

Minnesota and North Dakota
Farm Business Management Education

Red River Valley 2017 Report



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Minnesota Farm Business Management Education
and
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RED RIVER VALLEY AVERAGES
2017 ANNUAL REPORT

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2017 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 two major categories. Explanatory notes precede the farm operators' reports and the crop reports.

The 2017 Red River Valley Report is based upon data generated by individual farm analysis completed by farm/ranch families enrolled in the Farm and Ranch Business Management Education programs in Minnesota and North Dakota. The tables in this report were created using FINPACK and RankEm Central copyrighted software of the Center for Farm Financial Management, University of Minnesota.

The reports are available online at www.ndfarmmanagement.com or agcentric.org

EXPLANATORY NOTES FOR THE FARM OPERATORS' REPORTS

The tables 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. However, the balance sheets include 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 and livestock tables.

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

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 the table 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 payments are grouped as "Direct, CCP & ACRE pymts;" "LDP payments" which are loan deficiency payments that may be received on production when local prices are below the county loan rate for the crop; "Other government payments" which refers to all other government payments such as disaster payments but not including CRP payments; and CRP payments.

The second section of the income statement lists cash expenses. "Hired labor" includes only labor which was hired and paid. "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 expense" is the "Net cash farm income." This is net farm income on a cash basis.

The last two sections of the income statement deal with the non-cash changes in the farm business. The "Inventory Changes" and "Depreciation" 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 final adjustment is for "Gain or loss on capital sales." The bottom line, labeled "Net farm income," represents the return to the operators and family's unpaid labor, management, and equity capital (net worth). In other words, it represents the return to all of the resources that 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.

Inventory Changes

This is the detailed statement of inventory changes that is summarized in the income statement. It includes beginning and ending inventories and the calculated changes.

Depreciation

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

Profitability Measures

This table shows profitability when capital assets are valued at cost. Various measures of performance are calculated. In the previous tables no opportunity costs are used. In this table, opportunity costs for labor, capital, and management are used. The measures and their components are described below.

"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."

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

"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 \$20,000 per full time operator plus 5% of value of farm production is used.

"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.

Liquidity & Repayment Capacity Measures

The table shows several measures of liquidity and repayment capacity. Calculation of repayment capacity starts with net farm income from operations and adds back the non-cash expense of depreciation. Personal income is also added. Family living expenses, personal debt payments, income taxes paid, and interest on term debt are subtracted to determine the capital debt repayment capacity.

Balance Sheets

The ending balance sheet statements and solvency measures are for all farms; in previous Red River Valley reports they were presented for sole proprietors only. Current assets are valued at market price at the time of the inventory which is December 31. In balance sheet at cost values, 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 balance sheet at market values, the intermediate and long term assets are listed at market value, and deferred income tax liabilities are estimated.

Statement of Cash Flows

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

Financial Standards Measures

The Farm Financial Standards Task Force recommended the use of these 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.

Working Capital to Gross Revenues: Measures operating capital available against the size of the 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.

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. Profitability becomes a key concern when substantial debt capital is used in the business.

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.

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.

EBITDA: This factor stands for: Earnings Before Interest, Taxes, Depreciation and Amortization. This represents a measure of earnings available for debt repayment.

Repayment Capacity

Repayment capacity shows the borrower's ability to repay term debts (longer than one year) on time. This includes non-farm income, and is therefore not a measure of business performance alone.

Capital Debt Repayment Capacity: Measures the amount generated from farm and non-farm sources, to cover debt repayment and capital replacement.

Capital Debt Repayment Margin: The amount of money remaining after all operating expenses, taxes, family living costs, and scheduled debt payments have been made. It is the money left, after paying all expenses, which is available for purchasing/financing new machinery, equipment, land or livestock.

Replacement Margin: The replacement margin is the amount of income remaining after paying principal and interest on term loans and unfunded (cash) capital purchases.

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.

Replacement Margin Coverage Ratio: This represents the ability to term debt and unfunded capital purchases. A ratio under 1.0 indicated that you did not generate enough income to cover term debt payments and unfunded capital purchases.

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.

Crop Production and Marketing Summary

This table contains three sections. The first section reports averages for total acres owned, crop land by tenure and total pasture acres. 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."

Operator and Labor Information

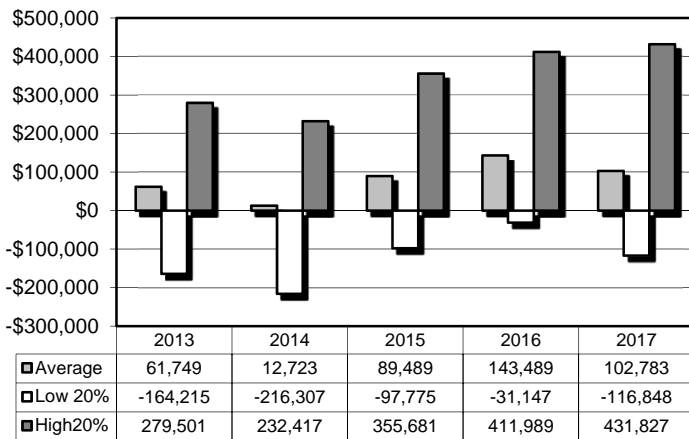
This table reports the average for the number of operators per farm, the operator's age, and the number of years farming.

Nonfarm Summary

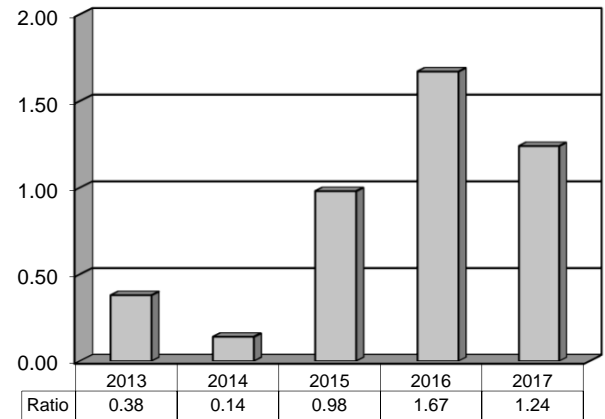
This table also reports nonfarm income. The figure reported is the average over all farms not just those reporting nonfarm income.

Five Year Trend of Financial Measures Red River Valley Farm Business Management Education

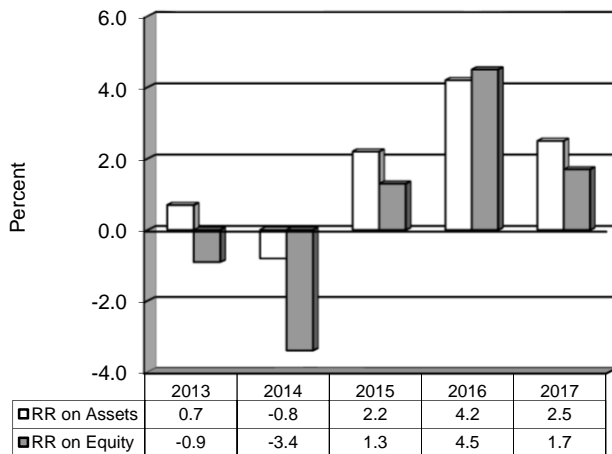
Net Farm Income



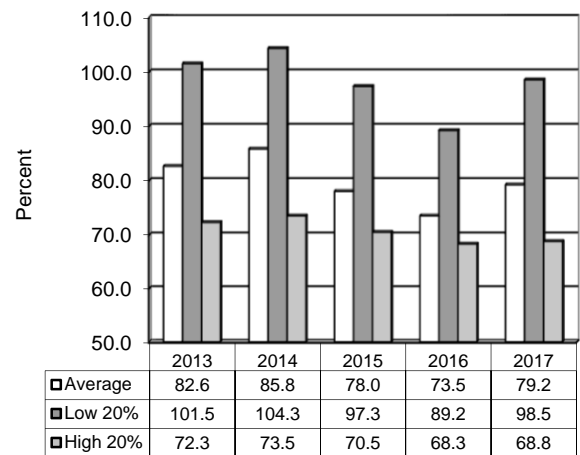
Term Debt Coverage Ratio (accrual)



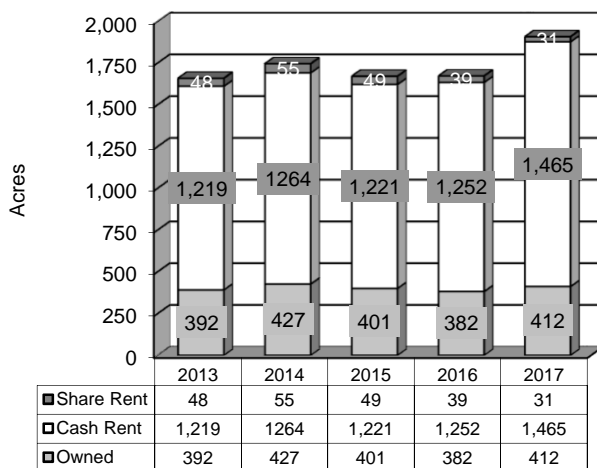
Rate of Return (cost)



