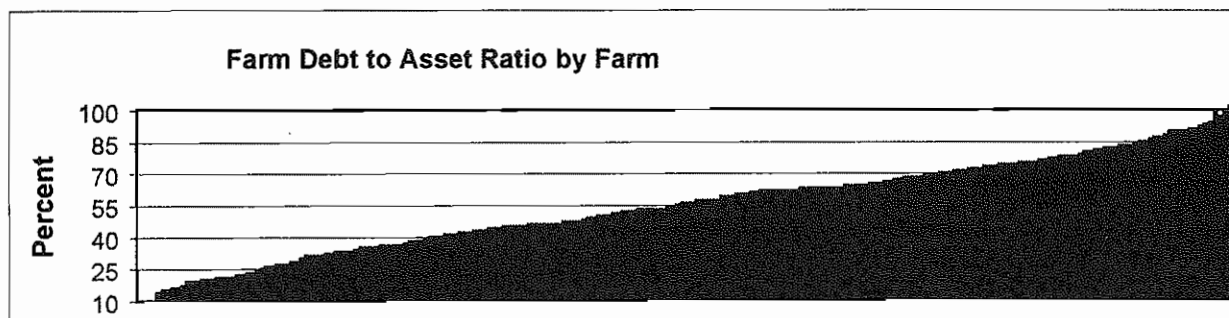
**Working Capital:** Working capital shows the dollar amount that current assets can or cannot cover current liabilities. It approximates the amount of capital available to purchase crop and livestock inputs and equipment necessary to produce farm products. The amount of working capital considered adequate must be related to the size of the farm business.



### Solvency

Solvency is important in evaluating the risk position of the farm and family and in considering future borrowing capacity. Solvency measures the ability of the business to pay off all debts if liquidated.

**Farm Debt To Asset Ratio:** The farm debt to asset ratio measures the financial position or solvency of the farm or ranch by comparing the total liabilities to the total assets. It measures the portion of the farm assets that have debt against them. A higher ratio is considered an indicator of greater financial risk.



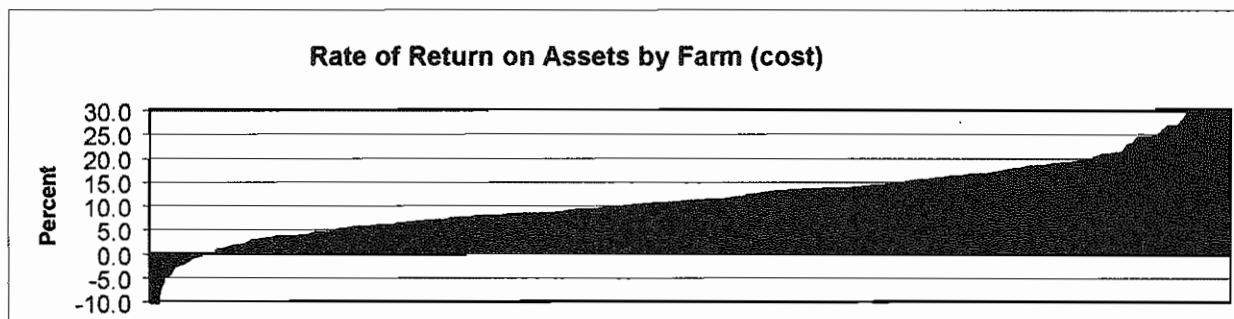
**Farm Equity To Asset Ratio:** The farm equity to asset ratio measures the farm equity relative to the value of the farm assets. It measures the proportion of the farm assets financed by the owner's equity whereas the debt to asset ratio measured the proportion of farm assets financed by debt.

**Farm Debt To Equity Ratio:** The farm debt to equity ratio measures the amount of farm debt relative to the amount of farm equity. It measures the amount of debt the farm has for every dollar of equity the farm has.

## Profitability

Profitability is the measure of the value of goods produced by the business in relation to the cost of resources used in the production. Profitability calculated on a cost basis does not consider changes in market valuation of capital assets such as machinery and breeding livestock.

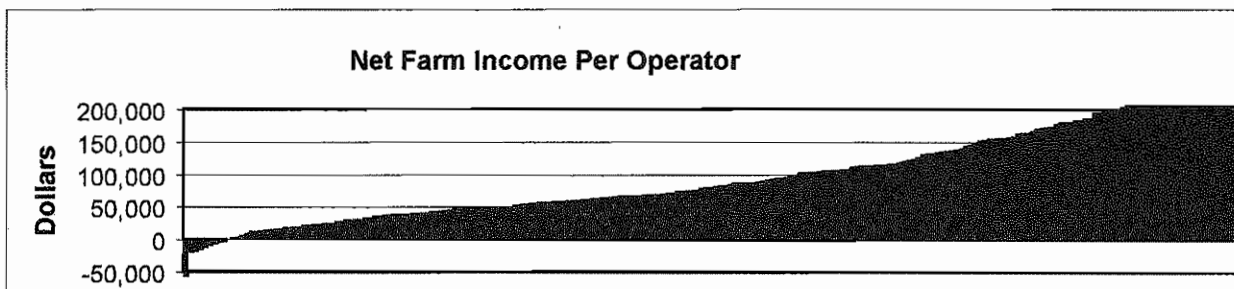
**Rate of Return on Assets:** Rate of return on assets is, in effect, the interest rate your farm earned in the past year on all money invested in the business. If assets are valued at market value, the rate of return on investment can be looked at as the "opportunity cost" of investing money in the farm instead of alternative investments. If assets are valued at cost (cost less depreciation), the rate of return represents the actual return on the average dollar invested in the business.



**Rate of Return on Equity:** Rate of return on equity is, in effect, the interest rate your investment in the business earned in the past year. If assets are valued at market value, this return can be compared with returns available if the assets were liquidated and invested in alternative investments. If assets are valued at cost, this represents the actual return to the amount of equity capital you have invested in the farm business.

If your return on assets is higher than your average interest rate, your return on equity will be still higher, reflecting the fact that there are residual returns to equity capital after paying all interest expense. This is positive use of financial leverage. If your return on assets is lower than your average interest rate, your return on equity will be still lower, reflecting the fact that borrowed capital did not earn enough to pay its interest cost. This is negative financial leverage. As your debt to asset ratio increases, these relationships become more pronounced. So profitability becomes a key concern when substantial debt capital is used in the business.

**Net Farm Income:** Net farm income represents the returns to labor, management, and equity capital invested in the business. Without income from other sources, or appreciation of capital asset values, net farm income must cover family living expenses and taxes, or net worth will decrease.



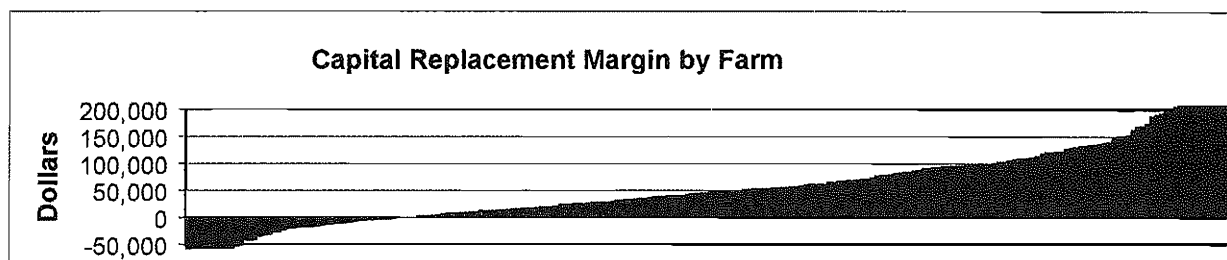
**Operating Profit Margin:** The operating profit margin is a measure of the profit margin from the employment of assets. It measures how effectively you are employing assets relative to the value of output produced. Low prices, high operating expenses, or production problems are all possible causes of a low operating profit margin.

## Repayment Capacity

Repayment capacity measures the ability to repay term debt (longer than one year) and to replace capital assets.

**Term Debt Coverage Ratio:** The term debt coverage ratio measures the ability of the business to cover all term debt payments. A number less than 100 percent indicates that the business, plus non-farm income, is not generating sufficient cash to meet all of the debt payments, after family living expenses and taxes have been paid. A number greater than 100 indicates the business is generating sufficient cash to pay all term debt obligations with some surplus margin remaining.

**Capital Replacement Margin:** The capital replacement margin is the amount of money remaining from farm and non-farm income after all operating expenses, taxes, family living and debt payments have been paid. It is the amount available for acquiring capital assets, such as machinery and land, or servicing additional debt.

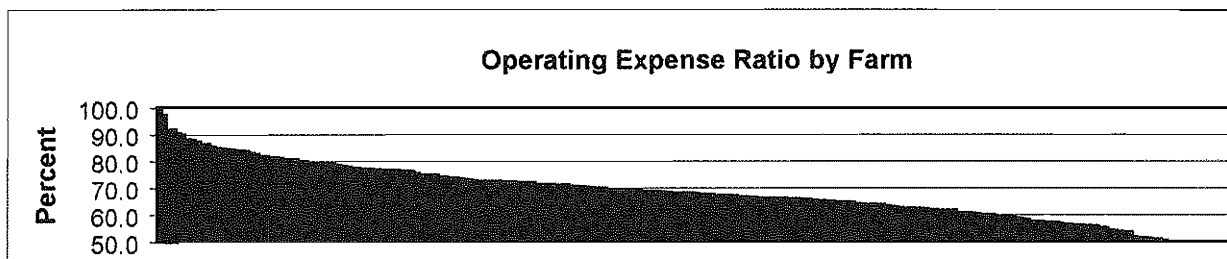


## Efficiency

These measures reflect the relationships between expense and income items to revenue and the efficiency of the farm business with regard to the use of cash and capital assets.

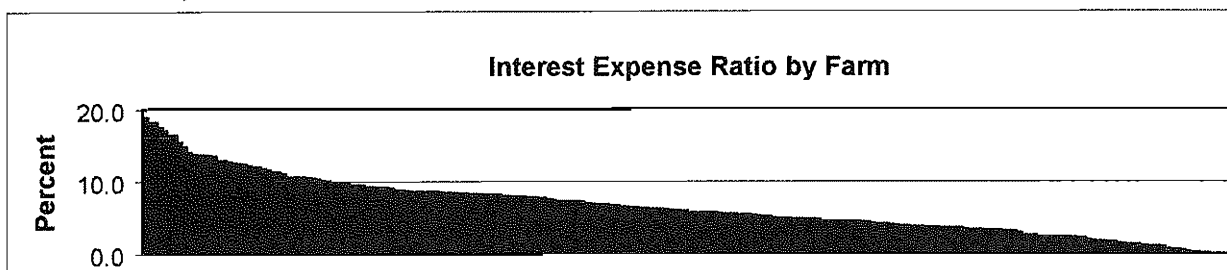
**Asset Turnover:** Asset turnover is a measure of how efficiently assets are used in the business. A farm with good operating profit margin and asset turnover will show a strong rate of return on farm assets. If operating profit margin is low, the asset turnover rate must be strong, or vice versa, to maintain the rate of return on assets.

**Operating Expense Ratio:** This ratio indicates the percent of the gross farm income which is used to pay the operating expenses. Operating expenses do not include interest or depreciation expense.



**Depreciation Expense Ratio:** This ratio indicates the percent of the gross farm income which is used to cover the depreciation expense.

**Interest Expense Ratio:** This ratio indicates the percent of the gross farm income which is used to pay farm interest expenses.