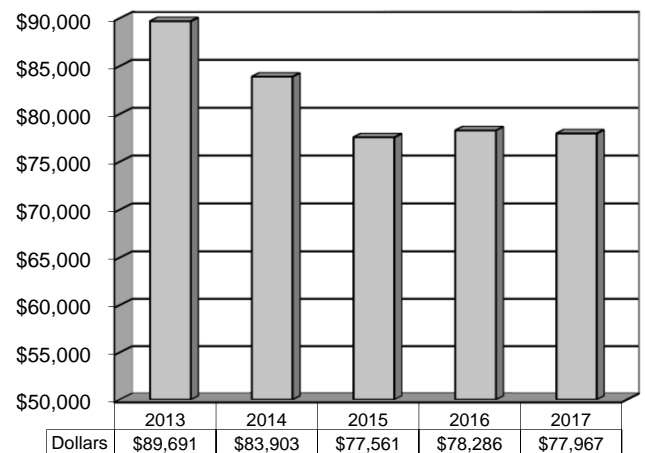
Operating Expense Ratio



Crop Acres



Apparent Family Living



Farm Income Statement
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Cash Farm Income				
Barley	4,732	9,275	1,199	4,319
Beans, Black Turtle	870	-	-	1,162
Beans, Cranberry	158	-	-	-
Beans, Navy	6,946	8,870	15,578	6,214
Beans, Pinto	3,337	-	3,470	3,931
Canola	264	-	-	1,320
Corn	252,463	405,659	215,521	215,965
Corn, Ear	121	-	604	-
Hay, Alfalfa	5,037	-	5,105	17,977
Oats	31	-	-	155
Peas, Field	289	588	-	-
Potatoes	9,487	-	3,312	44,124
Rye	382	-	-	-
Soybeans	265,047	324,394	198,599	359,896
Soybeans Seed	14,338	857	6,402	39,515
Straw	4,900	1,249	1,133	819
Sugar Beets	181,626	110,219	65,676	530,353
Sunflowers	5,155	5,101	5,382	12,553
Wheat, Durum	796	2,122	312	-
Wheat, Spring	146,979	98,502	83,622	335,188
Rented Out	317	-	-	1,583
Soybeans, Organic	494	-	94	2,374
Soybeans, Food	8,081	19,456	4,592	6,058
Corn, Organic	306	-	1,530	-
Oats, Organic	120	-	-	-
Rye, Organic	101	-	-	-
Wheat, Spring, Organic	612	-	3,061	-
Hay	361	1,805	-	-
Other Crops	3,655	14,793	-	1,326
Miscellaneous crop income	497	19	-	817
Beef Cow-Calf, Beef Calves	1,779	2,514	486	5,750
Beef Backgrounding	208	-	-	1,004
Beef Finishing	8,741	14,544	-	11,165
Dairy Finishing	177	885	-	-
Hogs, Farrow To Finish, Raised Hog	1,241	-	-	-
Hogs, Weaning to Finish	5,843	-	-	-
Misc. livestock income	998	4,640	-	-
Crop government payments	16,000	12,440	12,151	35,100
CRP payments	980	910	786	2,020
Other government payments Custom	5,610	6,021	4,403	7,704
work income	14,057	7,985	4,281	36,602
Patronage dividends, cash	12,226	9,587	7,379	26,489
Crop insurance income	15,372	17,316	11,016	18,566
Property insurance income	3,429	1,232	5,326	5,151
Sale of resale items	1,848	-	-	7,922
Other farm income	40,471	27,834	41,573	63,461
Gross Cash Farm Income	1,046,483	1,108,818	702,594	1,806,581

Farm Income Statement (continued)
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Cash Farm Expense				
Seed and plants	133,460	151,132	89,619	223,800
Fertilizer	100,822	105,641	84,994	157,382
Crop chemicals	78,290	82,789	50,667	148,748
Cover crop expense	94	-	11	323
Crop insurance	35,845	47,238	23,859	53,286
Drying expense	6,296	12,611	4,524	3,234
Storage	1,809	2,370	1,341	3,082
Irrigation energy	481	32	54	2,318
Crop custom hire	7,085	5,882	2,735	10,737
Hauling and trucking	2,566	1,231	679	7,800
Marketing	3,115	872	446	11,823
Crop miscellaneous	3,690	7,095	1,828	1,613
Consultants	3,146	2,871	1,329	7,498
Feeder livestock purchase	5,643	1,274	19	8,349
Purchased feed	4,754	7,761	112	2,821
Veterinary	1,153	2,826	64	397
Supplies	129	281	1	57
Livestock custom hire	27	103	-	34
Livestock leases	21	-	107	-
Interest	42,948	54,461	33,546	54,770
Fuel & oil	37,132	39,674	28,657	61,202
Repairs	72,470	75,230	52,315	124,148
Custom hire	7,371	7,646	11,995	6,020
Hired labor	56,231	87,449	25,861	100,528
Land rent	185,509	263,820	112,980	268,030
Stock/quota lease	9,552	4,357	2,128	28,057
Machinery leases	14,870	20,809	7,841	14,042
Building leases	4,678	10,219	2,379	7,042
Real estate taxes	10,970	8,231	9,956	18,560
Farm insurance	15,014	15,207	9,023	27,038
Utilities	10,284	11,298	7,322	16,073
Dues & professional fees	8,023	8,720	6,382	12,325
Purchase of resale items	3,823	-	-	12,627
Miscellaneous	10,626	12,307	7,487	14,281
Total cash expense	877,925	1,051,439	580,260	1,408,045
Net cash farm income	168,558	57,379	122,334	398,536
Inventory Changes				
Prepays and supplies	-2,335	-26,373	3,151	26,773
Accounts receivable	9,017	7,941	23,748	9,772
Hedging accounts	2,131	-1,890	-882	14,298
Other current assets	1,260	-3,931	-186	11,680
Crops and feed	-2,322	-53,420	-51,856	66,334
Market livestock	-2,808	-11,911	406	4,595
Breeding livestock	-218	-211	79	-521
Other assets	8,418	3,148	4,515	25,612
Accounts payable	-3,381	-9,540	12,081	-7,383
Accrued interest	-380	-621	-992	2,004
Total inventory change	9,383	-96,809	-9,937	153,164
Net operating profit	177,941	-39,430	112,397	551,700
Depreciation				
Machinery and equipment	-63,405	-63,387	-45,016	-103,718
Titled vehicles	-5,540	-5,808	-4,097	-8,148
Buildings and improvements	-6,952	-8,025	-7,017	-11,383
Total depreciation	-75,897	-77,220	-56,130	-123,248
Net farm income from operations	102,043	-116,650	56,268	428,452
Gain or loss on capital sales	739	-198	303	3,376
Net farm income	102,783	-116,848	56,571	431,827

Inventory Changes
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Net cash farm income	168,558	57,379	122,334	398,536
Crops and Feed				
Ending inventory	608,244	566,679	383,650	1,202,473
Beginning inventory	610,566	620,099	435,506	1,136,139
Inventory change	-2,322	-53,420	-51,856	66,334
Market Livestock				
Ending inventory	7,343	2,305	1,437	16,264
Beginning inventory	10,151	14,216	1,031	11,669
Inventory change	-2,808	-11,911	406	4,595
Accts Receivable				
Ending inventory	76,776	94,561	62,270	94,849
Beginning inventory	67,758	86,620	38,521	85,077
Inventory change	9,017	7,941	23,748	9,772
Prepaid Expenses and Supplies				
Ending inventory	86,392	55,638	63,498	199,087
Beginning inventory	88,727	82,011	60,347	172,315
Inventory change	-2,335	-26,373	3,151	26,773
Hedging Activities				
Ending inventory	9,132	9,484	4,294	20,237
Withdrawals	3,456	-	457	14,519
Beginning inventory	7,250	6,530	3,569	16,191
Deposits	3,207	4,844	2,065	4,266
Gain or loss	2,131	-1,890	-882	14,298
Other Current Assets				
Ending inventory	4,872	1,425	382	21,542
Beginning inventory	3,612	5,356	568	9,862
Inventory change	1,260	-3,931	-186	11,680
Breeding Livestock				
Ending inventory	3,783	2,667	1,047	13,584
Capital sales	86	114	317	-
Beginning inventory	3,092	2,992	1,285	9,371
Capital purchases	996	-	-	4,734
Depreciation, capital adjust	-218	-211	79	-521
Other Capital Assets				
Ending inventory	308,700	195,884	190,312	686,934
Capital sales	1,324	-	-	5,165
Beginning inventory	285,593	182,968	182,500	625,104
Capital purchases	16,013	9,769	3,298	41,383
Depreciation, capital adjust	8,418	3,148	4,515	25,612
Accounts Payable				
Beginning inventory	34,354	45,900	28,366	47,092
Ending inventory	37,735	55,440	16,285	54,476
Inventory change	-3,381	-9,540	12,081	-7,383
Accrued Interest				
Beginning inventory	19,734	25,851	14,629	21,398
Ending inventory	20,114	26,472	15,621	19,395
Inventory change	-380	-621	-992	2,004
Total inventory change	9,383	-96,809	-9,937	153,164
Net operating profit	177,941	-39,430	112,397	551,700

Depreciation
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Net operating profit	177,941	-39,430	112,397	551,700
Machinery and Equipment				
Ending inventory	668,906	667,899	488,081	1,084,680
Capital sales	11,074	12,815	11,627	11,312
Beginning inventory	669,999	693,719	493,591	1,038,314
Capital purchases	73,387	50,382	51,134	161,397
Depreciation, capital adjust.	-63,405	-63,387	-45,016	-103,718
Titled Vehicles				
Ending inventory	44,381	46,534	34,087	70,844
Capital sales	626	578	502	1,473
Beginning inventory	43,167	51,164	30,591	64,253
Capital purchases	7,381	1,755	8,095	16,211
Depreciation, capital adjust.	-5,540	-5,808	-4,097	-8,148
Buildings and Improvements				
Ending inventory	244,353	288,207	166,650	405,040
Capital sales	142	395	234	-
Beginning inventory	238,092	287,751	168,384	388,423
Capital purchases	13,355	8,875	5,517	28,000
Depreciation, capital adjust.	-6,952	-8,025	-7,017	-11,383
Total depreciation, capital adj.	-75,897	-77,220	-56,130	-123,248
Net farm income from operations	102,043	-116,650	56,268	428,452
Gain or loss on capital sales	739	-198	303	3,376
Net farm income	102,783	-116,848	56,571	431,827

Profitability Measures
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Profitability (assets valued at cost)				
Net farm income from operations	102,043	-116,650	56,268	428,452
Rate of return on assets	2.5 %	-4.6 %	1.9 %	7.2 %
Rate of return on equity	1.7 %	-12.5 %	0.5 %	9.1 %
Operating profit margin	7.0 %	-12.5 %	6.0 %	18.6 %
Asset turnover rate	36.3 %	36.4 %	31.7 %	38.7 %
Farm interest expense	43,328	55,082	34,538	52,766
Value of operator lbr and mgmt.	72,218	69,144	50,064	125,182
Return on farm assets	73,153	-130,712	40,742	356,036
Average farm assets	2,886,845	2,869,294	2,137,190	4,954,073
Return on farm equity	29,825	-185,794	6,204	303,270
Average farm equity	1,729,649	1,489,238	1,258,669	3,343,569
Value of farm production	1,048,852	1,043,359	678,287	1,915,960