**Net Farm Income Ratio:** The ratio indicates the percent of the gross farm income which remains after all expenses.

## Five Year Trends Red River Valley Farm Business Management Education

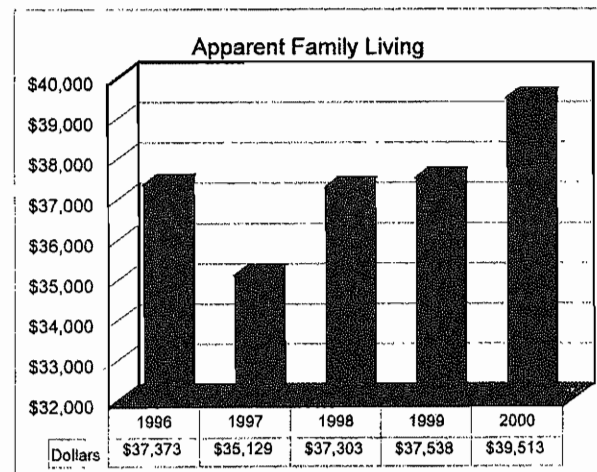
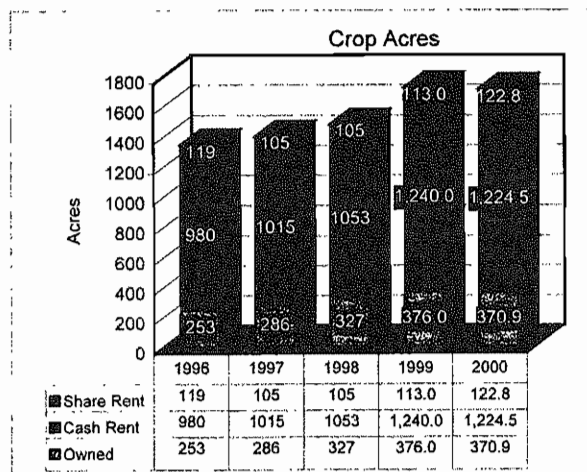
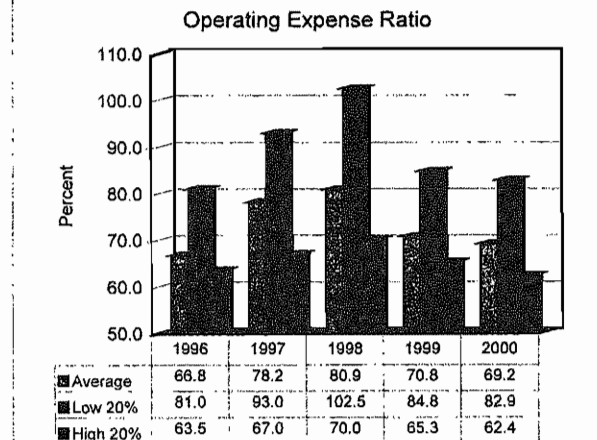
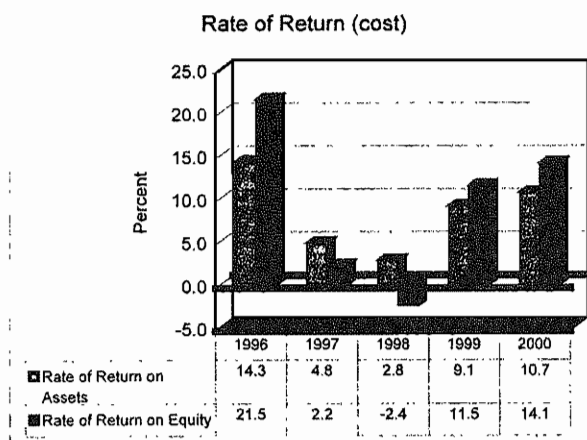
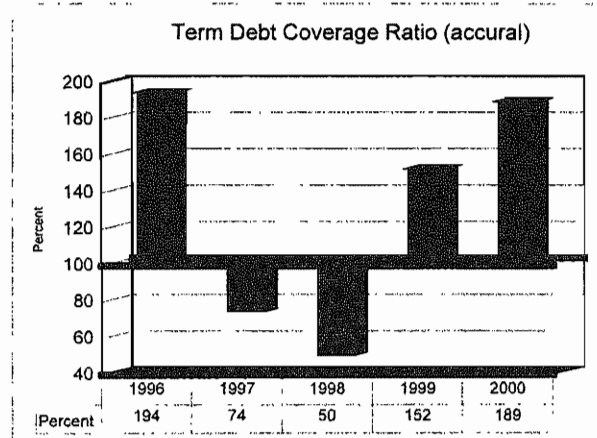
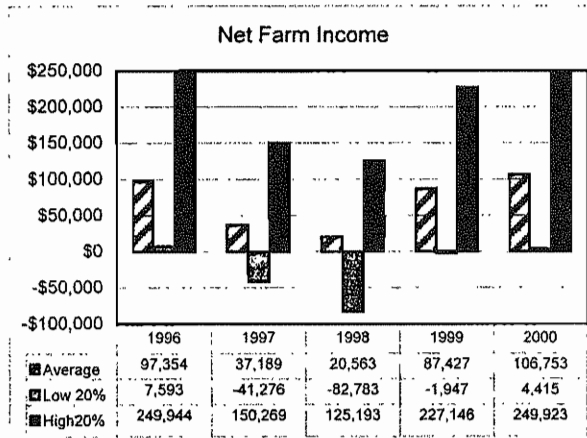




TABLE 1  
FARM INCOME STATEMENT, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	226	45	46
CASH FARM INCOME			
Barley	3,286	1,859	9,202
Beans, Black Turtle	124	129	482
Beans, Navy	3,227	1,127	3,644
Beans, Pinto	2,155	497	869
Canola	1,599	-	2,602
Corn	24,882	29,291	40,298
Hay, Alfalfa	803	825	-
Potatoes	1,324	-	3,339
Potatoes, Seed	490	-	-
Soybeans	69,071	65,021	88,304
Straw	619	86	-
Sugar Beets	117,685	37,907	213,635
Sunflowers	2,431	1,067	2,305
Sunflowers, Confectionary	2,008	510	1,624
Wheat, Durum	642	-	2,403
Wheat, Spring	78,032	41,997	120,748
Wheat, Winter	1,435	1	5,737
Other crops	801	-	983
Miscellaneous crop income	106	43	49
Beef Calves	138	172	-
Background Beef	456	1,234	1,031
Finish Beef Calves	1,244	-	5,928
Finish Yrlg Steers	298	-	-
Dairy, Milk	719	3,610	-
Dairy Heifers	106	530	-
Hogs, Farrow to Finish	2,267	11,385	-
Hogs, Weaning to Finish	3,805	-	18,695
Cull breeding livestock	240	982	217
Misc. livestock income	90	21	45
Gov't transition payments	53,571	42,294	75,164
CRP payments	1,020	346	1,176
Other government payments	48,759	25,337	74,027
Custom work income	5,032	819	5,189
Patronage dividends, cash	4,304	2,211	9,487
Insurance income	28,354	13,457	58,632
Cash from hedging accts	482	-	1,189
Other farm income	13,630	5,330	19,143
Gross Cash Farm Income	475,233	288,089	766,145

TABLE 1  
FARM INCOME STATEMENT, 2000 (Continued)  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	226	45	46
CASH FARM EXPENSE			
Seed	28,065	17,846	43,443
Fertilizer	37,662	26,644	56,374
Crop chemicals	55,696	30,008	91,026
Crop insurance	13,678	8,841	20,030
Drying fuel	639	302	1,110
Crop marketing	7,330	2,894	12,942
Crop miscellaneous	19,267	8,840	34,109
Feeder livestock purchase	2,498	801	10,352
Purchased feed	2,845	5,087	8,325
Breeding fees	24	122	-
Veterinary	158	241	520
Livestock expenses	255	1,085	131
Interest	32,725	20,152	44,931
Fuel & oil	19,159	11,806	29,122
Repairs	30,463	21,739	39,844
Custom hire	12,096	7,248	15,339
Hired labor	17,492	11,576	31,581
Land rent	82,148	52,608	118,717
Machinery & bldg leases	8,613	4,848	11,872
Real estate taxes	4,094	2,837	6,614
Farm insurance	6,140	4,577	8,747
Utilities	4,090	3,767	5,605
Dues & professional fees	3,389	2,488	5,225
Hedging account deposits	1,490	33	2,699
Miscellaneous	9,591	6,957	9,746
Total cash expense	399,610	253,345	608,406
Net cash farm income	75,623	34,745	157,740
INVENTORY CHANGES			
Crops and feed	30,195	-1,698	64,860
Market livestock	556	-333	1,498
Accounts receivable	12,954	-2,891	31,066
Prepaid expenses and supplies	7,002	80	18,823
Accounts payable	1,036	-6,635	6,013
Total inventory change	51,743	-11,478	122,260
Net operating profit	127,366	23,266	280,000
DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS			
Breeding livestock	-50	-81	-67
Machinery and equipment	-22,249	-12,659	-34,179
Buildings and improvements	-1,010	-1,923	-1,557
Other farm capital	2,696	-4,188	5,727
Total depr. and other capital adj	-20,613	-18,852	-30,077
Net farm income	106,753	4,415	249,923

TABLE 2  
INVENTORY CHANGES, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	226	45	46
Net cash farm income	75,623	34,745	157,740
CROPS AND FEED			
Ending inventory	187,823	93,776	331,232
Beginning inventory	158,471	95,474	266,372
Inventory change	30,195	-1,698	64,860
MARKET LIVESTOCK			
Ending inventory	4,029	4,937	11,912
Beginning inventory	3,473	5,270	10,414
Inventory change	556	-333	1,498
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	50,214	25,699	89,851
Beginning inventory	37,261	28,590	58,785
Inventory change	12,954	-2,891	31,066
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	32,654	13,193	65,624
Beginning inventory	25,652	13,114	46,800
Inventory change	7,002	80	18,823
ACCOUNTS PAYABLE & ACCRUED EXPENSES			
Beginning inventory	27,006	13,671	42,235
Ending inventory	25,965	20,306	36,223
Inventory change	1,036	-6,635	6,013
Total inventory change	51,743	-11,478	122,260
Net operating profit	127,366	23,266	280,000

TABLE 3  
DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	226	45	46
Net operating profit	127,366	23,266	280,000
BREEDING LIVESTOCK			
Ending inventory	1,547	4,947	1,734
Capital sales	-	-	-
Beginning inventory	1,488	4,664	1,651
Capital purchases	108	363	150
Depreciation, capital adjust.	-50	-81	-67
MACHINERY AND EQUIPMENT			
Ending inventory	216,797	160,742	314,830
Capital sales	3,173	2,585	3,822
Beginning inventory	203,796	153,505	302,261
Capital purchases	38,422	22,482	50,570
Depreciation, capital adjust.	-22,249	-12,659	-34,179
BUILDINGS AND IMPROVEMENTS			
Ending inventory	41,339	66,141	55,904
Capital sales	-	-	-
Beginning inventory	38,229	56,493	54,604
Capital purchases	4,119	11,572	2,856
Depreciation, capital adjust.	-1,010	-1,923	-1,557
OTHER CAPITAL ASSETS			
Ending inventory	174,129	53,843	324,803
Capital sales	3,480	441	8,646
Beginning inventory	172,512	57,503	322,556
Capital purchases	2,401	968	5,165
Depreciation, capital adjust.	2,696	-4,188	5,727
Total depreciation, capital adj.	-20,613	-18,852	-30,077
Net farm income	106,753	4,415	249,923



TABLE 4  
 PROFITABILITY MEASURES, 2000  
 Minnesota and North Dakota Farm Business Mgmt Education  
 Red River Valley  
 (Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	225	44	46
Profitability (assets valued at cost)			
Net farm income	107,721	7,038	249,923
Labor and management earnings	76,529	-11,173	189,864
Rate of return on assets	10.7 %	1.6 %	14.5 %
Rate of return on equity	14.1 %	-5.0 %	19.8 %
Operating profit margin	20.6 %	3.8 %	28.7 %
Asset turnover rate	52.2 %	42.3 %	50.5 %
Interest on farm net worth	31,192	18,211	60,058
Farm interest expense	32,730	25,444	44,607
Value of operator lbr and mgmt.	34,683	21,983	52,334
Return on farm assets	105,768	10,499	242,196
Average farm assets	984,706	647,422	1,673,916
Return on farm equity	73,038	-14,945	197,589
Average farm equity	517,015	299,549	997,586
Value of farm production	513,981	274,054	844,825