Liquidity & Repayment Capacity Measures
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Liquidity				
Current ratio	1.62	1.10	1.58	2.18
Working capital	323,487	69,859	206,916	931,296
Working capital to gross inc	30.4 %	6.6 %	30.5 %	48.0 %
Current assets	846,472	735,593	560,867	1,719,644
Current liabilities	522,985	665,735	353,951	788,348
Gross revenues (accrual)	1,063,071	1,052,394	678,417	1,939,758
Repayment capacity				
Net farm income from operations	102,043	-116,650	56,268	428,452
Depreciation	75,897	77,220	56,130	123,248
Personal income	25,262	36,611	33,587	12,374
Family living/owner withdrawals	-77,967	-67,290	-66,794	-121,424
Cash discrepancy	-81	147	36	-98
Payments on personal debt	-4,827	-4,555	-3,316	-6,454
Income taxes paid	-21,424	-11,993	-13,815	-51,448
Interest on term debt	29,937	33,933	26,921	35,511
Capital debt repayment capacity	128,921	-52,724	88,982	420,257
Scheduled term debt payments	-104,175	-118,395	-83,105	-147,565
Capital debt repayment margin	24,747	-171,120	5,877	272,692
Cash replacement allowance	-46,868	-50,156	-29,894	-74,258
Replacement margin	-22,122	-221,276	-24,016	198,434
Term debt coverage ratio	1.24	-0.45	1.07	2.85
Replacement coverage ratio	0.85	-0.31	0.79	1.89

Balance Sheet at Cost Values
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Assets				
Current Farm Assets				
Cash and checking balance	53,713	5,502	45,336	165,191
Prepaid expenses & supplies	86,392	55,638	63,498	199,087
Growing crops	13	-	-	65
Accounts receivable	76,776	94,561	62,270	94,849
Hedging accounts	9,132	9,484	4,294	20,237
Crops held for sale or feed	608,244	566,679	383,650	1,202,473
Market livestock held for sale	7,343	2,305	1,437	16,264
Other current assets	4,859	1,425	382	21,478
Total current farm assets	846,472	735,593	560,867	1,719,644
Intermediate Farm Assets				
Breeding livestock	3,783	2,667	1,047	13,584
Machinery and equipment	668,906	667,899	488,081	1,084,680
Titled vehicles	44,381	46,534	34,087	70,844
Other intermediate assets	224,551	136,167	110,897	542,848
Total intermediate farm assets	941,622	853,266	634,112	1,711,955
Long Term Farm Assets				
Farm land	805,640	886,008	693,774	1,143,360
Buildings and improvements	244,353	288,207	166,650	405,040
Other long-term assets	84,150	59,718	79,415	144,086
Total long-term farm assets	1,134,142	1,233,932	939,839	1,692,486
Total Farm Assets	2,922,236	2,822,792	2,134,819	5,124,085
Total Nonfarm Assets	332,861	246,335	277,340	519,883
Total Assets	3,255,097	3,069,127	2,412,158	5,643,967
Liabilities				
Current Farm Liabilities				
Accrued interest	20,114	26,472	15,621	19,395
Accounts payable	37,735	55,440	16,285	54,476
Current notes	390,123	501,483	266,013	601,478
Principal due on term debt	75,012	82,340	56,032	112,999
Total current farm liabilities	522,985	665,735	353,951	788,348
Total intermediate farm liabs	155,051	159,201	101,638	221,794
Total long term farm liabilities	505,519	586,973	418,795	649,272
Total farm liabilities	1,183,555	1,411,909	874,384	1,659,414
Total nonfarm liabilities	84,217	69,070	51,331	153,432
Total liabilities	1,267,771	1,480,979	925,715	1,812,847
Net worth (farm and nonfarm)	1,987,326	1,588,148	1,486,444	3,831,121
Net worth change	41,358	-129,141	22,271	276,315
Percent net worth change	2 %	-8 %	2 %	8 %
Ratio Analysis				
Current farm liabilities / assets	62 %	91 %	63 %	46 %
Intermediate farm liab. / assets	16 %	19 %	16 %	13 %
Long term farm liab. / assets	45 %	48 %	45 %	38 %
Total debt to asset ratio	39 %	48 %	38 %	32 %

Balance Sheet at Market Values
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Assets				
Current Farm Assets				
Cash and checking balance	53,713	5,502	45,336	165,191
Prepaid expenses & supplies	86,392	55,638	63,498	199,087
Growing crops	13	-	-	65
Accounts receivable	76,776	94,561	62,270	94,849
Hedging accounts	9,132	9,484	4,294	20,237
Crops held for sale or feed	608,244	566,679	383,650	1,202,473
Market livestock held for sale	7,343	2,305	1,437	16,264
Other current assets	4,859	1,425	382	21,478
Total current farm assets	846,472	735,593	560,867	1,719,644
Intermediate Farm Assets				
Breeding livestock	4,096	3,144	1,372	14,018
Machinery and equipment	845,121	904,409	575,411	1,335,382
Titled vehicles	54,873	60,860	37,656	90,268
Other intermediate assets	296,432	147,538	126,764	787,720
Total intermediate farm assets	1,200,522	1,115,950	741,204	2,227,387
Long Term Farm Assets				
Farm land	1,459,686	1,323,615	1,253,263	2,300,653
Buildings and improvements	282,150	340,641	191,998	462,698
Other long-term assets	101,952	83,518	101,994	163,669
Total long-term farm assets	1,843,787	1,747,774	1,547,255	2,927,020
Total Farm Assets	3,890,781	3,599,317	2,849,326	6,874,050
Total Nonfarm Assets	413,918	303,651	326,582	639,502
Total Assets	4,304,699	3,902,968	3,175,908	7,513,552
Liabilities				
Current Farm Liabilities				
Accrued interest	20,114	26,472	15,621	19,395
Accounts payable	37,735	55,440	16,285	54,476
Current notes	390,123	501,483	266,013	601,478
Principal due on term debt	75,012	82,340	56,032	112,999
Total current farm liabilities	522,985	665,735	353,951	788,348
Total intermediate farm liabs	155,051	159,201	101,638	221,794
Total long term farm liabilities	505,519	586,973	418,795	649,272
Total farm liabilities	1,183,555	1,411,909	874,384	1,659,414
Total nonfarm liabilities	84,217	69,070	51,331	153,432
Total liabs excluding deferreds	1,267,771	1,480,979	925,715	1,812,847
Total deferred liabilities	317,600	255,726	167,519	738,155
Total liabilities	1,585,372	1,736,705	1,093,234	2,551,002
Retained earnings	1,987,326	1,588,148	1,486,444	3,831,121
Market valuation equity	732,002	578,115	596,231	1,131,429
Net worth (farm and nonfarm)	2,719,328	2,166,262	2,082,675	4,962,550
Net worth excluding deferreds	3,036,928	2,421,988	2,250,194	5,700,705
Net worth change	85,662	-56,274	43,900	301,821
Percent net worth change	3 %	-3 %	2 %	6 %
Ratio Analysis				
Current farm liabilities / assets	62 %	91 %	63 %	46 %
Intermediate farm liab. / assets	13 %	14 %	14 %	10 %
Long term farm liab. / assets	27 %	34 %	27 %	22 %
Total debt to asset ratio	37 %	44 %	34 %	34 %
Debt to assets excl deferreds	29 %	38 %	29 %	24 %

Statement Of Cash Flows
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Beginning cash (farm & nonfarm)	62,654	41,491	63,773	129,987
Cash Provided By Operating Activities				
Gross cash farm income	1,046,483	1,108,818	702,594	1,806,581
Total cash farm expense	-877,925	-1,051,439	-580,260	-1,408,045
Net cash from hedging transactions	248	-4,844	-1,608	10,253
Cash provided by operating	168,806	52,536	120,726	408,789
Cash Provided By Investing Activities				
Sale of breeding livestock	86	114	317	-
Sale of machinery & equipment	10,933	12,377	11,911	11,665
Sale of titled vehicles	740	818	520	1,782
Sale of farm land	4,900	746	-	6,624
Sale of farm buildings	142	395	234	-
Sale of other farm assets	2,103	-	-	7,685
Sale of nonfarm assets	5,707	9,885	2,633	6,028
Purchase of breeding livestock	-996	-	-	-4,734
Purchase of machinery & equip.	-73,387	-50,382	-51,134	-161,397
Purchase of titled vehicles	-7,381	-1,755	-8,095	-16,211
Purchase of farm land	-36,544	-37,321	-9,061	-41,515
Purchase of farm buildings	-13,355	-8,875	-5,517	-28,000
Purchase of other farm assets	-16,013	-9,769	-3,298	-41,383
Purchase of nonfarm assets	-26,345	-19,241	-9,596	-62,040
Cash provided by investing	-149,410	-103,009	-71,084	-321,495
Cash Provided By Financing Activities				
Money borrowed	510,347	596,910	340,659	831,284
Principal payments	-454,285	-545,753	-338,348	-713,885
Personal income	25,262	36,611	33,587	12,374
Family living/owner withdrawals	-77,967	-67,290	-66,794	-121,424
Income and social security tax	-20,978	-11,878	-12,459	-49,503
Capital contributions	24	-	-	-
Capital distributions	-1,611	-379	-	-2,888
Dividends paid	-	-	-	-
Cash gifts and inheritances	7,456	15,842	2,848	4,826
Gifts given	-1,984	-426	-4,827	-3,039
Other cash flows	-	-	-	-
Cash provided by financing	-13,737	23,637	-45,333	-42,255
Net change in cash balance	5,660	-26,836	4,309	45,038
Ending cash (farm & nonfarm)	68,233	14,802	68,119	174,927
Discrepancy	81	-147	-36	98

Financial Standards Measures
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Liquidity				
Current ratio	1.62	1.10	1.58	2.18
Working capital	323,487	69,859	206,916	931,296
Working capital to gross inc	30.4 %	6.6 %	30.5 %	48.0 %
Solvency (market)				
Farm debt to asset ratio	38 %	46 %	36 %	35 %
Farm equity to asset ratio	62 %	54 %	64 %	65 %
Farm debt to equity ratio	0.62	0.86	0.57	0.53
Profitability (cost)				
Rate of return on farm assets	2.5 %	-4.6 %	1.9 %	7.2 %
Rate of return on farm equity	1.7 %	-12.5 %	0.5 %	9.1 %
Operating profit margin	7.0 %	-12.5 %	6.0 %	18.6 %
Net farm income	102,783	-116,848	56,571	431,827
EBITDA	221,269	15,652	146,935	604,466
Repayment Capacity				
Capital debt repayment capacity	128,921	-52,724	88,982	420,257
Capital debt repayment margin	24,747	-171,120	5,877	272,692
Replacement margin	-22,122	-221,276	-24,016	198,434
Term debt coverage ratio	1.24	-0.45	1.07	2.85
Replacement coverage ratio	0.85	-0.31	0.79	1.89
Efficiency				
Asset turnover rate (cost)	36.3 %	36.4 %	31.7 %	38.7 %
Operating expense ratio	79.2 %	98.5 %	78.3 %	68.8 %
Depreciation expense ratio	7.1 %	7.3 %	8.3 %	6.4 %
Interest expense ratio	4.1 %	5.2 %	5.1 %	2.7 %
Net farm income ratio	9.7 %	-11.1 %	8.3 %	22.3 %