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	226	45	46
Profitability (assets valued at market)			
Net farm income	62,950	13,013	149,122
Labor and management earnings	29,299	-6,768	84,930
Rate of return on assets	5.3 %	2.2 %	7.2 %
Rate of return on equity	5.0 %	-2.9 %	9.1 %
Operating profit margin	11.9 %	5.7 %	16.7 %
Asset turnover rate	44.7 %	37.7 %	42.7 %
Interest on farm net worth	33,651	19,781	64,192
Farm interest expense	32,667	25,287	44,607
Value of operator lbr and mgmt.	34,710	22,401	52,334
Return on farm assets	60,906	15,899	141,395
Average farm assets	1,147,620	736,012	1,976,377
Return on farm equity	28,240	-9,388	96,788
Average farm equity	559,684	327,975	1,069,429
Value of farm production	513,545	277,197	844,825

TABLE 5  
LIQUIDITY MEASURES, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	226	45	46
Liquidity (cash)			
Net cash farm income	75,623	34,745	157,740
Net nonfarm income	14,328	16,437	8,314
Family living and taxes	48,797	36,920	70,313
Real estate principal payments	9,947	11,442	13,125
Cash available for interm. debt	31,207	2,819	82,615
Average intermediate debt	156,547	99,595	202,224
Years to turnover interm. debt	5.0	35.3	2.4
Expense as a % of income	84 %	88 %	79 %
Interest as a % of income	7 %	7 %	6 %
Liquidity (accrual)			
Total accrual farm income	518,938	283,166	863,569
Total accrual operating expense	391,572	259,900	583,570
Net accrual operating income	127,366	23,266	280,000
Net nonfarm income	14,328	16,437	8,314
Family living and taxes	48,797	36,920	70,313
Real estate principal payments	9,947	11,442	13,125
Available for intermediate debt	82,950	-8,659	204,875
Average intermediate debt	156,547	99,595	202,224
Years to turnover interm. debt	1.9	**	1.0
Expense as a % of income	75 %	92 %	68 %
Interest as a % of income	6 %	9 %	5 %

\*\* Income insufficient to meet debt servicing requirements

TABLE 6  
BALANCE SHEET AT COST VALUES, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms		Low 20%		High 20%	
Number of farms	188		40		33	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	14,558	15,079	13,404	6,646	24,911	23,375
Prepaid expenses & supplies	21,460	28,230	12,420	12,366	36,317	51,123
Growing crops	56	22	0	0	182	0
Accounts receivable	28,712	42,736	24,390	25,968	54,102	90,403
Hedging accounts	1,578	1,451	3,469	200	1,824	3,187
Crops held for sale or feed	135,622	158,707	93,400	89,035	211,717	259,953
Crops under government loan	2,509	2,100	443	1,575	4,225	3,468
Market livestock held for sale	2,721	3,123	5,929	5,554	6,289	7,406
Other current assets	2,259	1,851	1,948	400	1,027	0
Total current farm assets	209,475	253,299	155,403	141,743	340,594	438,915
<b>Intermediate Farm Assets</b>						
Breeding livestock	1,238	1,356	3,005	3,548	2,302	2,417
Machinery and equipment	176,339	187,486	144,247	148,239	243,829	255,618
Other intermediate assets	124,670	125,833	40,678	41,179	205,354	202,230
Total intermediate farm assets	302,246	314,675	187,930	192,965	451,485	460,265
<b>Long Term Farm Assets</b>						
Farm land	261,370	271,233	216,892	218,383	494,582	510,925
Buildings and improvements	35,336	39,253	53,300	64,222	41,725	44,110
Other long-term assets	20,553	21,282	9,023	9,445	75,665	77,618
Total long-term farm assets	317,260	331,767	279,214	292,050	611,972	632,653
Total Farm Assets	828,981	899,742	622,547	626,759	1,404,051	1,531,833
Total Nonfarm Assets	141,771	151,659	85,554	97,390	189,608	203,322
Total Assets	970,751	1,051,401	708,101	724,148	1,593,659	1,735,155
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	10,156	10,625	7,699	13,551	11,828	11,399
Accounts payable	11,550	10,495	6,505	6,436	17,965	13,764
Current notes	100,228	110,794	93,214	107,669	178,433	132,304
Government crop loans	1,951	1,507	0	0	3,599	3,401
Principal due on term debt	34,414	33,851	27,860	23,273	52,206	50,780
Total current farm liabilities	158,300	167,273	135,278	150,928	264,032	211,648
Total intermediate farm liabs	119,184	115,654	76,440	71,560	161,302	163,590
Total long term farm liabilities	156,551	160,711	139,643	137,693	262,495	269,323
Total farm liabilities	434,035	443,638	351,361	360,182	687,829	644,561
Total nonfarm liabilities	24,261	26,099	22,589	25,978	29,679	31,679
Total liabilities	458,296	469,738	373,950	386,160	717,507	676,239
NET WORTH (farm and nonfarm)	512,456	581,663	334,150	337,988	876,152	1,058,915
Net worth change		69,207		3,837		182,764
<b>RATIO ANALYSIS</b>						
Current farm liabilities / assets	76 %	66 %	87 %	106 %	78 %	48 %
Curr. & interm farm liab. / asset	54 %	50 %	62 %	66 %	54 %	42 %
Long term farm liab. / assets	49 %	48 %	50 %	47 %	43 %	43 %
Total debt to asset ratio	47 %	45 %	53 %	53 %	45 %	39 %

TABLE 7  
BALANCE SHEET AT MARKET VALUES, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms		Low 20%		High 20%	
Number of farms	188		40		33	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	14,558	15,079	13,404	6,646	24,911	23,375
Prepaid expenses & supplies	21,460	28,230	12,420	12,366	36,317	51,123
Growing crops	56	22	0	0	182	0
Accounts receivable	28,712	42,736	24,390	25,968	54,102	90,403
Hedging accounts	1,578	1,451	3,469	200	1,824	3,187
Crops held for sale or feed	135,622	158,707	93,400	89,035	211,717	259,953
Crops under government loan	2,509	2,100	443	1,575	4,225	3,468
Market livestock held for sale	2,721	3,123	5,929	5,554	6,289	7,406
Other current assets	2,259	1,851	1,948	400	1,027	0
Total current farm assets	209,475	253,299	155,403	141,743	340,594	438,915
Intermediate Farm Assets						
Breeding livestock	1,164	1,486	2,668	4,088	2,291	2,417
Machinery and equipment	231,175	244,864	180,512	189,391	335,057	349,084
Other intermediate assets	162,088	126,742	43,745	41,393	289,120	217,283
Total intermediate farm assets	394,427	373,091	226,924	234,872	626,468	568,784
Long Term Farm Assets						
Farm land	308,031	324,703	260,279	261,895	562,415	598,481
Buildings and improvements	45,455	50,204	60,968	74,246	59,032	62,108
Other long-term assets	22,289	21,794	9,023	9,823	79,773	76,917
Total long-term farm assets	375,776	396,702	330,269	345,964	701,220	737,506
Total Farm Assets	979,678	1,023,092	712,597	722,579	1,668,283	1,745,205
Total Nonfarm Assets	156,011	167,331	88,119	100,280	206,560	220,801
Total Assets	1,135,689	1,190,423	800,716	822,859	1,874,842	1,966,005
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	10,156	10,625	7,699	13,551	11,828	11,399
Accounts payable	11,550	10,495	6,505	6,436	17,965	13,764
Current notes	100,228	110,794	93,214	107,669	178,433	132,304
Government crop loans	1,951	1,507	0	0	3,599	3,401
Principal due on term debt	34,414	33,851	27,860	23,273	52,206	50,780
Total current farm liabilities	158,300	167,273	135,278	150,928	264,032	211,648
Total intermediate farm liabs	119,184	115,654	76,440	71,560	161,302	163,590
Total long term farm liabilities	156,551	160,711	139,643	137,693	262,495	269,323
Total farm liabilities	434,035	443,638	351,361	360,182	687,829	644,561
Total nonfarm liabilities	24,261	26,099	22,589	25,978	29,679	31,679
Total liabs excluding deferreds	458,296	469,738	373,950	386,160	717,507	676,239
Total deferred liabilities	98,342	105,159	58,078	54,561	176,093	192,523
Total liabilities	556,638	574,897	432,028	440,721	893,600	868,762
RETAINED EARNINGS	512,456	581,663	334,150	337,988	876,152	1,058,915
Market valuation equity	66,595	33,863	34,537	44,150	105,090	38,328
Net worth (farm and nonfarm)	579,051	615,526	368,688	382,138	981,242	1,097,243
Net worth excluding deferreds	677,393	720,686	426,765	436,699	1,157,335	1,289,766
Net worth change		36,475		13,451		116,001
<b>RATIO ANALYSIS</b>						
Current farm liabilities / assets	76 %	66 %	87 %	106 %	78 %	48 %
Curr. & interm farm liab. / asset	46 %	45 %	55 %	59 %	44 %	37 %
Long term farm liab. / assets	42 %	41 %	42 %	40 %	37 %	37 %
Total debt to asset ratio	49 %	48 %	54 %	54 %	48 %	44 %
Debt to assets excl deferreds	40 %	39 %	47 %	47 %	38 %	34 %



TABLE 8  
STATEMENT OF CASH FLOWS, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	226	45	46
Beginning cash (farm & nonfarm)	23,146	15,037	30,750
CASH FROM OPERATING ACTIVITIES			
Gross cash farm income	475,233	288,089	766,145
Net nonfarm income	14,328	16,437	8,314
Total cash farm expense	-399,610	-253,345	-608,406
Apparent family living expense	-39,513	-33,038	-51,590
Income and social security tax	-9,285	-3,882	-18,723
Cash from operations	41,154	14,261	95,740
CASH FROM INVESTING ACTIVITIES			
Sale of breeding livestock	-	-	-
Sale of machinery & equipment	3,173	2,585	3,822
Sale of farm land	1,351	-	1,287
Sale of farm buildings	-	-	-
Sale of other farm assets	3,480	441	8,646
Sale of nonfarm assets	2,812	4,201	4,546
Purchase of breeding livestock	-108	-363	-150
Purchase of machinery & equip.	-38,422	-22,482	-50,570
Purchase of farm land	-8,812	-1,333	-11,681
Purchase of farm buildings	-4,119	-11,572	-2,856
Purchase of other farm assets	-2,401	-968	-5,165
Purchase of nonfarm assets	-11,561	-12,157	-14,876
Cash from investing activities	-54,608	-41,649	-66,998
CASH FROM FINANCING ACTIVITIES			
Money borrowed	244,514	183,591	337,696
Cash gifts and inheritances	3,789	8,735	2,715
Principal payments	-233,344	-170,677	-365,618
Dividends paid	-	-	-
Gifts given	-53	-49	-1
Cash from financing activities	14,905	21,601	-25,207
Net change in cash balance	1,451	-5,787	3,535
Ending cash (farm & nonfarm)	24,598	9,250	34,284

TABLE 9  
FINANCIAL STANDARDS MEASURES, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	226	45	46
LIQUIDITY			
Current ratio	1.63	1.00	2.19
Working capital	114,086	-561	283,082
SOLVENCY (market)			
Farm debt to asset ratio	51 %	56 %	45 %
Farm equity to asset ratio	49 %	44 %	55 %
Farm debt to equity ratio	104 %	126 %	81 %
PROFITABILITY (cost)			
Rate of return on farm assets	10.7 %	1.6 %	14.5 %
Rate of return on farm equity	14.1 %	-5.0 %	19.8 %
Operating profit margin	20.6 %	3.8 %	28.7 %
Net farm income	107,721	7,038	249,923
REPAYMENT CAPACITY			
Term debt coverage ratio	189 %	39 %	284 %
Capital replacement margin	54,715	-27,119	164,257
EFFICIENCY			
Asset turnover rate (cost)	52.2 %	42.3 %	50.5 %
Operating expense ratio	69.2 %	82.9 %	62.4 %
Depreciation expense ratio	4.0 %	6.7 %	3.5 %
Interest expense ratio	6.3 %	8.9 %	5.2 %
Net farm income ratio	20.6 %	1.6 %	28.9 %