Crop Production and Marketing Summary
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Acreage Summary				
Total acres owned	460	375	447	720
Total crop acres	1,907	2,113	1,326	3,130
Crop acres owned	412	317	425	656
Crop acres cash rented	1,465	1,761	850	2,446
Crop acres share rented	31	36	51	28
Total pasture acres	2	1	1	4
Percent crop acres owned	22 %	15 %	32 %	21 %
Mach invest/crop acre cost	374	345	395	361
Mach invest/crop acre market	470	458	464	447
Average Price Received (Cash Sales Only)				
Soybeans per bushel	9.06	8.94	9.07	9.09
Wheat, Spring per bushel	5.51	5.58	5.31	5.52
Corn per bushel	3.02	2.94	3.02	3.09
Soybeans Seed per bushel	10.94	-	-	10.78
Soybeans, Food per bushel	13.13	-	-	-
Beans, Pinto per cwt	25.33	-	-	-
Sunflowers per cwt	18.84	-	-	-
Barley per bushel	4.46	-	-	-
Beans, Navy per cwt	26.01	-	-	-
Hay, Alfalfa per ton	94.68	-	-	-
Average Yield Per Acre				
Soybeans (bushel)	39.12	40.21	38.07	39.08
Corn (bushel)	177.79	181.34	169.32	174.64
Wheat, Spring (bushel)	74.36	70.97	74.10	76.04
Sugar Beets (ton)	30.72	27.45	30.08	31.49
Soybeans Seed (bushel)	40.12	38.45	-	38.88
Soybeans, Food (bushel)	33.59	-	38.02	-
Barley (bushel)	89.68	81.15	-	-
Beans, Navy (cwt)	19.98	-	19.15	-
Beans, Pinto (cwt)	17.81	-	-	17.21
Hay, Alfalfa (ton)	2.84	-	-	-
Sunflowers (cwt)	22.67	-	-	-

Operator and Labor Information
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Operator Information				
Average number of operators	1.1	1.2	1.0	1.4
Average age of operators	47.8	48.6	47.2	49.3
Average number of years farming	24.2	25.0	23.0	27.3
Results Per Operator				
Working capital	286,553	58,631	203,879	663,196
Total assets (market)	3,813,202	3,275,705	3,129,302	5,350,560
Total liabilities	1,404,359	1,457,592	1,077,190	1,816,622
Net worth (market)	2,408,843	1,818,113	2,052,111	3,533,937
Net worth excl deferred liabs	2,690,181	2,032,740	2,217,172	4,059,593
Gross farm income	941,693	883,260	668,461	1,381,343
Total farm expense	851,300	981,162	613,019	1,076,233
Net farm income from operations	90,392	-97,902	55,442	305,110
Net nonfarm income	22,377	30,727	33,095	8,812
Family living & tax withdrawals	88,114	66,418	79,390	123,176
Total acres owned	407.5	314.9	440.5	512.5
Total crop acres	1,689.5	1,773.6	1,306.2	2,229.0
Crop acres owned	364.7	265.7	418.3	467.1
Crop acres cash rented	1,297.6	1,477.9	837.3	1,742.2
Crop acres share rented	27.2	30.0	50.6	19.7
Total pasture acres	1.5	1.1	0.6	2.7
Labor Analysis				
Number of farms	235	47	47	47
Total unpaid labor hours	1,832	1,823	1,746	2,251
Total hired labor hours	2,436	3,866	1,143	4,468
Total labor hours per farm	4,268	5,689	2,889	6,719
Unpaid hours per operator	1,622	1,530	1,720	1,603

Nonfarm Summary
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	235	47	47	47
Nonfarm Income				
Personal wages & salary	19,178	28,907	30,769	8,037
Net nonfarm business income	1,347	3,036	394	-126
Personal rental income	243	-	256	296
Personal interest income	153	26	284	339
Personal cash dividends	32	-	4	119
Tax refunds	597	957	399	237
Other nonfarm income	3,710	3,683	1,482	3,472
Total nonfarm income	25,262	36,611	33,587	12,374
Gifts and inheritances	7,456	15,842	2,848	4,826

Financial Summary
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Gross Farm Income)

	Avg. Of All Farms	Less than 100,000	100,001 - 250,000	250,001 - 500,000	500,001 - 1,000,000	1,000,001- 2,000,000	Over 2,000,000
Number of farms	235	6	23	41	79	59	27
Income Statement							
Gross cash farm income	1,046,483	59,829	175,180	356,471	712,067	1,441,311	3,171,464
Total cash farm expense	877,925	60,477	147,780	290,753	575,458	1,195,582	2,764,043
Net cash farm income	168,558	-648	27,400	65,717	136,608	245,729	407,420
Inventory change	9,383	32,197	23,330	561	-31,075	44,563	47,328
Depreciation	-75,897	-3,771	-12,278	-33,159	-57,555	-112,576	-184,535
Net farm income from operations	102,043	27,778	38,452	33,120	47,978	177,716	270,213
Gain or loss on capital sales	739	-	-	-258	88	3,006	-
Average net farm income	102,783	27,778	38,452	32,862	48,066	180,722	270,213
Median net farm income	53,694	17,205	30,346	44,213	50,497	148,129	177,509
Profitability (cost)							
Rate of return on assets	2.5 %	6.6 %	4.6 %	1.1 %	1.1 %	3.4 %	2.9 %
Rate of return on equity	1.7 %	7.5 %	5.4 %	-0.7 %	-0.4 %	3.3 %	2.1 %
Operating profit margin	7.0 %	15.0 %	12.5 %	3.5 %	3.4 %	9.2 %	7.3 %
Asset turnover rate	36.3 %	44.0 %	36.7 %	30.4 %	32.3 %	37.6 %	39.5 %
Liquidity & Repayment (end of year)							
Current assets	846,472	113,606	150,171	298,635	594,020	1,197,602	2,405,748
Current liabilities	522,985	16,451	81,552	187,356	358,878	718,831	1,573,442
Current ratio	1.62	6.91	1.84	1.59	1.66	1.67	1.53
Working capital	323,487	97,154	68,619	111,279	235,142	478,771	832,306
Change in working capital	-39,478	21,665	10,476	1,934	-51,472	-31,206	-141,485
Working capital to gross inc	30.4 %	94.6 %	34.0 %	30.3 %	33.6 %	32.3 %	25.9 %
Term debt coverage ratio	1.24	6.43	2.20	1.18	0.85	1.47	1.24
Replacement coverage ratio	0.85	3.54	1.33	0.83	0.55	1.00	0.91
Term debt to EBITDA	2.97	0.47	2.39	3.02	3.48	2.36	3.47
Solvency (end of year at cost)							
Number of farms	235	6	23	41	79	59	27
Total assets	3,255,097	391,941	729,150	1,470,378	2,524,864	4,267,588	8,677,342
Total liabilities	1,267,771	126,518	315,872	552,391	902,578	1,600,425	3,760,199
Net worth	1,987,326	265,423	413,278	917,987	1,622,286	2,667,163	4,917,144
Net worth change	41,358	63,102	22,337	12,517	5,219	76,341	125,817
Farm debt to asset ratio	41 %	35 %	45 %	38 %	39 %	38 %	45 %
Total debt to asset ratio	39 %	32 %	43 %	38 %	36 %	38 %	43 %
Change in earned net worth %	2 %	31 %	6 %	1 %	0 %	3 %	3 %
Solvency (end of year at market)							
Number of farms	235	6	23	41	79	59	27
Total assets	4,304,699	517,214	870,615	1,911,785	3,563,322	5,422,448	11,432,105
Total liabilities	1,585,372	162,837	341,963	655,117	1,070,582	2,003,510	4,965,826
Net worth	2,719,328	354,377	528,652	1,256,668	2,492,741	3,418,938	6,466,279
Total net worth change	85,662	63,403	29,113	34,258	55,989	153,990	154,349
Farm debt to asset ratio	38 %	35 %	41 %	35 %	32 %	38 %	45 %
Total debt to asset ratio	37 %	31 %	39 %	34 %	30 %	37 %	43 %
Change in total net worth %	3 %	22 %	6 %	3 %	2 %	5 %	2 %
Nonfarm Information							
Net nonfarm income	25,262	30,020	25,076	38,981	28,221	18,831	8,922
Crop Acres							
Total crop acres	1,907	194	434	776	1,407	2,804	4,767
Total crop acres owned	412	30	97	212	335	528	1,038
Total crop acres cash rented	1,465	164	334	520	1,032	2,257	3,689
Total crop acres share rented	31	-	3	44	40	19	40
Machinery value per crop acre	374	230	271	403	409	372	348

Financial Summary
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Age of Operator)

	<u>Avg. Of All Farms</u>	<u>Less Than 31</u>	<u>31 - 40</u>	<u>41 - 50</u>	<u>51 - 60</u>	<u>Over 60</u>
Number of farms	235	28	51	39	69	48
Income Statement						
Gross cash farm income	1,046,483	452,931	838,102	1,159,195	1,388,243	1,031,268
Total cash farm expense	877,925	388,752	734,887	937,788	1,194,223	811,938
Net cash farm income	168,558	64,180	103,215	221,407	194,021	219,331
Inventory change	9,383	36,331	26,605	20,080	-12,593	-1,738
Depreciation	-75,897	-21,588	-55,185	-71,877	-103,888	-92,614
Net farm income from operations	102,043	78,923	74,634	169,609	77,540	124,979
Gain or loss on capital sales	739	27	262	-151	1,980	602
Average net farm income	102,783	78,950	74,896	169,458	79,520	125,581
Median net farm income	53,694	34,285	52,987	73,117	54,463	78,290
Profitability (cost)						
Rate of return on assets	2.5 %	5.6 %	2.8 %	4.7 %	1.2 %	2.6 %
Rate of return on equity	1.7 %	7.1 %	1.3 %	5.3 %	-0.4 %	1.9 %
Operating profit margin	7.0 %	10.7 %	6.9 %	11.7 %	3.3 %	8.7 %
Asset turnover rate	36.3 %	52.3 %	40.0 %	40.2 %	36.1 %	29.3 %
Liquidity & Repayment (end of year)						
Current assets	846,472	313,790	631,034	966,300	1,064,170	975,805
Current liabilities	522,985	187,855	534,995	518,769	680,088	483,304
Current ratio	1.62	1.67	1.18	1.86	1.56	2.02
Working capital	323,487	125,935	96,038	447,531	384,082	492,501
Change in working capital	-39,478	14,166	-67,260	-20,467	-76,141	-3,994
Working capital to gross inc	30.4 %	25.4 %	10.9 %	38.8 %	27.6 %	47.3 %
Term debt coverage ratio	1.24	2.21	1.00	1.98	0.90	1.38
Replacement coverage ratio	0.85	1.91	0.75	1.43	0.61	0.86
Term debt to EBITDA	2.97	1.43	3.99	2.19	3.57	2.51
Solvency (end of year at cost)						
Number of farms	235	28	51	39	69	48
Total assets	3,255,097	1,079,358	2,563,137	3,220,008	4,158,288	3,989,658
Total liabilities	1,267,771	463,095	1,389,295	1,256,953	1,566,785	1,187,005
Net worth	1,987,326	616,263	1,173,842	1,963,054	2,591,504	2,802,653
Net worth change	41,358	69,965	18,536	95,728	13,334	45,026
Farm debt to asset ratio	41 %	41 %	56 %	39 %	40 %	32 %
Total debt to asset ratio	39 %	43 %	54 %	39 %	38 %	30 %
Change in earned net worth %	2 %	13 %	2 %	5 %	1 %	2 %
Solvency (end of year at market)						
Number of farms	235	28	51	39	69	48
Total assets	4,304,699	1,126,359	2,953,712	4,129,912	5,600,206	5,873,878
Total liabilities	1,585,372	517,045	1,580,246	1,628,857	1,978,943	1,612,918
Net worth	2,719,328	609,314	1,373,466	2,501,055	3,621,263	4,260,961
Total net worth change	85,662	84,378	21,003	159,090	80,974	102,191
Farm debt to asset ratio	38 %	45 %	56 %	40 %	37 %	29 %
Total debt to asset ratio	37 %	46 %	54 %	39 %	35 %	27 %
Change in total net worth %	3 %	16 %	2 %	7 %	2 %	2 %
Nonfarm Information						
Net nonfarm income	25,262	23,940	23,327	20,567	32,463	21,551
Crop Acres						
Total crop acres	1,907	1,303	1,535	1,984	2,415	1,863
Total crop acres owned	412	87	306	308	543	610
Total crop acres cash rented	1,465	1,191	1,213	1,634	1,838	1,218
Total crop acres share rented	31	25	16	42	34	35
Machinery value per crop acre	374	168	337	330	402	475

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 operators 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 direct government payments. 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 may be classified into the low 20%, the mid 20%, or the 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 20% for a third crop. When there are less than 25 total farms with any particular crop and farmer's tenure, only overall averages are presented.

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, "Machinery leases" as direct expense refers to machinery leased and used only in that crop enterprise; 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 direct cost for each crop enterprise on cash rented land. In the case of double cropping, one-half of the rent is charged to each crop.

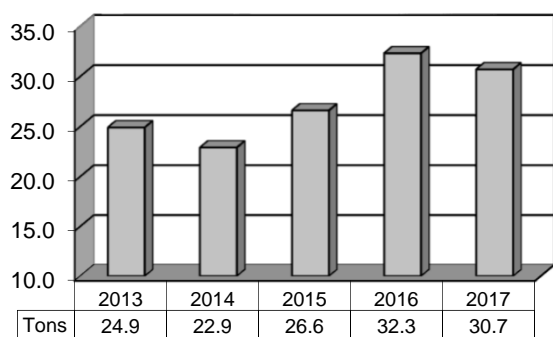
"Total direct expense per unit" and "Total dir & ovhd exp per unit" are calculated by dividing "Total direct expense per acre" and "Total dir & ovhd expenses per acre," respectively, by "Yield per acre." "With labor & management" is the breakeven yield after direct, overhead and a labor and management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

In the last section of the crop table, "machinery cost per acre" is the sum of fuel, repairs, all custom hire and machinery leases, machinery depreciation and interest on intermediate debt.

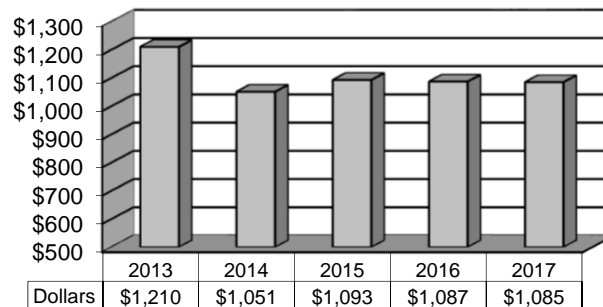
Rounding of individual items for the report may have caused minor discrepancies with the calculated totals.

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

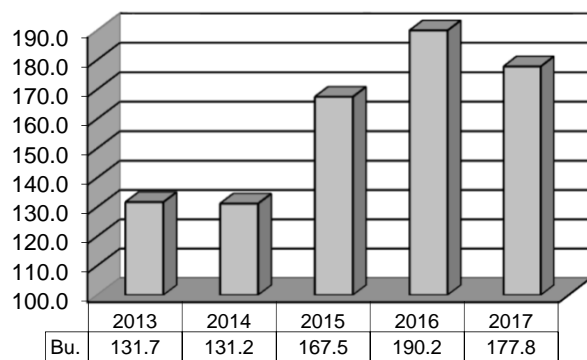
Sugar Beet Yields



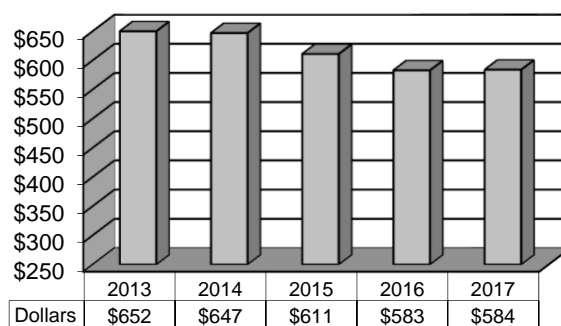
Sugar Beet Total Listed Cost (cash rented land)



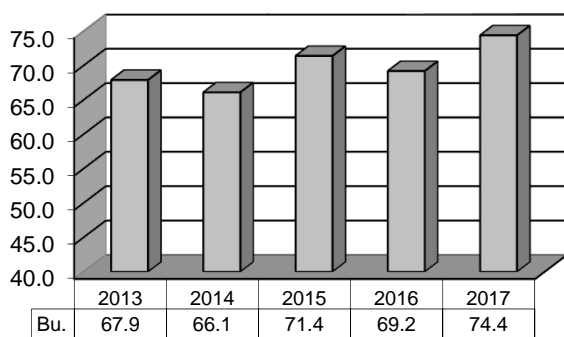
Corn Yields



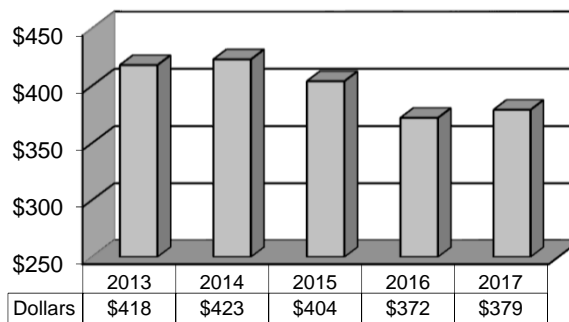
Corn Total Listed Cost (cash rented land)



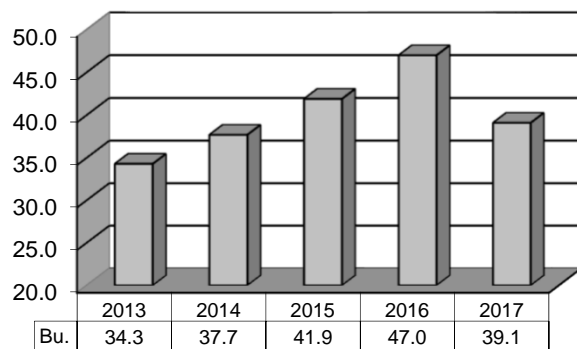
Spring Wheat Yields



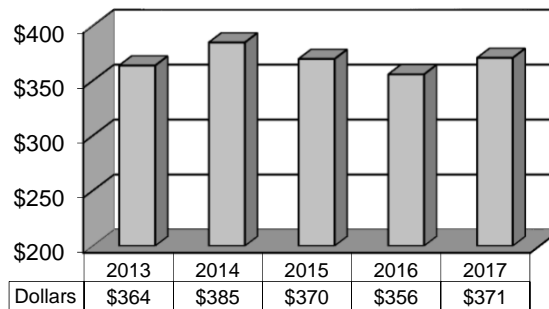
Spring Wheat Total Listed Cost (cash rented land)



Soybeans Yields



Soybeans Total Listed Cost (cash rented land)



Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Barley on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	8
Acres	278.22
Yield per acre (bu.)	88.42
Operators share of yield %	100.00
Value per bu.	4.26
Total product return per acre	376.67
Crop insurance per acre	9.20
Other crop income per acre	4.35
Gross return per acre	390.22
Direct Expenses	
Seed and plants	16.22
Fertilizer	55.69
Crop chemicals	34.65
Crop insurance	20.35
Fuel & oil	14.86
Repairs	22.03
Custom hire	6.48
Land rent	134.20
Operating interest	5.73
Miscellaneous	6.40
Total direct expenses per acre	316.61
Return over direct exp per acre	73.61
Overhead Expenses	
Hired labor	22.56
Machinery leases	3.77
Farm insurance	7.47
Utilities	4.65
Dues & professional fees	2.37
Interest	3.17
Mach & bldg depreciation	28.72
Miscellaneous	4.63
Total overhead expenses per acre	77.34
Total dir & ovhd expenses per acre	393.95
Net return per acre	-3.73
Government payments	10.50
Net return with govt pmts	6.77
Labor & management charge	25.92
Net return over lbr & mgt	-19.15
Cost of Production	
Total direct expense per bu.	3.58
Total dir & ovhd exp per bu.	4.46
Less govt & other income	4.18
With labor & management	4.48
Net value per unit	4.26
Machinery cost per acre	77.21
Est. labor hours per acre	1.44