TABLE 10  
CROP PRODUCTION AND MARKETING SUMMARY, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	226	45	46
ACREAGE SUMMARY			
Total acres owned	397	300	699
Total crop acres	1,718	1,158	2,437
Crop acres owned	371	293	612
Crop acres cash rented	1,224	783	1,619
Crop acres share rented	123	82	206
Total pasture acres	2	-	10
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Wheat, Spring per bu.	2.92	2.82	2.89
Soybeans per bu.	4.34	4.21	4.42
Corn per bu.	1.60	1.42	1.64
Barley per bu.	1.60	1.27	1.68
Beans, Navy per cwt.	14.55	-	14.56
Sunflowers per cwt.	7.59	-	7.10
Canola per cwt.	6.09	-	6.28
Sunflowers, Confectionary per cwt.	10.69	-	-
Beans, Pinto per cwt.	12.46	-	-
Hay, Alfalfa per ton	53.81	-	-
Wheat, Winter per bu.	2.49	-	-
AVERAGE YIELD PER ACRE			
Wheat, Spring (bu.)	49.21	45.09	50.33
Soybeans (bu.)	32.34	30.50	34.98
Sugar Beets (ton)	20.01	21.96	18.86
Corn (bu.)	114.68	95.23	111.43
Barley (bu.)	56.24	56.82	67.71
Sunflowers (cwt.)	14.58	16.85	15.66
Beans, Navy (cwt.)	13.02	-	11.42
Beans, Pinto (cwt.)	15.21	-	16.32
Sunflowers, Confectionary (cwt.)	16.06	-	-
Canola (cwt.)	11.43	-	12.73
Hay, Alfalfa (ton)	3.20	3.36	-
Beans, Black Turtle (cwt.)	14.60	-	-
Oats (bu.)	78.27	-	-

TABLE 11  
HOUSEHOLD AND PERSONAL EXPENSES, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

	Avg. Of All Farms
Number of farms	27
Average family size	3.5
Family Living Expenses	
Food and meals expense	5,916
Medical care and health insurance	4,449
Cash donations	1,434
Household supplies	4,817
Clothing	2,606
Personal care	1,590
Child / Dependent care	892
Gifts	3,395
Education	1,687
Recreation	4,669
Utilities (household share)	1,507
Nonfarm vehicle operating expense	1,122
Household real estate taxes	234
Dwelling rent	-
Household repairs	1,648
Nonfarm interest	1,078
Life insurance payments	1,122
Total cash family living expense	38,167
Family living from the farm	-
Total family living	38,167
Other Nonfarm Expenditures	
Income taxes	14,807
Furnishing & appliance purchase	26
Nonfarm vehicle purchases	1,051
Nonfarm real estate purchases	3,614
Other nonfarm capital purchases	1,846
Nonfarm savings & investments	4,345
Total other nonfarm expenditures	25,688
Total cash family living investment & nonfarm capital purch	63,856

TABLE 12  
 NONFARM INCOME, OPERATOR AND LABOR INFORMATION, 2000  
 Minnesota and North Dakota Farm Business Mgmt Education  
 Red River Valley  
 (Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 20%	High 20%
Number of farms	226	45	46
NONFARM INCOME			
Nonfarm wages & salary	10,938	10,376	7,285
Nonfarm business income	775	2,782	-788
Nonfarm rental income	585	868	483
Nonfarm interest income	306	236	297
Nonfarm cash dividends	74	59	155
Tax refunds	396	254	68
Gifts and inheritances	3,789	8,735	2,715
Other nonfarm income	1,254	1,861	813
Total nonfarm income	18,116	25,172	11,029
OPERATOR INFORMATION			
Average number of operators	1.1	1.1	1.3
Average age of operators	42.3	43.0	43.9
Average number of years farming	20.0	19.8	23.6
RESULTS PER OPERATOR			
Working capital	99,550	-515	224,513
Total assets (market)	1,155,901	765,279	1,764,356
Total liabilities	654,607	454,336	929,146
Net worth (market)	501,294	310,943	835,210
Net worth excl deferred liabs	612,298	362,867	1,027,573
Gross farm income	452,819	260,051	684,900
Total farm expense	359,667	255,997	486,685
Net farm income	93,151	4,054	198,214
Net nonfarm income	12,502	15,095	6,594
Family living withdrawals	42,580	33,906	55,766
Total acres owned	347	276	554
Total crops acres	1,499	1,063	1,933
Crop acres owned	324	268	485
Crop acres cash rented	1,068	719	1,284
Crop acres share rented	107	76	164
Total pasture acres	2	-	8
LABOR ANALYSIS			
Number of farms	201	36	42
Total unpaid labor hours	2,269	1,861	2,810
Total hired labor hours	1,193	450	2,238
Total labor hours per farm	3,462	2,311	5,048
Unpaid hours per operator	1,966	1,675	2,185

## **EXPLANATORY NOTES FOR CROPS TABLES**

The "Crop Enterprise Analysis" tables show the average physical production, gross return, direct costs, overhead costs, and net returns per acre. The "Net Return per Acre" is the "Gross Return per Acre" minus the direct and overhead costs. "Net Return" represents the return to the operator's and family's unpaid labor, management, and equity. It represents the return to all of the resources which are owned by the farm family and hence, not purchased or paid a wage. Net returns are also calculated after a charge for unpaid operator labor and management and after an allocation of Agricultural Market Transition Act and Market Loss Assistance government payments. Sugar beet enterprises, where the beet stock is owned, have a sugar beet stock equity charge to determine net return over sugar beet stock. The sugar beet stock equity charge is calculated by multiplying \$1250 (the average sugar beet stock sales price in 2000) by 8% and subtracting the interest paid on beet stock debt in 2000. The last section of each crop table contains breakeven yield measures which provide useful standards or goals for the individual managers.

There are potentially three tables for each crop depending on the farmer's tenure on the land. The crop tables may be for (1) owned land, (2) cash rented land, and (3) share rented land. Individual farms may have data in all three tables if all three land tenure categories are represented in that farm business. When there are less than five farms with a particular crop and tenure, that table is not included in the report. Farms are classified into low 20% or high 20% on the basis of net return per acre. The classification is done separately for each table, i.e., an individual farm may be in the low 20% for one crop, the high 20% for a second, and the middle 60% for a third. When there are less than 25 total farms with any particular crop and farmer's tenure, only overall averages are presented.

Value per unit is the market price received plus any loan deficiency payment. Miscellaneous income includes crop insurance and disaster payments for the crop.

Several cost items, such as "utilities," "hired labor," and "interest paid," are listed under both "direct" and "overhead" costs because some of these costs are specific to that crop whereas others are general overhead costs of the farm. For example, "Direct Lease Payments" refers to non-land inputs or resources leased and used only in that crop enterprise and not listed elsewhere under direct costs; the most common example is the lease of equipment that is crop specific. However, cost of leasing machinery that is used for the entire farm operation is listed as an overhead cost. Interest payments are likewise divided into those incurred directly for a specific crop and those that are not. "Land Rent" is listed as a separate category and is assigned as a direct cost for each crop enterprise because it is identifiable with the specific crop. In the case of double cropping, one-half of the rent is charged to each crop.

In the last section of the crop table, "Total direct expense per unit" and "Total dir & ovhd exp per unit" are calculated by dividing "Total direct expense per acre" and "Total dir & ovhd expenses per acre," respectively, by "Yield per acre." "With labor & management" is the breakeven price after direct, overhead and a labor and management charge are considered. "Total exp less govt & oth income" is the breakeven price after all costs (including a labor and management charge) are reduced by government payments and miscellaneous income.

Rounding of individual items for the report may have caused minor discrepancies with the calculated totals.



# **Five Year Crop History of Yields and Cost of Production Red River Valley Farm Business Management Education**

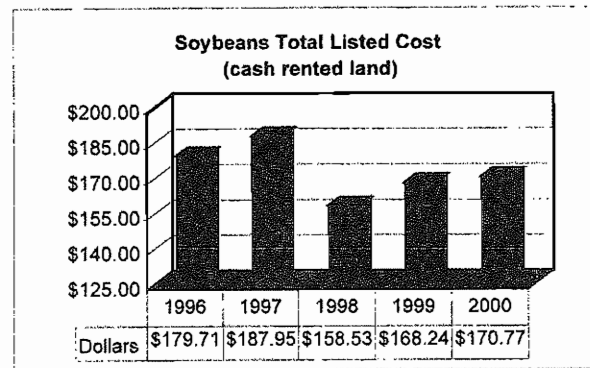
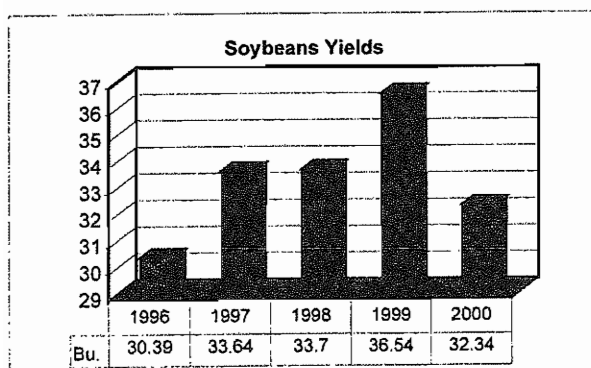
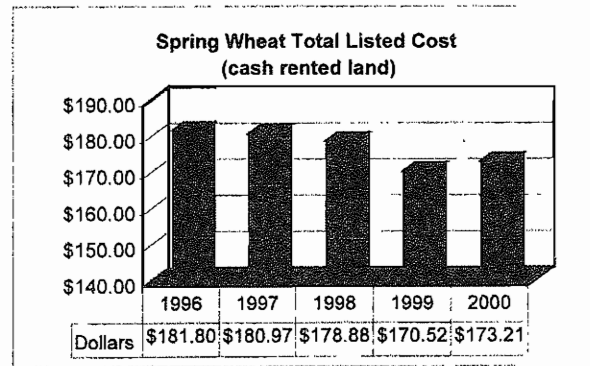
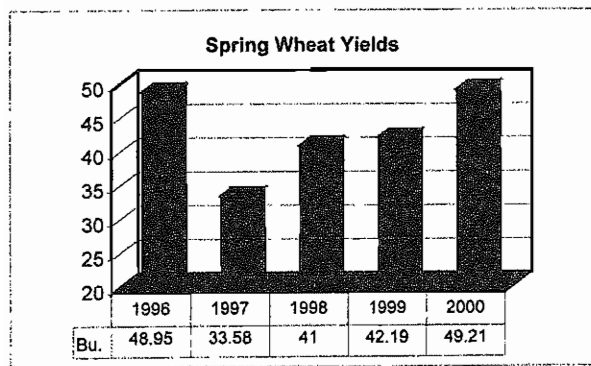
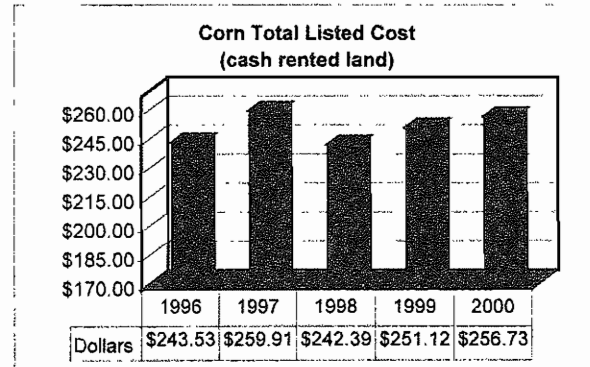
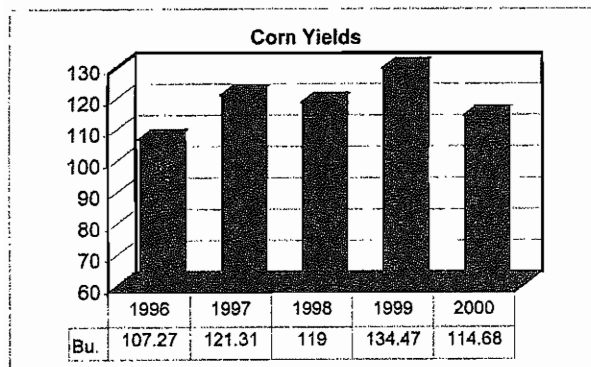
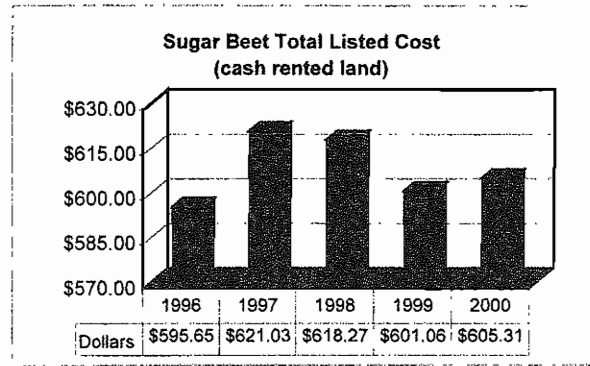
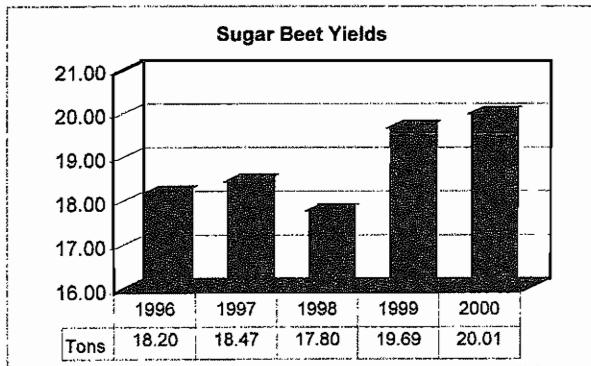