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Beans, Navy on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	271.39
Yield per acre (cwt.)	20.28
Operators share of yield %	100.00
Value per cwt.	25.02
Total product return per acre	507.45
Crop insurance per acre	33.03
Other crop income per acre	7.62
Gross return per acre	548.10
Direct Expenses	
Seed and plants	56.74
Fertilizer	48.56
Crop chemicals	61.07
Crop insurance	28.41
Fuel & oil	23.08
Repairs	38.98
Custom hire	9.60
Hired labor	3.53
Land rent	130.65
Operating interest	17.06
Miscellaneous	1.27
Total direct expenses per acre	418.95
Return over direct exp per acre	129.15
Overhead Expenses	
Custom hire	0.96
Hired labor	11.87
Machinery leases	2.37
Building leases	3.40
Farm insurance	8.01
Utilities	4.69
Dues & professional fees	3.12
Interest	4.54
Mach & bldg depreciation	29.82
Miscellaneous	2.90
Total overhead expenses per acre	71.68
Total dir & ovhd expenses per acre	490.63
Net return per acre	57.47
Government payments	-
Net return with govt pmts	57.47
Labor & management charge	33.52
Net return over lbr & mgt	23.95
Cost of Production	
Total direct expense per cwt.	20.65
Total dir & ovhd exp per cwt.	24.19
Less govt & other income	22.18
With labor & management	23.84
Net value per unit	25.02
Machinery cost per acre	109.40
Est. labor hours per acre	1.87

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Beans, Pinto on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	268.86
Yield per acre (cwt.)	17.69
Operators share of yield %	100.00
Value per cwt.	23.89
Total product return per acre	422.61
Crop insurance per acre	1.94
Other crop income per acre	4.69
Gross return per acre	429.24
Direct Expenses	
Seed and plants	53.07
Fertilizer	17.62
Crop chemicals	56.73
Crop insurance	22.14
Fuel & oil	18.38
Repairs	28.37
Custom hire	7.17
Land rent	109.39
Operating interest	4.54
Total direct expenses per acre	317.43
Return over direct exp per acre	111.81
Overhead Expenses	
Hired labor	19.53
Machinery leases	3.62
Building leases	4.87
Farm insurance	5.05
Utilities	3.58
Dues & professional fees	5.27
Interest	1.81
Mach & bldg depreciation	51.48
Miscellaneous	1.87
Total overhead expenses per acre	97.10
Total dir & ovhd expenses per acre	414.53
Net return per acre	14.71
Government payments	-
Net return with govt pmts	14.71
Labor & management charge	40.08
Net return over lbr & mgt	-25.37
Cost of Production	
Total direct expense per cwt.	17.95
Total dir & ovhd exp per cwt.	23.44
Less govt & other income	23.06
With labor & management	25.33
Net value per unit	23.89
Machinery cost per acre	105.23
Est. labor hours per acre	1.92

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Corn on Owned Land

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	86	17	17	18
Acres	278.46	166.80	370.58	303.96
Yield per acre (bu.)	181.04	160.31	178.94	203.19
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	3.07	2.86	3.12	3.14
Total product return per acre	556.53	459.05	557.63	638.94
Hedging gains/losses per acre	0.82	-	-	3.60
Crop insurance per acre	3.86	7.42	5.93	2.19
Other crop income per acre	2.90	0.93	1.18	6.41
Gross return per acre	564.12	467.39	564.74	651.14
Direct Expenses				
Seed and plants	95.93	98.16	99.90	93.92
Fertilizer	102.31	99.47	103.49	104.47
Crop chemicals	26.07	24.04	27.41	18.25
Crop insurance	23.09	25.16	22.13	24.19
Drying expense	13.76	11.69	12.58	21.50
Fuel & oil	20.95	23.17	21.81	22.29
Repairs	37.54	50.04	33.67	38.24
Custom hire	6.16	4.99	12.36	1.92
Hired labor	3.64	3.99	10.59	0.34
Machinery leases	0.98	2.45	-	0.27
Operating interest	11.10	8.58	10.53	9.26
Miscellaneous	3.10	2.76	1.04	0.27
Total direct expenses per acre	344.63	354.50	355.52	334.94
Return over direct exp per acre	219.49	112.90	209.22	316.21
Overhead Expenses				
Custom hire	0.75	0.26	0.11	1.70
Hired labor	24.72	8.44	17.49	40.26
Machinery leases	7.81	5.99	8.38	5.21
Building leases	1.95	0.98	3.17	1.74
RE & pers. property taxes	22.58	24.24	20.72	24.92
Farm insurance	8.05	9.35	8.91	9.00
Utilities	6.12	6.47	7.69	6.56
Dues & professional fees	4.29	4.64	5.84	3.34
Interest	59.37	85.29	47.69	70.75
Mach & bldg depreciation	47.54	48.06	46.27	49.73
Miscellaneous	6.14	4.97	6.58	8.62
Total overhead expenses per acre	189.32	198.70	172.85	221.82
Total dir & ovhd expenses per acre	533.95	553.19	528.37	556.75
Net return per acre	30.17	-85.80	36.37	94.39
Government payments	7.94	7.93	6.71	3.90
Net return with govt pmts	38.11	-77.87	43.08	98.29
Labor & management charge	37.34	49.51	32.73	40.51
Net return over lbr & mgt	0.78	-127.38	10.35	57.78
Cost of Production				
Total direct expense per bu.	1.90	2.21	1.99	1.65
Total dir & ovhd exp per bu.	2.95	3.45	2.95	2.74
Less govt & other income	2.86	3.35	2.88	2.66
With labor & management	3.07	3.66	3.06	2.86
Net value per unit	3.08	2.86	3.12	3.16
Machinery cost per acre	120.62	134.62	120.93	120.85
Est. labor hours per acre	2.42	2.71	2.27	2.62

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Corn on Cash Rent

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	131	26	26	27
Acres	564.96	593.05	671.78	631.52
Yield per acre (bu.)	176.63	165.96	175.26	188.62
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	3.09	3.05	3.08	3.13
Total product return per acre	545.31	505.81	539.00	590.43
Hedging gains/losses per acre	2.44	-	8.14	3.10
Crop insurance per acre	5.11	8.68	2.98	8.62
Other crop income per acre	4.52	4.38	5.12	4.56
Gross return per acre	557.38	518.87	555.24	606.71
Direct Expenses				
Seed and plants	92.39	95.83	96.24	86.15
Fertilizer	103.74	104.57	107.63	99.20
Crop chemicals	26.65	26.73	27.37	22.39
Crop insurance	21.10	18.02	23.76	20.84
Drying expense	12.73	15.22	12.46	8.53
Fuel & oil	21.94	23.14	21.79	22.16
Repairs	36.84	35.68	32.69	37.61
Custom hire	5.33	11.59	6.16	0.70
Hired labor	4.70	7.19	2.07	6.01
Land rent	143.35	182.90	140.01	130.07
Machinery leases	1.39	2.75	0.94	-
Operating interest	11.75	16.47	10.62	9.60
Miscellaneous	2.55	3.00	3.13	0.37
Total direct expenses per acre	484.45	543.09	484.87	443.62
Return over direct exp per acre	72.94	-24.22	70.38	163.08
Overhead Expenses				
Custom hire	0.62	-	0.81	0.53
Hired labor	17.68	9.39	25.02	22.23
Machinery leases	10.52	10.58	11.07	16.04
Building leases	3.14	8.91	2.89	1.19
Farm insurance	6.98	6.92	5.20	7.09
Utilities	5.27	4.54	5.03	6.67
Dues & professional fees	4.15	2.73	3.96	5.20
Interest	3.44	3.03	3.41	4.47
Mach & bldg depreciation	42.76	37.28	40.51	43.72
Miscellaneous	5.29	3.74	6.88	4.46
Total overhead expenses per acre	99.84	87.11	104.78	111.59
Total dir & ovhd expenses per acre	584.29	630.20	589.65	555.22
Net return per acre	-26.90	-111.33	-34.41	51.49
Government payments	5.27	4.39	7.89	5.28
Net return with govt pmts	-21.63	-106.95	-26.52	56.77
Labor & management charge	38.81	36.98	37.64	39.69
Net return over lbr & mgt	-60.44	-143.93	-64.16	17.08
Cost of Production				
Total direct expense per bu.	2.74	3.27	2.77	2.35
Total dir & ovhd exp per bu.	3.31	3.80	3.36	2.94
Less govt & other income	3.21	3.69	3.23	2.83
With labor & management	3.43	3.91	3.44	3.04
Net value per unit	3.10	3.05	3.12	3.15
Machinery cost per acre	118.91	121.31	112.34	122.01
Est. labor hours per acre	2.15	2.17	2.22	2.05

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Hay, Alfalfa on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	7
Acres	147.29
Yield per acre (ton)	2.83
Operators share of yield %	100.00
Value per ton	126.74
Total product return per acre	358.83
Other crop income per acre	12.52
Gross return per acre	371.35
Direct Expenses	
Fertilizer	26.60
Crop chemicals	3.63
Crop insurance	1.60
Fuel & oil	24.83
Repairs	42.53
Custom hire	13.74
Hired labor	32.24
Land rent	140.07
Machinery leases	57.16
Operating interest	10.06
Miscellaneous	18.77
Total direct expenses per acre	371.24
Return over direct exp per acre	0.12
Overhead Expenses	
Hired labor	15.54
Machinery leases	3.96
Farm insurance	5.27
Utilities	4.31
Dues & professional fees	4.08
Interest	1.25
Mach & bldg depreciation	19.82
Miscellaneous	9.13
Total overhead expenses per acre	63.37
Total dir & ovhd expenses per acre	434.60
Net return per acre	-63.25
Government payments	2.27
Net return with govt pmts	-60.98
Labor & management charge	40.19
Net return over lbr & mgt	-101.17
Cost of Production	
Total direct expense per ton	131.12
Total dir & ovhd exp per ton	153.50
Less govt & other income	148.28
With labor & management	162.47
Net value per unit	126.74
Machinery cost per acre	161.16
Est. labor hours per acre	2.15