TABLE 13 - 1  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Barley on Owned Land	
	Avg. Of All Farms
Number of fields	10
Number of farms	10
Acres	131.94
Yield per acre (bushel)	62.49
Operators share of yield %	100.00
Value per bushel	1.94
Total product return per acre	121.28
Miscellaneous income per acre	32.44
Gross return per acre	153.71
Direct Expenses	
Seed	7.35
Fertilizer	20.32
Crop chemicals	14.65
Crop insurance	5.71
Fuel & oil	6.45
Repairs	9.63
Custom hire	3.00
Operating interest	1.60
Total direct expenses per acre	68.70
Return over direct exp per acre	85.01
Overhead Expenses	
Custom hire	1.38
Hired labor	3.24
Machinery & bldg leases	1.53
RE & pers. property taxes	8.39
Farm insurance	3.30
Utilities	1.15
Dues & professional fees	0.57
Interest	23.71
Mach & bldg depreciation	9.11
Miscellaneous	2.29
Total overhead expenses per acre	54.68
Total dir & ovhd expenses per acre	123.38
Net return per acre	30.33
Lbr & mgt charge per acre	12.07
Net return over lbr & mgt	18.26
Government payments	32.09
Net return with govt payments	50.34
Cost of Production	
Total direct expense per bushel	1.10
Total dir & ovhd exp per bushel	1.97
With labor & management	2.17
Total exp less govt & oth income	1.14

TABLE 13 - 2  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Barley on Cash Rented Land

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	26	5	5
Number of farms	25	5	5
Acres	169.11	284.62	150.34
Yield per acre (bushel)	59.44	42.07	80.93
Operators share of yield %	100.00	100.00	100.00
Value per bushel	1.87	1.52	2.24
Total product return per acre	111.17	63.96	181.30
Miscellaneous income per acre	13.78	27.75	10.16
Gross return per acre	124.95	91.71	191.47
Direct Expenses			
Seed	7.63	7.63	7.87
Fertilizer	22.78	30.30	18.29
Crop chemicals	17.42	23.07	7.20
Crop insurance	4.23	5.80	2.97
Fuel & oil	6.69	5.48	6.71
Repairs	9.75	8.84	10.63
Custom hire	1.05	0.57	1.10
Land rent	57.52	60.95	51.22
Operating interest	3.55	3.60	2.23
Miscellaneous	0.60	0.42	-
Total direct expenses per acre	131.22	146.65	108.22
Return over direct exp per acre	-6.27	-54.94	83.25
Overhead Expenses			
Custom hire	1.57	2.53	0.45
Hired labor	3.70	2.72	4.50
Machinery & bldg leases	2.85	2.85	1.85
Farm insurance	2.94	4.10	3.00
Utilities	1.53	1.29	1.58
Dues & professional fees	1.30	1.01	2.44
Interest	3.61	3.78	2.89
Mach & bldg depreciation	7.77	8.89	7.85
Miscellaneous	1.98	0.96	1.19
Total overhead expenses per acre	27.25	28.12	25.74
Total dir & ovhd expenses per acre	158.47	174.78	133.96
Net return per acre	-33.52	-83.07	57.50
Lbr & mgt charge per acre	14.64	13.51	13.16
Net return over lbr & mgt	-48.17	-96.58	44.34
Government payments	30.03	27.51	28.35
Net return with govt payments	-18.13	-69.07	72.69
Cost of Production			
Total direct expense per bushel	2.21	3.49	1.34
Total dir & ovhd exp per bushel	2.67	4.15	1.66
With labor & management	2.91	4.48	1.82
Total exp less govt & oth income	2.18	3.16	1.34

TABLE 13 - 3  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Beans, Navy on Owned Land

	Avg. Of All Farms
Number of fields	11
Number of farms	10
Acres	79.68
Yield per acre (cwt)	11.42
Operators share of yield %	100.00
Value per cwt	13.71
Total product return per acre	156.53
Miscellaneous income per acre	80.02
Gross return per acre	236.55
Direct Expenses	
Seed	34.99
Fertilizer	20.19
Crop chemicals	25.86
Crop insurance	19.00
Fuel & oil	11.70
Repairs	16.30
Custom hire	6.64
Operating interest	6.35
Miscellaneous	0.34
Total direct expenses per acre	141.37
Return over direct exp per acre	95.18
Overhead Expenses	
Custom hire	4.65
Hired labor	10.59
Machinery & bldg leases	3.80
RE & pers. property taxes	10.35
Farm insurance	5.28
Utilities	2.75
Dues & professional fees	1.85
Interest	35.91
Mach & bldg depreciation	11.42
Miscellaneous	8.42
Total overhead expenses per acre	95.04
Total dir & ovhd expenses per acre	236.41
Net return per acre	0.14
Lbr & mgt charge per acre	22.74
Net return over lbr & mgt	-22.60
Government payments	-
Net return with govt payments	-22.60
Cost of Production	
Total direct expense per cwt	12.38
Total dir & ovhd exp per cwt	20.71
With labor & management	22.69
Total exp less govt & oth income	15.69

TABLE 13 - 4  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Beans, Navy on Cash Rented Land

	Avg. Of All Farms
Number of fields	21
Number of farms	17
Acres	133.85
Yield per acre (cwt)	11.90
Operators share of yield %	100.00
Value per cwt	12.78
Total product return per acre	152.03
Miscellaneous income per acre	110.61
Gross return per acre	262.65
Direct Expenses	
Seed	27.33
Fertilizer	21.24
Crop chemicals	23.58
Crop insurance	21.14
Fuel & oil	11.17
Repairs	21.54
Custom hire	4.06
Land rent	53.86
Operating interest	6.37
Miscellaneous	0.87
Total direct expenses per acre	191.17
Return over direct exp per acre	71.48
Overhead Expenses	
Custom hire	2.45
Hired labor	10.71
Machinery & bldg leases	2.79
Farm insurance	5.28
Utilities	2.57
Dues & professional fees	2.47
Interest	3.81
Mach & bldg depreciation	15.29
Miscellaneous	3.44
Total overhead expenses per acre	48.80
Total dir & ovhd expenses per acre	239.97
Net return per acre	22.68
Lbr & mgt charge per acre	25.96
Net return over lbr & mgt	-3.28
Government payments	-
Net return with govt payments	-3.28
Cost of Production	
Total direct expense per cwt	16.07
Total dir & ovhd exp per cwt	20.17
With labor & management	22.35
Total exp less govt & oth income	13.05

TABLE 13 - 5  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Beans, Pinto on Owned Land

	Avg. Of All Farms
Number of fields	9
Number of farms	7
Acres	77.56
Yield per acre (cwt)	15.05
Operators share of yield %	100.00
Value per cwt	11.50
Total product return per acre	173.09
Miscellaneous income per acre	14.74
Gross return per acre	187.83
Direct Expenses	
Seed	27.25
Fertilizer	21.49
Crop chemicals	21.10
Crop insurance	19.14
Fuel & oil	14.13
Repairs	20.05
Custom hire	3.71
Operating interest	10.07
Miscellaneous	0.02
Total direct expenses per acre	136.97
Return over direct exp per acre	50.86
Overhead Expenses	
Custom hire	2.80
Hired labor	13.20
Machinery & bldg leases	3.24
RE & pers. property taxes	9.59
Farm insurance	7.98
Utilities	2.57
Dues & professional fees	2.59
Interest	43.35
Mach & bldg depreciation	18.01
Miscellaneous	4.20
Total overhead expenses per acre	107.53
Total dir & ovhd expenses per acre	244.50
Net return per acre	-56.67
Lbr & mgt charge per acre	22.25
Net return over lbr & mgt	-78.92
Government payments	-
Net return with govt payments	-78.92
Cost of Production	
Total direct expense per cwt	9.10
Total dir & ovhd exp per cwt	16.24
With labor & management	17.72
Total exp less govt & oth income	16.74



TABLE 13 - 6  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Beans, Pinto on Cash Rented Land

	Avg. Of All Farms
Number of fields	15
Number of farms	11
Acres	95.97
Yield per acre (cwt)	13.75
Operators share of yield %	100.00
Value per cwt	12.26
Total product return per acre	168.58
Miscellaneous income per acre	35.24
Gross return per acre	203.82
Direct Expenses	
Seed	25.38
Fertilizer	14.31
Crop chemicals	19.12
Crop insurance	15.03
Fuel & oil	12.20
Repairs	19.15
Custom hire	3.55
Land rent	50.27
Operating interest	6.99
Miscellaneous	0.01
Total direct expenses per acre	166.02
Return over direct exp per acre	37.80
Overhead Expenses	
Custom hire	2.42
Hired labor	7.04
Machinery & bldg leases	3.13
Farm insurance	5.97
Utilities	2.35
Dues & professional fees	2.20
Interest	4.55
Mach & bldg depreciation	14.62
Miscellaneous	3.06
Total overhead expenses per acre	45.34
Total dir & ovhd expenses per acre	211.36
Net return per acre	-7.54
Lbr & mgt charge per acre	27.30
Net return over lbr & mgt	-34.84
Government payments	-
Net return with govt payments	-34.84
Cost of Production	
Total direct expense per cwt	12.08
Total dir & ovhd exp per cwt	15.38
With labor & management	17.36
Total exp less govt & oth income	14.79

TABLE 13 - 7  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Canola on Cash Rented Land

	Avg. Of All Farms
Number of fields	13
Number of farms	13
Acres	234.08
Yield per acre (cwt)	10.96
Operators share of yield %	100.00
Value per cwt	10.46
Total product return per acre	114.65
Miscellaneous income per acre	35.14
Gross return per acre	149.78
Direct Expenses	
Seed	15.73
Fertilizer	24.74
Crop chemicals	20.07
Crop insurance	7.64
Fuel & oil	9.40
Repairs	10.86
Custom hire	1.81
Land rent	47.96
Operating interest	3.13
Total direct expenses per acre	141.34
Return over direct exp per acre	8.44
Overhead Expenses	
Custom hire	4.15
Hired labor	2.40
Machinery & bldg leases	4.49
Farm insurance	2.93
Utilities	1.36
Dues & professional fees	0.57
Interest	3.24
Mach & bldg depreciation	8.33
Miscellaneous	2.34
Total overhead expenses per acre	29.81
Total dir & ovhd expenses per acre	171.15
Net return per acre	-21.37
Lbr & mgt charge per acre	20.05
Net return over lbr & mgt	-41.42
Government payments	40.85
Net return with govt payments	-0.57
Cost of Production	
Total direct expense per cwt	12.90
Total dir & ovhd exp per cwt	15.62
With labor & management	17.45
Total exp less govt & oth income	10.51