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Soybeans on Owned Land

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	110	22	22	22
Acres	276.31	298.03	298.33	290.48
Yield per acre (bu.)	39.66	31.57	39.93	49.02
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	9.02	8.97	9.01	9.04
Total product return per acre	357.65	283.27	359.77	443.16
Hedging gains/losses per acre	0.82	-	-	3.90
Crop insurance per acre	14.63	25.13	10.94	4.85
Other crop income per acre	4.73	1.81	2.63	13.64
Gross return per acre	377.84	310.21	373.34	465.55
Direct Expenses				
Seed and plants	65.57	69.28	67.94	63.12
Fertilizer	11.18	20.82	11.70	5.73
Crop chemicals	37.63	40.83	37.44	35.72
Crop insurance	21.54	23.10	22.06	20.94
Fuel & oil	13.19	16.32	9.58	13.24
Repairs	25.01	33.78	17.25	22.00
Custom hire	3.50	6.70	5.42	1.31
Hired labor	2.51	5.98	1.18	0.60
Operating interest	5.23	4.59	5.64	4.39
Miscellaneous	3.78	5.61	6.14	0.80
Total direct expenses per acre	189.14	227.01	184.35	167.84
Return over direct exp per acre	188.69	83.20	188.99	297.71
Overhead Expenses				
Hired labor	14.71	12.03	18.13	20.48
Machinery leases	2.72	0.82	3.39	4.11
Building leases	1.10	0.91	0.54	1.60
RE & pers. property taxes	23.19	18.58	24.31	23.73
Farm insurance	8.06	8.90	5.65	7.46
Utilities	4.29	4.70	3.44	3.69
Dues & professional fees	3.64	4.63	3.36	4.42
Interest	41.51	33.89	32.27	52.34
Mach & bldg depreciation	30.88	34.35	26.68	32.50
Miscellaneous	4.66	3.71	3.09	5.98
Total overhead expenses per acre	134.77	122.53	120.85	156.31
Total dir & ovhd expenses per acre	323.91	349.54	305.20	324.15
Net return per acre	53.93	-39.33	68.14	141.40
Government payments	9.19	15.11	11.50	3.90
Net return with govt pmts	63.12	-24.21	79.64	145.30
Labor & management charge	26.21	30.31	25.33	22.83
Net return over lbr & mgt	36.91	-54.52	54.31	122.47
Cost of Production				
Total direct expense per bu.	4.77	7.19	4.62	3.42
Total dir & ovhd exp per bu.	8.17	11.07	7.64	6.61
Less govt & other income	7.43	9.74	7.01	6.08
With labor & management	8.09	10.70	7.65	6.54
Net value per unit	9.04	8.97	9.01	9.12
Machinery cost per acre	75.24	90.35	60.54	72.96
Est. labor hours per acre	1.55	1.71	1.68	1.51

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Soybeans on Cash Rent

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	178	35	35	36
Acres	682.00	625.50	942.50	681.15
Yield per acre (bu.)	39.02	32.78	39.64	45.70
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	9.06	9.04	9.05	9.03
Total product return per acre	353.59	296.24	358.73	412.76
Hedging gains/losses per acre	0.05	-0.36	-	0.36
Crop insurance per acre	10.67	23.12	7.81	5.43
Other crop income per acre	3.42	2.41	2.70	5.97
Gross return per acre	367.73	321.41	369.23	424.51
Direct Expenses				
Seed and plants	61.21	63.85	62.27	57.31
Fertilizer	10.39	13.65	10.15	6.84
Crop chemicals	35.98	40.34	38.16	33.47
Crop insurance	20.07	20.15	24.15	19.63
Fuel & oil	12.21	12.27	10.83	12.62
Repairs	21.50	21.17	21.70	18.63
Custom hire	3.93	7.06	2.46	0.86
Hired labor	2.71	4.53	2.12	0.32
Land rent	131.05	157.51	128.75	128.09
Operating interest	5.64	7.30	5.08	5.55
Miscellaneous	3.39	5.15	4.15	1.21
Total direct expenses per acre	308.09	352.99	309.83	284.52
Return over direct exp per acre	59.64	-31.58	59.41	139.99
Overhead Expenses				
Hired labor	11.59	7.02	14.41	16.81
Machinery leases	4.93	3.95	4.09	4.92
Building leases	1.45	3.99	0.75	1.42
Farm insurance	6.14	5.53	5.89	6.65
Utilities	3.50	2.62	3.38	3.26
Dues & professional fees	3.45	2.37	3.69	4.11
Interest	2.22	2.65	2.52	1.79
Mach & bldg depreciation	25.77	23.62	25.46	26.79
Miscellaneous	3.57	1.79	3.98	3.92
Total overhead expenses per acre	62.63	53.54	64.17	69.68
Total dir & ovhd expenses per acre	370.72	406.53	374.00	354.20
Net return per acre	-2.99	-85.12	-4.76	70.31
Government payments	7.00	7.57	5.35	5.46
Net return with govt pmts	4.02	-77.55	0.58	75.77
Labor & management charge	24.65	22.86	25.35	23.08
Net return over lbr & mgt	-20.64	-100.41	-24.77	52.69
Cost of Production				
Total direct expense per bu.	7.89	10.77	7.82	6.23
Total dir & ovhd exp per bu.	9.50	12.40	9.43	7.75
Less govt & other income	8.96	11.40	9.03	7.37
With labor & management	9.59	12.10	9.67	7.88
Net value per unit	9.06	9.03	9.05	9.04
Machinery cost per acre	69.71	70.57	64.85	64.01
Est. labor hours per acre	1.38	1.18	1.40	1.37

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Soybeans Seed on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	10
Acres	213.00
Yield per acre (bu.)	40.49
Operators share of yield %	100.00
Value per bu.	10.62
Total product return per acre	430.16
Crop insurance per acre	1.65
Other crop income per acre	1.40
Gross return per acre	433.21
Direct Expenses	
Seed and plants	69.76
Fertilizer	23.74
Crop chemicals	32.60
Crop insurance	15.94
Fuel & oil	13.04
Repairs	26.78
Custom hire	10.77
Machinery leases	1.41
Operating interest	9.16
Miscellaneous	3.66
Total direct expenses per acre	206.85
Return over direct exp per acre	226.36
Overhead Expenses	
Hired labor	12.83
Machinery leases	1.63
Building leases	0.57
RE & pers. property taxes	23.28
Farm insurance	8.78
Utilities	5.04
Dues & professional fees	4.73
Interest	43.78
Mach & bldg depreciation	36.24
Miscellaneous	6.09
Total overhead expenses per acre	142.97
Total dir & ovhd expenses per acre	349.83
Net return per acre	83.39
Government payments	12.41
Net return with govt pmts	95.79
Labor & management charge	31.01
Net return over lbr & mgt	64.78
Cost of Production	
Total direct expense per bu.	5.11
Total dir & ovhd exp per bu.	8.64
Less govt & other income	8.26
With labor & management	9.02
Net value per unit	10.62
Machinery cost per acre	87.19
Est. labor hours per acre	1.87

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Soybeans Seed on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	15
Acres	416.34
Yield per acre (bu.)	39.99
Operators share of yield %	100.00
Value per bu.	10.65
Total product return per acre	425.89
Crop insurance per acre	7.57
Other crop income per acre	1.62
Gross return per acre	435.09
Direct Expenses	
Seed and plants	63.19
Fertilizer	12.97
Crop chemicals	35.56
Crop insurance	17.23
Fuel & oil	12.92
Repairs	27.69
Custom hire	2.88
Land rent	120.07
Machinery leases	1.67
Operating interest	6.54
Miscellaneous	4.77
Total direct expenses per acre	305.49
Return over direct exp per acre	129.60
Overhead Expenses	
Hired labor	11.86
Machinery leases	2.70
Building leases	1.02
Farm insurance	7.41
Utilities	3.84
Dues & professional fees	5.09
Interest	1.81
Mach & bldg depreciation	29.44
Miscellaneous	3.34
Total overhead expenses per acre	66.51
Total dir & ovhd expenses per acre	372.00
Net return per acre	63.09
Government payments	11.25
Net return with govt pmts	74.35
Labor & management charge	30.24
Net return over lbr & mgt	44.10
Cost of Production	
Total direct expense per bu.	7.64
Total dir & ovhd exp per bu.	9.30
Less govt & other income	8.79
With labor & management	9.55
Net value per unit	10.65
Machinery cost per acre	74.76
Est. labor hours per acre	1.57

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Soybeans, Food on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	7
Acres	171.57
Yield per acre (bu.)	35.13
Operators share of yield %	100.00
Value per bu.	12.59
Total product return per acre	442.23
Crop insurance per acre	9.30
Other crop income per acre	1.05
Gross return per acre	452.57
Direct Expenses	
Seed and plants	34.40
Fertilizer	18.13
Crop chemicals	52.73
Crop insurance	21.01
Fuel & oil	11.69
Repairs	22.03
Custom hire	2.86
Hired labor	5.81
Operating interest	7.71
Miscellaneous	2.81
Total direct expenses per acre	179.18
Return over direct exp per acre	273.39
Overhead Expenses	
Hired labor	5.05
Machinery leases	6.27
Building leases	4.07
RE & pers. property taxes	23.87
Farm insurance	6.03
Utilities	2.77
Dues & professional fees	5.01
Interest	79.43
Mach & bldg depreciation	22.91
Miscellaneous	2.73
Total overhead expenses per acre	158.14
Total dir & ovhd expenses per acre	337.33
Net return per acre	115.24
Government payments	1.45
Net return with govt pmts	116.69
Labor & management charge	15.93
Net return over lbr & mgt	100.76
Cost of Production	
Total direct expense per bu.	5.10
Total dir & ovhd exp per bu.	9.60
Less govt & other income	9.27
With labor & management	9.72
Net value per unit	12.59
Machinery cost per acre	66.61
Est. labor hours per acre	0.80

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Soybeans, Food on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	14
Acres	525.69
Yield per acre (bu.)	33.34
Operators share of yield %	100.00
Value per bu.	12.31
Total product return per acre	410.24
Hedging gains/losses per acre	7.61
Crop insurance per acre	6.72
Other crop income per acre	2.48
Gross return per acre	427.05
Direct Expenses	
Seed and plants	24.14
Fertilizer	15.84
Crop chemicals	47.04
Crop insurance	19.31
Fuel & oil	14.37
Repairs	22.99
Custom hire	4.67
Hired labor	3.75
Land rent	164.52
Operating interest	7.84
Miscellaneous	4.36
Total direct expenses per acre	328.83
Return over direct exp per acre	98.22
Overhead Expenses	
Hired labor	8.67
Machinery leases	5.16
Building leases	3.43
Farm insurance	5.85
Utilities	3.46
Dues & professional fees	4.09
Interest	2.49
Mach & bldg depreciation	22.80
Miscellaneous	2.96
Total overhead expenses per acre	58.92
Total dir & ovhd expenses per acre	387.75
Net return per acre	39.30
Government payments	7.35
Net return with govt pmts	46.65
Labor & management charge	21.16
Net return over lbr & mgt	25.49
Cost of Production	
Total direct expense per bu.	9.86
Total dir & ovhd exp per bu.	11.63
Less govt & other income	10.91
With labor & management	11.54
Net value per unit	12.53
Machinery cost per acre	71.88
Est. labor hours per acre	1.08

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Sugar Beets on Owned Land, Excluding Joint Venture