TABLE 13 - 8  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Corn on Owned Land

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	36	6	6
Number of farms	32	6	6
Acres	124.61	105.90	125.03
Yield per acre (bushel)	109.08	71.39	147.42
Operators share of yield %	100.00	100.00	100.00
Value per bushel	1.78	1.74	1.74
Total product return per acre	194.00	124.00	256.69
Miscellaneous income per acre	24.83	27.87	42.49
Gross return per acre	218.83	151.87	299.18
Direct Expenses			
Seed	30.28	37.61	25.80
Fertilizer	34.77	32.33	37.20
Crop chemicals	19.10	19.53	18.25
Crop insurance	7.54	9.42	4.51
Drying fuel	5.34	1.92	1.28
Fuel & oil	11.41	11.68	11.48
Repairs	19.85	26.49	20.20
Custom hire	1.03	1.62	0.07
Operating interest	6.76	12.59	1.89
Miscellaneous	0.71	1.72	-
Total direct expenses per acre	136.79	154.90	120.67
Return over direct exp per acre	82.05	-3.03	178.51
Overhead Expenses			
Custom hire	3.06	2.03	2.82
Hired labor	9.88	13.26	4.39
Machinery & bldg leases	4.65	2.16	4.56
RE & pers. property taxes	10.05	13.28	7.71
Farm insurance	2.91	3.24	1.86
Utilities	2.25	3.49	1.65
Dues & professional fees	2.09	2.85	1.14
Interest	44.69	61.55	32.14
Mach & bldg depreciation	16.69	21.84	17.71
Miscellaneous	3.19	6.04	3.87
Total overhead expenses per acre	99.47	129.75	77.86
Total dir & ovhd expenses per acre	236.25	284.65	198.53
Net return per acre	-17.42	-132.78	100.65
Lbr & mgt charge per acre	19.07	23.94	17.79
Net return over lbr & mgt	-36.49	-156.72	82.86
Government payments	29.73	32.55	24.80
Net return with govt payments	-6.75	-124.17	107.66
Cost of Production			
Total direct expense per bushel	1.25	2.17	0.82
Total dir & ovhd exp per bushel	2.17	3.99	1.35
With labor & management	2.34	4.32	1.47
Total exp less govt & oth income	1.84	3.48	1.01

TABLE 13 - 9  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Corn on Cash Rented Land

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	85	12	15
Number of farms	60	12	12
Acres	191.80	145.28	237.10
Yield per acre (bushel)	113.77	89.20	126.07
Operators share of yield %	100.00	100.00	100.00
Value per bushel	1.83	1.83	1.83
Total product return per acre	208.27	163.35	231.08
Miscellaneous income per acre	25.24	1.68	78.52
Gross return per acre	233.51	165.04	309.60
Direct Expenses			
Seed	30.61	31.77	28.50
Fertilizer	35.44	33.86	40.11
Crop chemicals	21.96	23.73	23.51
Crop insurance	9.49	7.74	12.85
Drying fuel	4.56	2.13	1.16
Fuel & oil	11.16	11.10	9.83
Repairs	19.18	20.67	15.98
Custom hire	2.19	3.69	2.29
Land rent	63.32	62.18	65.39
Operating interest	7.24	8.81	4.45
Miscellaneous	1.02	1.39	0.59
Total direct expenses per acre	206.17	207.06	204.66
Return over direct exp per acre	27.34	-42.03	104.95
Overhead Expenses			
Custom hire	3.72	0.53	1.78
Hired labor	7.63	8.09	7.28
Machinery & bldg leases	5.76	8.25	6.84
Farm insurance	3.27	3.31	2.28
Utilities	2.37	3.58	1.46
Dues & professional fees	2.30	1.70	2.13
Interest	6.72	9.95	4.60
Mach & bldg depreciation	14.87	23.93	14.43
Miscellaneous	3.92	7.51	3.74
Total overhead expenses per acre	50.56	66.86	44.54
Total dir & ovhd expenses per acre	256.73	273.93	249.20
Net return per acre	-23.22	-108.89	60.41
Lbr & mgt charge per acre	19.88	25.59	16.12
Net return over lbr & mgt	-43.11	-134.48	44.29
Government payments	28.99	32.20	23.34
Net return with govt payments	-14.12	-102.28	67.63
Cost of Production			
Total direct expense per bushel	1.81	2.32	1.62
Total dir & ovhd exp per bushel	2.26	3.07	1.98
With labor & management	2.42	3.36	2.10
Total exp less govt & oth income	1.95	2.98	1.30

TABLE 13 - 10  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Corn on Share Rent

	Avg. Of All Farms
Number of fields	14
Number of farms	11
Acres	112.76
Yield per acre (bushel)	118.16
Operators share of yield %	67.93
Value per bushel	1.79
Total product return per acre	143.62
Miscellaneous income per acre	3.49
Gross return per acre	147.10
Direct Expenses	
Seed	26.84
Fertilizer	35.80
Crop chemicals	15.87
Crop insurance	7.87
Drying fuel	3.38
Fuel & oil	10.92
Repairs	15.55
Custom hire	4.06
Operating interest	6.05
Miscellaneous	0.07
Total direct expenses per acre	126.42
Return over direct exp per acre	20.68
Overhead Expenses	
Hired labor	9.24
Machinery & bldg leases	8.04
Farm insurance	2.21
Utilities	2.72
Dues & professional fees	1.52
Interest	5.29
Mach & bldg depreciation	29.18
Miscellaneous	3.09
Total overhead expenses per acre	61.28
Total dir & ovhd expenses per acre	187.70
Net return per acre	-40.60
Lbr & mgt charge per acre	21.76
Net return over lbr & mgt	-62.35
Government payments	22.99
Net return with govt payments	-39.37
Cost of Production	
Total direct expense per bushel	1.57
Total dir & ovhd exp per bushel	2.34
With labor & management	2.61
Total exp less govt & oth income	2.28

TABLE 13 - 11  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Hay, Alfalfa on Owned Land

	Avg. Of All Farms
Number of fields	9
Number of farms	8
Acres	50.50
Yield per acre (ton)	3.26
Operators share of yield %	100.00
Value per ton	51.87
Total product return per acre	169.19
Miscellaneous income per acre	-
Gross return per acre	169.19
Direct Expenses	
Seed	4.40
Fertilizer	7.96
Fuel & oil	14.60
Repairs	26.89
Custom hire	1.39
Operating interest	2.73
Miscellaneous	5.90
Total direct expenses per acre	63.88
Return over direct exp per acre	105.30
Overhead Expenses	
Custom hire	10.69
Hired labor	8.48
Machinery & bldg leases	0.45
RE & pers. property taxes	10.67
Farm insurance	2.95
Utilities	1.49
Dues & professional fees	1.85
Interest	25.09
Mach & bldg depreciation	10.25
Miscellaneous	2.57
Total overhead expenses per acre	74.48
Total dir & ovhd expenses per acre	138.36
Net return per acre	30.82
Lbr & mgt charge per acre	23.88
Net return over lbr & mgt	6.94
Government payments	35.33
Net return with govt payments	42.27
Cost of Production	
Total direct expense per ton	19.59
Total dir & ovhd exp per ton	42.42
With labor & management	49.75
Total exp less govt & oth income	38.91



TABLE 13 - 12  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Hay, Alfalfa on Cash Rented Land

	Avg. Of All Farms
Number of fields	8
Number of farms	8
Acres	102.88
Yield per acre (ton)	3.42
Operators share of yield %	100.00
Value per ton	50.85
Total product return per acre	174.02
Miscellaneous income per acre	-
Gross return per acre	174.02
Direct Expenses	
Fertilizer	7.31
Crop chemicals	1.75
Crop insurance	1.07
Fuel & oil	13.54
Repairs	21.08
Custom hire	5.11
Land rent	56.72
Machinery & bldg leases	2.45
Operating interest	4.27
Miscellaneous	7.41
Total direct expenses per acre	120.71
Return over direct exp per acre	53.31
Overhead Expenses	
Custom hire	5.70
Hired labor	7.23
Machinery & bldg leases	2.72
Farm insurance	2.51
Utilities	2.68
Dues & professional fees	1.92
Interest	4.44
Mach & bldg depreciation	16.44
Miscellaneous	2.73
Total overhead expenses per acre	46.37
Total dir & ovhd expenses per acre	167.08
Net return per acre	6.94
Lbr & mgt charge per acre	24.54
Net return over lbr & mgt	-17.60
Government payments	28.89
Net return with govt payments	11.29
Cost of Production	
Total direct expense per ton	35.27
Total dir & ovhd exp per ton	48.82
With labor & management	55.99
Total exp less govt & oth income	47.55

TABLE 13 - 13  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Soybeans on Owned Land

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	151	26	33
Number of farms	110	22	22
Acres	148.85	162.97	177.06
Yield per acre (bushel)	32.84	27.81	36.74
Operators share of yield %	100.00	100.00	100.00
Value per bushel	5.11	4.86	5.10
Total product return per acre	167.93	135.24	187.47
Miscellaneous income per acre	21.07	21.15	34.51
Gross return per acre	189.00	156.39	221.98
Direct Expenses			
Seed	15.77	20.51	10.51
Fertilizer	5.30	5.30	5.12
Crop chemicals	19.13	22.74	14.61
Crop insurance	9.18	11.18	9.76
Fuel & oil	8.50	8.35	8.95
Repairs	14.84	17.12	12.64
Custom hire	2.39	0.99	2.17
Operating interest	3.63	4.88	1.90
Miscellaneous	0.79	1.34	0.27
Total direct expenses per acre	79.54	92.41	65.93
Return over direct exp per acre	109.46	63.98	156.04
Overhead Expenses			
Custom hire	1.81	2.04	3.50
Hired labor	5.69	4.46	5.50
Machinery & bldg leases	2.93	4.36	3.43
RE & pers. property taxes	10.47	12.07	10.29
Farm insurance	3.31	3.26	2.97
Utilities	2.06	2.39	1.81
Dues & professional fees	1.59	1.81	1.54
Interest	34.74	53.42	22.83
Mach & bldg depreciation	12.15	11.32	11.83
Miscellaneous	3.10	1.58	2.56
Total overhead expenses per acre	77.85	96.70	66.26
Total dir & ovhd expenses per acre	157.39	189.11	132.19
Net return per acre	31.61	-32.72	89.79
Lbr & mgt charge per acre	17.40	18.76	18.44
Net return over lbr & mgt	14.22	-51.48	71.34
Government payments	31.16	29.55	28.80
Net return with govt payments	45.38	-21.93	100.14
Cost of Production			
Total direct expense per bushel	2.42	3.32	1.79
Total dir & ovhd exp per bushel	4.79	6.80	3.60
With labor & management	5.32	7.47	4.10
Total exp less govt & oth income	3.73	5.65	2.38

TABLE 13 - 14  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Soybeans on Cash Rented Land

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	296	62	72
Number of farms	176	35	36
Acres	262.74	245.57	210.69
Yield per acre (bushel)	32.02	27.83	34.38
Operators share of yield %	100.00	100.00	100.00
Value per bushel	5.11	4.96	5.28
Total product return per acre	163.52	138.08	181.36
Miscellaneous income per acre	23.27	16.75	35.32
Gross return per acre	186.79	154.83	216.67
Direct Expenses			
Seed	16.40	19.89	12.39
Fertilizer	5.19	5.31	2.75
Crop chemicals	20.60	21.01	16.49
Crop insurance	8.98	9.74	8.34
Fuel & oil	7.48	7.67	6.96
Repairs	12.57	15.27	12.14
Custom hire	2.39	2.79	0.74
Land rent	59.61	60.37	55.77
Operating interest	4.27	4.97	3.42
Miscellaneous	0.66	1.01	0.23
Total direct expenses per acre	138.14	148.04	119.21
Return over direct exp per acre	48.65	6.79	97.46
Overhead Expenses			
Custom hire	2.09	3.06	3.36
Hired labor	5.07	5.63	4.06
Machinery & bldg leases	3.11	2.91	2.98
Farm insurance	2.99	3.28	3.45
Utilities	1.68	1.90	1.85
Dues & professional fees	1.46	1.39	2.11
Interest	4.45	5.80	3.25
Mach & bldg depreciation	9.35	11.12	9.00
Miscellaneous	2.42	2.48	1.81
Total overhead expenses per acre	32.63	37.57	31.88
Total dir & ovhd expenses per acre	170.77	185.61	151.10
Net return per acre	16.03	-30.78	65.58
Lbr & mgt charge per acre	15.51	15.32	16.79
Net return over lbr & mgt	0.52	-46.10	48.79
Government payments	30.83	31.04	30.41
Net return with govt payments	31.35	-15.06	79.20
Cost of Production			
Total direct expense per bushel	4.31	5.32	3.47
Total dir & ovhd exp per bushel	5.33	6.67	4.40
With labor & management	5.80	7.22	4.86
Total exp less govt & oth income	4.14	5.50	3.00

TABLE 13 - 15  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Soybeans on Share Rent

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	58	14	11
Number of farms	35	7	7
Acres	137.32	85.81	90.35
Yield per acre (bushel)	32.89	29.23	39.25
Operators share of yield %	66.66	68.15	59.34
Value per bushel	4.78	4.63	5.02
Total product return per acre	104.33	92.22	116.22
Miscellaneous income per acre	19.58	18.63	18.41
Gross return per acre	123.91	110.85	134.63
Direct Expenses			
Seed	16.02	22.20	8.42
Fertilizer	1.53	3.26	-
Crop chemicals	18.95	23.44	16.97
Crop insurance	6.88	5.05	4.18
Fuel & oil	9.49	11.40	7.67
Repairs	13.75	17.74	14.59
Custom hire	2.76	5.89	0.96
Machinery & bldg leases	0.11	-	0.91
Operating interest	3.40	2.65	3.08
Miscellaneous	0.03	-	-
Total direct expenses per acre	72.93	91.63	56.79
Return over direct exp per acre	50.98	19.21	77.84
Overhead Expenses			
Hired labor	6.50	5.40	3.81
Machinery & bldg leases	4.20	1.95	1.17
Farm insurance	2.65	3.98	1.71
Utilities	2.12	2.90	1.52
Dues & professional fees	2.11	3.02	1.31
Interest	3.43	5.89	1.28
Mach & bldg depreciation	14.95	27.16	12.75
Miscellaneous	3.37	2.53	2.84
Total overhead expenses per acre	39.32	52.83	26.41
Total dir & ovhd expenses per acre	112.25	144.46	83.20
Net return per acre	11.66	-33.61	51.43
Lbr & mgt charge per acre	17.60	22.48	19.54
Net return over lbr & mgt	-5.94	-56.09	31.89
Government payments	18.47	17.20	15.43
Net return with govt payments	12.53	-38.89	47.31
Cost of Production			
Total direct expense per bushel	3.33	4.60	2.44
Total dir & ovhd exp per bushel	5.12	7.25	3.57
With labor & management	5.92	8.38	4.41
Total exp less govt & oth income	4.19	6.58	2.96

TABLE 13 - 16  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Sugar Beets on Owned Land, Excluding Joint Venture

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	69	15	13
Number of farms	52	10	10
Acres	99.88	105.08	133.50
Yield per acre (ton)	19.06	21.24	16.02
Operators share of yield %	100.00	100.00	100.00
Value per ton	30.80	29.82	31.24
Total product return per acre	587.07	633.53	500.30
Miscellaneous income per acre	108.47	24.21	259.34
Gross return per acre	695.53	657.74	759.64
Direct Expenses			
Seed	40.62	43.51	35.82
Fertilizer	27.97	29.13	24.60
Crop chemicals	99.98	104.20	82.89
Crop insurance	15.75	25.70	12.08
Fuel & oil	32.72	37.67	30.86
Repairs	59.18	90.23	41.11
Custom hire	18.26	14.03	23.83
Hired labor	13.92	25.78	7.21
Operating interest	16.07	19.93	10.59
Miscellaneous	2.18	4.47	1.20
Total direct expenses per acre	326.65	394.63	270.19
Return over direct exp per acre	368.88	263.11	489.45
Overhead Expenses			
Custom hire	3.66	3.76	4.15
Hired labor	29.04	38.68	16.51
Machinery & bldg leases	9.26	8.11	4.81
RE & pers. property taxes	11.29	11.10	9.94
Farm insurance	4.78	6.81	3.18
Utilities	6.51	9.31	3.42
Dues & professional fees	6.41	5.57	3.77
Interest	54.10	75.72	39.31
Mach & bldg depreciation	53.91	74.13	54.91
Miscellaneous	9.38	9.83	8.45
Total overhead expenses per acre	188.36	243.01	148.44
Total dir & ovhd expenses per acre	515.01	637.64	418.63
Net return per acre	180.52	20.10	341.01
Lbr & mgt charge per acre	66.84	52.03	70.57
Net return over lbr & mgt	113.68	-31.93	270.44
Government payments	34.15	40.91	32.04
Net return with govt payments	147.83	8.98	302.48
Sugar beet stock equity charge	85.81	81.72	97.09
Net return over sugar beet stock	62.02	-72.74	205.39
Cost of Production			
Total direct expense per ton	17.14	18.58	16.87
Total dir & ovhd exp per ton	27.02	30.02	26.14
With labor & management	30.53	32.47	30.54
Total exp less govt & oth income	23.04	29.40	12.35
With sugar beet stock equity charge	27.55	33.25	18.41

TABLE 13 - 17  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Sugar Beets on Owned Land - Joint venture	
	Avg. Of All Farms
Number of fields	17
Number of farms	17
Acres	81.03
Yield per acre (ton)	20.45
Operators share of yield %	100.00
Value per ton	30.07
Total product return per acre	614.79
Miscellaneous income per acre	60.18
Gross return per acre	674.97
Direct Expenses	
Seed	39.81
Fertilizer	27.66
Crop chemicals	90.17
Crop insurance	20.37
Fuel & oil	32.13
Repairs	42.97
Custom hire	19.97
Hired labor	17.64
Stock rent (joint venture)	172.53
Operating interest	16.72
Miscellaneous	0.42
Total direct expenses per acre	480.37
Return over direct exp per acre	194.60
Overhead Expenses	
Custom hire	6.40
Hired labor	22.70
Machinery & bldg leases	9.11
RE & pers. property taxes	9.20
Farm insurance	2.50
Utilities	5.66
Dues & professional fees	4.53
Interest	49.77
Mach & bldg depreciation	37.19
Miscellaneous	9.87
Total overhead expenses per acre	156.92
Total dir & ovhd expenses per acre	637.29
Net return per acre	37.68
Lbr & mgt charge per acre	57.99
Net return over lbr & mgt	-20.31
Government payments	30.44
Net return with govt payments	10.13
Cost of Production	
Total direct expense per ton	23.49
Total dir & ovhd exp per ton	31.17
With labor & management	34.00
Total exp less govt & oth income	29.57

TABLE 13 - 18  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Sugar Beets on Cash Rented Land, Excluding Joint Venture

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	126	25	24
Number of farms	98	19	20
Acres	129.68	99.25	94.40
Yield per acre (ton)	19.79	17.60	18.99
Operators share of yield %	100.00	100.00	100.00
Value per ton	30.66	30.52	31.05
Total product return per acre	606.58	537.22	589.65
Miscellaneous income per acre	78.08	37.96	232.32
Gross return per acre	684.65	575.18	821.97
Direct Expenses			
Seed	41.92	40.75	41.87
Fertilizer	30.02	29.47	32.58
Crop chemicals	109.01	102.65	102.08
Crop insurance	15.48	19.47	13.77
Fuel & oil	31.67	33.91	28.81
Repairs	53.05	77.10	42.79
Custom hire	16.29	12.26	13.90
Hired labor	15.59	15.17	9.77
Land rent	76.99	61.30	80.88
Operating interest	14.20	13.73	10.89
Miscellaneous	1.86	3.46	0.37
Total direct expenses per acre	406.09	409.30	377.71
Return over direct exp per acre	278.56	165.89	444.26
Overhead Expenses			
Custom hire	5.46	3.93	9.44
Hired labor	28.42	28.75	20.95
Machinery & bldg leases	11.70	21.23	8.27
Farm insurance	4.64	4.83	2.77
Utilities	5.97	7.18	4.42
Dues & professional fees	5.77	5.46	5.42
Interest	26.19	27.70	19.38
Mach & bldg depreciation	44.55	72.81	33.88
Miscellaneous	9.06	9.10	7.91
Total overhead expenses per acre	141.76	180.98	112.44
Total dir & ovhd expenses per acre	547.85	590.28	490.15
Net return per acre	136.80	-15.09	331.83
Lbr & mgt charge per acre	70.36	60.35	62.12
Net return over lbr & mgt	66.44	-75.44	269.70
Government payments	31.70	32.17	29.50
Net return with govt payments	98.14	-43.27	299.20
Sugar beet stock equity charge	78.48	85.69	81.82
Net return over sugar beet stock	19.66	-128.96	217.38
Cost of Production			
Total direct expense per ton	20.53	23.25	19.89
Total dir & ovhd exp per ton	27.69	33.53	25.81
With labor & management	31.24	36.97	29.08
Total exp less govt & oth income	25.69	32.98	15.29
With sugar beet stock equity charge	29.66	37.85	19.60



TABLE 13 - 19  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Sugar Beets on Cash Rented Land, Joint Venture

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	91	13	28
Number of farms	68	13	13
Acres	153.24	157.08	117.31
Yield per acre (ton)	18.67	17.74	15.47
Operators share of yield %	100.00	100.00	100.00
Value per ton	30.02	26.85	31.01
Total product return per acre	560.39	476.23	479.70
Miscellaneous income per acre	113.29	59.19	306.87
Gross return per acre	673.67	535.42	786.57
Direct Expenses			
Seed	41.20	46.79	39.56
Fertilizer	31.26	29.39	34.08
Crop chemicals	105.24	115.25	92.55
Crop insurance	16.44	17.95	13.31
Fuel & oil	28.49	38.54	22.59
Repairs	44.11	56.66	41.42
Custom hire	11.42	20.28	2.21
Hired labor	9.73	7.58	6.06
Land rent	64.84	51.31	69.60
Stock rent (joint venture)	187.39	193.03	157.67
Operating interest	17.77	13.66	16.84
Miscellaneous	1.86	1.51	0.07
Total direct expenses per acre	559.74	591.94	495.96
Return over direct exp per acre	113.93	-56.52	290.61
Overhead Expenses			
Custom hire	12.17	9.89	10.03
Hired labor	18.36	22.62	15.98
Machinery & bldg leases	17.06	28.67	15.16
Farm insurance	3.68	4.36	2.25
Utilities	4.78	7.28	3.68
Dues & professional fees	3.82	3.28	3.32
Interest	16.97	11.33	17.79
Mach & bldg depreciation	27.79	40.11	18.67
Miscellaneous	8.34	16.53	4.64
Total overhead expenses per acre	112.99	144.07	91.51
Total dir & ovhd expenses per acre	672.73	736.02	587.47
Net return per acre	0.94	-200.60	199.10
Lbr & mgt charge per acre	55.44	70.64	56.16
Net return over lbr & mgt	-54.49	-271.24	142.95
Government payments	29.74	36.17	30.02
Net return with govt payments	-24.75	-235.07	172.96
Cost of Production			
Total direct expense per ton	29.98	33.37	32.06
Total dir & ovhd exp per ton	36.03	41.50	37.98
With labor & management	39.00	45.48	41.61
Total exp less govt & oth income	31.34	40.10	19.83

TABLE 13 - 20  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Sunflowers on Owned Land

	Avg. Of All Farms
Number of fields	10
Number of farms	6
Acres	84.60
Yield per acre (cwt)	14.63
Operators share of yield %	100.00
Value per cwt	9.71
Total product return per acre	142.06
Miscellaneous income per acre	33.98
Gross return per acre	176.04
Direct Expenses	
Seed	15.61
Fertilizer	10.23
Crop chemicals	8.63
Crop insurance	6.02
Fuel & oil	9.69
Repairs	19.54
Custom hire	5.68
Operating interest	2.64
Miscellaneous	0.13
Total direct expenses per acre	78.17
Return over direct exp per acre	97.87
Overhead Expenses	
Hired labor	8.73
Machinery & bldg leases	2.76
RE & pers. property taxes	9.04
Farm insurance	4.10
Utilities	2.48
Dues & professional fees	1.38
Interest	33.57
Mach & bldg depreciation	16.37
Miscellaneous	2.47
Total overhead expenses per acre	80.90
Total dir & ovhd expenses per acre	159.08
Net return per acre	16.96
Lbr & mgt charge per acre	15.92
Net return over lbr & mgt	1.05
Government payments	37.90
Net return with govt payments	38.95
Cost of Production	
Total direct expense per cwt	5.35
Total dir & ovhd exp per cwt	10.88
With labor & management	11.97
Total exp less govt & oth income	7.05

TABLE 13 - 21  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Sunflowers on Cash Rented Land

	Avg. Of All Farms
Number of fields	19
Number of farms	17
Acres	175.52
Yield per acre (cwt)	14.61
Operators share of yield %	100.00
Value per cwt	9.97
Total product return per acre	145.65
Miscellaneous income per acre	22.82
Gross return per acre	168.47
Direct Expenses	
Seed	16.25
Fertilizer	19.19
Crop chemicals	15.17
Crop insurance	7.86
Fuel & oil	8.58
Repairs	14.03
Custom hire	4.04
Land rent	54.60
Operating interest	4.47
Miscellaneous	0.30
Total direct expenses per acre	144.48
Return over direct exp per acre	23.99
Overhead Expenses	
Custom hire	2.07
Hired labor	3.86
Machinery & bldg leases	8.09
Farm insurance	2.87
Utilities	1.99
Dues & professional fees	1.13
Interest	6.79
Mach & bldg depreciation	10.51
Miscellaneous	4.20
Total overhead expenses per acre	41.50
Total dir & ovhd expenses per acre	185.98
Net return per acre	-17.51
Lbr & mgt charge per acre	19.91
Net return over lbr & mgt	-37.42
Government payments	34.68
Net return with govt payments	-2.74
Cost of Production	
Total direct expense per cwt	9.89
Total dir & ovhd exp per cwt	12.73
With labor & management	14.09
Total exp less govt & oth income	10.15

TABLE 13 - 22  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Sunflowers, Confectionary on Cash Rented Land

	Avg. Of All Farms
Number of fields	16
Number of farms	15
Acres	200.46
Yield per acre (cwt)	16.33
Operators share of yield %	100.00
Value per cwt	14.29
Total product return per acre	233.28
Miscellaneous income per acre	10.10
Gross return per acre	243.38
Direct Expenses	
Seed	21.59
Fertilizer	16.45
Crop chemicals	14.81
Crop insurance	6.77
Drying fuel	1.08
Fuel & oil	8.17
Repairs	14.06
Custom hire	5.23
Land rent	63.34
Operating interest	4.08
Miscellaneous	1.13
Total direct expenses per acre	156.73
Return over direct exp per acre	86.65
Overhead Expenses	
Custom hire	1.67
Hired labor	9.08
Machinery & bldg leases	3.24
Farm insurance	2.38
Utilities	1.54
Dues & professional fees	2.19
Interest	3.82
Mach & bldg depreciation	8.09
Miscellaneous	2.12
Total overhead expenses per acre	34.14
Total dir & ovhd expenses per acre	190.87
Net return per acre	52.51
Lbr & mgt charge per acre	17.16
Net return over lbr & mgt	35.34
Government payments	34.12
Net return with govt payments	69.46
Cost of Production	
Total direct expense per cwt	9.60
Total dir & ovhd exp per cwt	11.69
With labor & management	12.74
Total exp less govt & oth income	10.03

TABLE 13 - 23  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Wheat, Spring on Owned Land

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	172	31	44
Number of farms	126	25	25
Acres	179.17	159.98	185.85
Yield per acre (bushel)	50.27	42.89	56.68
Operators share of yield %	100.00	100.00	100.00
Value per bushel	3.57	3.67	3.68
Total product return per acre	179.39	157.35	208.67
Miscellaneous income per acre	12.50	12.69	9.98
Gross return per acre	191.90	170.05	218.65
Direct Expenses			
Seed	10.00	10.29	10.16
Fertilizer	24.05	22.92	20.26
Crop chemicals	21.39	23.17	18.24
Crop insurance	7.60	8.93	7.35
Drying fuel	0.18	0.01	0.53
Fuel & oil	6.86	6.81	7.68
Repairs	11.08	15.27	10.35
Custom hire	2.94	6.30	2.47
Operating interest	3.18	4.21	2.35
Miscellaneous	0.60	0.88	0.32
Total direct expenses per acre	87.86	98.76	79.71
Return over direct exp per acre	104.04	71.28	138.93
Overhead Expenses			
Custom hire	1.46	1.80	0.83
Hired labor	4.95	4.74	4.24
Machinery & bldg leases	2.23	2.26	1.71
RE & pers. property taxes	9.67	11.83	8.09
Farm insurance	4.03	5.27	4.62
Utilities	1.54	2.39	1.56
Dues & professional fees	1.25	1.87	1.28
Interest	30.28	53.31	19.65
Mach & bldg depreciation	9.83	11.11	11.11
Miscellaneous	2.58	5.63	2.31
Total overhead expenses per acre	67.82	100.21	55.40
Total dir & ovhd expenses per acre	155.68	198.98	135.12
Net return per acre	36.22	-28.93	83.53
Lbr & mgt charge per acre	14.05	14.72	14.22
Net return over lbr & mgt	22.16	-43.65	69.31
Government payments	34.28	35.32	34.57
Net return with govt payments	56.44	-8.33	103.87
Cost of Production			
Total direct expense per bushel	1.75	2.30	1.41
Total dir & ovhd exp per bushel	3.10	4.64	2.38
With labor & management	3.38	4.98	2.63
Total exp less govt & oth income	2.45	3.86	1.85

TABLE 13 - 24  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Wheat, Spring on Cash Rented Land

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	289	44	97
Number of farms	181	36	37
Acres	328.55	344.58	166.26
Yield per acre (bushel)	48.57	40.88	54.69
Operators share of yield %	100.00	100.00	100.00
Value per bushel	3.53	3.31	3.56
Total product return per acre	171.42	135.41	194.64
Miscellaneous income per acre	16.92	19.18	30.87
Gross return per acre	188.34	154.58	225.51
Direct Expenses			
Seed	9.31	8.66	9.78
Fertilizer	25.72	26.14	25.41
Crop chemicals	20.75	21.32	16.65
Crop insurance	7.12	7.24	5.60
Fuel & oil	6.70	7.22	6.20
Repairs	10.44	10.92	9.89
Custom hire	2.84	3.31	2.30
Land rent	57.53	58.62	57.51
Operating interest	3.21	4.64	2.29
Miscellaneous	1.10	0.40	1.35
Total direct expenses per acre	144.72	148.47	136.98
Return over direct exp per acre	43.62	6.11	88.53
Overhead Expenses			
Custom hire	1.76	1.75	0.79
Hired labor	4.33	4.69	5.34
Machinery & bldg leases	3.05	3.74	2.42
Farm insurance	3.28	4.02	3.61
Utilities	1.45	1.94	1.33
Dues & professional fees	1.24	1.08	1.22
Interest	3.59	5.95	2.83
Mach & bldg depreciation	7.76	7.51	7.89
Miscellaneous	2.05	2.68	1.61
Total overhead expenses per acre	28.49	33.36	27.06
Total dir & ovhd expenses per acre	173.21	181.83	164.04
Net return per acre	15.13	-27.25	61.48
Lbr & mgt charge per acre	14.39	15.23	13.74
Net return over lbr & mgt	0.74	-42.48	47.73
Government payments	32.58	31.66	29.79
Net return with govt payments	33.32	-10.82	77.52
Cost of Production			
Total direct expense per bushel	2.98	3.63	2.50
Total dir & ovhd exp per bushel	3.57	4.45	3.00
With labor & management	3.85	4.82	3.25
Total exp less govt & oth income	2.84	3.57	2.14

TABLE 13 - 25  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

Wheat, Spring on Share Rent

	Avg. Of All Farms	Low 20%	High 20%
Number of fields	77	9	17
Number of farms	38	7	7
Acres	132.63	103.46	126.06
Yield per acre (bushel)	49.63	45.93	55.07
Operators share of yield %	63.11	64.79	67.69
Value per bushel	3.39	3.56	3.49
Total product return per acre	105.90	105.38	130.16
Miscellaneous income per acre	14.77	3.76	19.71
Gross return per acre	120.67	109.14	149.87
Direct Expenses			
Seed	8.64	7.51	10.35
Fertilizer	22.60	26.49	19.81
Crop chemicals	14.02	16.92	10.80
Crop insurance	4.76	4.82	4.60
Fuel & oil	6.70	10.26	6.13
Repairs	10.28	14.81	9.09
Custom hire	2.17	4.67	2.70
Operating interest	2.51	4.95	2.68
Miscellaneous	0.13	-	0.07
Total direct expenses per acre	71.80	90.43	66.23
Return over direct exp per acre	48.87	18.71	83.64
Overhead Expenses			
Custom hire	0.37	2.69	0.06
Hired labor	3.92	4.71	3.79
Machinery & bldg leases	2.60	2.42	1.68
Farm insurance	2.85	4.00	2.29
Utilities	1.34	1.64	1.42
Dues & professional fees	1.20	1.06	0.88
Interest	3.23	6.13	2.20
Mach & bldg depreciation	10.09	10.98	11.17
Miscellaneous	2.50	4.69	1.92
Total overhead expenses per acre	28.08	38.32	25.41
Total dir & ovhd expenses per acr	99.88	128.75	91.64
Net return per acre	20.79	-19.60	58.22
Lbr & mgt charge per acre	13.51	15.91	12.43
Net return over lbr & mgt	7.29	-35.52	45.80
Government payments	19.92	16.95	24.12
Net return with govt payments	27.20	-18.57	69.92
Cost of Production			
Total direct expense per bushel	2.29	3.04	1.78
Total dir & ovhd exp per bushel	3.19	4.33	2.46
With labor & management	3.62	4.86	2.79
Total exp less govt & oth income	2.51	4.17	1.62

TABLE 13 - 26  
Crop Enterprise Analysis, 2000  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Net return)

	CRP on Owned Land
	Avg. Of All Farms
Number of fields	11
Number of farms	11
Acres	158.15
Yield per acre (unit)	53.37
Operators share of yield %	100.00
Value per unit	1.00
Total product return per acre	53.37
Miscellaneous income per acre	-
Gross return per acre	53.37
Direct Expenses	
Crop chemicals	4.43
Fuel & oil	0.71
Repairs	1.67
Operating interest	0.35
Miscellaneous	0.21
Total direct expenses per acre	7.37
Return over direct exp per acre	46.00
Overhead Expenses	
RE & pers. property taxes	5.63
Farm insurance	1.71
Interest	17.68
Mach & bldg depreciation	1.09
Miscellaneous	1.30
Total overhead expenses per acre	27.25
Total dir & ovhd expenses per acr	34.63
Net return per acre	18.74



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