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	36	7	7	8
Acres	129.95	114.73	154.95	104.50
Yield per acre (ton)	29.11	28.58	23.45	32.99
Operators share of yield %	100.00	100.00	100.00	100.00
Value per ton	39.14	33.27	46.36	44.29
Total product return per acre	1,139.60	950.78	1,087.06	1,461.33
Crop insurance per acre	2.44	-	-	-
Other crop income per acre	5.96	16.02	5.47	0.84
Gross return per acre	1,148.00	966.81	1,092.53	1,462.17
Direct Expenses				
Seed and plants	218.27	211.92	204.68	231.49
Fertilizer	74.94	89.31	77.45	64.47
Crop chemicals	109.48	117.76	106.35	126.59
Crop insurance	29.12	36.62	33.86	22.24
Fuel & oil	51.69	66.25	50.74	50.64
Repairs	92.84	110.41	90.56	101.67
Custom hire	13.41	15.77	16.33	2.88
Hired labor	34.50	51.56	12.44	30.48
Machinery leases	2.10	-	-	0.64
Hauling and trucking	9.30	-	9.27	7.01
Operating interest	18.61	32.22	18.61	21.75
Miscellaneous	3.22	-	3.01	8.36
Total direct expenses per acre	657.49	731.83	623.31	668.21
Return over direct exp per acre	490.51	234.97	469.22	793.95
Overhead Expenses				
Custom hire	0.97	4.89	0.58	-
Hired labor	52.59	23.03	106.03	29.17
Machinery leases	9.10	7.91	12.17	8.44
Building leases	3.06	0.11	4.70	3.57
RE & pers. property taxes	27.25	18.80	28.62	31.97
Farm insurance	19.44	16.96	20.97	18.07
Utilities	11.64	9.03	12.80	12.87
Dues & professional fees	6.66	4.20	2.08	6.93
Interest	53.16	23.97	74.51	80.57
Mach & bldg depreciation	104.05	104.87	98.69	124.76
Miscellaneous	13.32	5.16	20.65	13.54
Total overhead expenses per acre	301.24	218.95	381.81	329.90
Total dir & ovhd expenses per acre	958.73	950.78	1,005.12	998.12
Net return per acre	189.27	16.03	87.41	464.05
Government payments	11.85	9.92	10.42	9.51
Net return with govt pmts	201.13	25.95	97.83	473.56
Labor & management charge	99.51	83.27	77.85	155.77
Net return over lbr & mgt	101.61	-57.32	19.98	317.79
Cost of Production				
Total direct expense per ton	22.58	25.61	26.58	20.25
Total dir & ovhd exp per ton	32.93	33.27	42.86	30.25
Less govt & other income	32.23	32.36	42.19	29.94
With labor & management	35.65	35.27	45.50	34.66
Net value per unit	39.14	33.27	46.36	44.29
Machinery cost per acre	276.67	308.46	282.94	292.16
Est. labor hours per acre	5.68	4.89	5.56	6.18

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Sugar Beets on Owned Land, Including Joint Venture

	<u>Avg. Of All Farms</u>
Number of farms	19
Acres	160.22
Yield per acre (ton)	31.67
Operators share of yield %	100.00
Value per ton	40.80
Total product return per acre	1,291.97
Crop insurance per acre	17.44
Other crop income per acre	2.71
Gross return per acre	1,312.12
Direct Expenses	
Seed and plants	230.64
Fertilizer	79.31
Crop chemicals	109.64
Crop insurance	24.88
Fuel & oil	48.79
Repairs	81.01
Custom hire	19.20
Hired labor	44.84
Stock/quota lease	144.23
Machinery leases	0.93
Hauling and trucking	21.83
Operating interest	31.29
Miscellaneous	4.60
Total direct expenses per acre	841.19
Return over direct exp per acre	470.93
Overhead Expenses	
Hired labor	28.77
Machinery leases	10.94
Building leases	3.62
RE & pers. property taxes	23.41
Farm insurance	14.47
Utilities	9.67
Dues & professional fees	7.18
Interest	66.11
Mach & bldg depreciation	91.88
Miscellaneous	9.08
Total overhead expenses per acre	265.12
Total dir & ovhd expenses per acre	1,106.31
Net return per acre	205.81
Government payments	11.20
Net return with govt pmts	217.01
Labor & management charge	80.12
Net return over lbr & mgt	136.89
Cost of Production	
Total direct expense per ton	26.56
Total dir & ovhd exp per ton	34.94
Less govt & other income	33.95
With labor & management	36.48
Net value per unit	40.80
Machinery cost per acre	257.55
Est. labor hours per acre	4.39

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Sugar Beets on Cash Rent, Excluding Joint Venture

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	55	11	11	11
Acres	247.33	279.97	298.91	228.18
Yield per acre (ton)	31.30	30.57	30.18	33.26
Operators share of yield %	100.00	100.00	100.00	100.00
Value per ton	37.29	29.30	37.46	43.76
Total product return per acre	1,167.13	895.64	1,130.43	1,455.66
Crop insurance per acre	7.68	9.32	17.77	-
Other crop income per acre	8.77	19.53	8.11	2.94
Gross return per acre	1,183.59	924.49	1,156.31	1,458.60
Direct Expenses				
Seed and plants	217.00	206.97	219.86	220.83
Fertilizer	75.42	87.00	66.95	84.02
Crop chemicals	103.56	113.10	87.25	94.40
Crop insurance	30.49	37.89	30.29	23.47
Fuel & oil	51.10	50.17	58.28	47.13
Repairs	88.06	73.89	94.86	77.11
Custom hire	13.45	11.87	16.81	15.11
Hired labor	39.90	28.03	54.16	28.62
Land rent	135.33	148.16	99.80	141.61
Machinery leases	1.38	-	-	1.88
Hauling and trucking	13.19	-	28.76	0.90
Operating interest	15.82	21.05	18.56	7.65
Miscellaneous	3.17	0.17	4.46	3.19
Total direct expenses per acre	787.86	778.31	780.06	745.94
Return over direct exp per acre	395.73	146.18	376.25	712.66
Overhead Expenses				
Custom hire	1.16	3.87	1.18	-
Hired labor	54.92	80.48	34.34	51.30
Machinery leases	10.91	16.95	8.27	11.91
Building leases	3.76	10.61	2.20	0.40
Farm insurance	13.76	7.71	13.59	13.12
Utilities	10.44	8.90	13.50	8.80
Dues & professional fees	7.80	9.43	9.35	3.41
Interest	6.97	4.10	12.01	4.92
Mach & bldg depreciation	93.72	78.62	95.02	88.28
Miscellaneous	10.30	13.74	6.46	11.91
Total overhead expenses per acre	213.72	234.41	195.93	194.04
Total dir & ovhd expenses per acre	1,001.58	1,012.72	975.99	939.99
Net return per acre	182.00	-88.23	180.32	518.61
Government payments	11.82	7.67	13.46	14.92
Net return with govt pmts	193.82	-80.57	193.79	533.53
Labor & management charge	91.91	63.48	89.81	101.06
Net return over lbr & mgt	101.91	-144.04	103.98	432.47
Cost of Production				
Total direct expense per ton	25.17	25.46	25.85	22.43
Total dir & ovhd exp per ton	32.00	33.13	32.34	28.26
Less govt & other income	31.10	31.93	31.04	27.72
With labor & management	34.04	34.01	34.01	30.76
Net value per unit	37.29	29.30	37.46	43.76
Machinery cost per acre	258.71	223.21	281.51	238.99
Est. labor hours per acre	5.58	5.94	5.09	4.56

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Sugar Beets on Cash Rent, Including Joint Venture

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	43	8	8	9
Acres	289.71	220.80	356.83	252.81
Yield per acre (ton)	30.38	22.33	30.52	33.13
Operators share of yield %	100.00	100.00	100.00	100.00
Value per ton	40.72	40.95	40.56	44.04
Total product return per acre	1,237.07	914.60	1,237.62	1,459.10
Crop insurance per acre	22.22	123.65	19.22	-
Other crop income per acre	10.60	15.30	0.90	1.80
Gross return per acre	1,269.89	1,053.55	1,257.74	1,460.91
Direct Expenses				
Seed and plants	224.67	234.82	212.16	234.41
Fertilizer	76.38	89.58	69.36	75.99
Crop chemicals	103.37	110.88	109.77	97.96
Crop insurance	32.40	44.20	29.51	26.93
Fuel & oil	52.54	49.15	56.27	47.27
Repairs	85.98	81.00	92.17	88.45
Custom hire	13.76	6.44	12.84	5.49
Hired labor	38.25	37.94	46.93	41.77
Land rent	135.78	146.09	127.48	140.32
Stock/quota lease	165.40	138.76	139.49	189.88
Machinery leases	1.57	8.35	-	1.09
Hauling and trucking	21.21	25.59	27.61	7.41
Operating interest	23.57	26.04	11.77	17.84
Miscellaneous	3.52	1.12	6.39	1.74
Total direct expenses per acre	978.38	999.96	941.76	976.57
Return over direct exp per acre	291.51	53.59	315.98	484.34
Overhead Expenses				
Hired labor	45.36	58.50	43.30	30.36
Machinery leases	17.45	17.09	15.59	28.19
Building leases	5.51	1.44	10.51	2.33
Farm insurance	12.58	12.86	17.85	11.02
Utilities	8.78	10.75	11.68	6.38
Dues & professional fees	6.31	3.53	7.16	6.12
Interest	9.48	9.42	9.13	10.09
Mach & bldg depreciation	80.79	88.49	87.70	67.06
Miscellaneous	12.11	28.32	6.31	8.83
	198.37	230.39	209.22	170.40
Total overhead expenses per acre	1,176.75	1,230.35	1,150.97	1,146.97
Total dir & ovhd expenses per acre	93.13	-176.80	106.77	313.94
Net return per acre	9.84	7.33	17.29	10.81
Government payments	102.97	-169.47	124.06	324.75
Net return with govt pmts	92.81	80.83	97.73	116.60
Labor & management charge	10.16	-250.30	26.33	208.15
Net return over lbr & mgt				
Cost of Production	32.20	44.78	30.86	29.48
Total direct expense per ton	38.73	55.09	37.72	34.62
Total dir & ovhd exp per ton	37.33	48.54	36.49	34.24
Less govt & other income	40.38	52.16	39.69	37.76
With labor & management				
	40.72	40.95	40.56	44.04
Net value per unit	257.66	254.86	267.27	242.37
Machinery cost per acre	4.91	4.87	5.52	4.92
Est. labor hours per acre				

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Sunflowers on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	7
Acres	358.37
Yield per acre (cwt.)	22.84
Operators share of yield %	100.00
Value per cwt.	19.40
Total product return per acre	443.16
Crop insurance per acre	7.54
Other crop income per acre	6.14
Gross return per acre	456.84
Direct Expenses	
Seed and plants	35.66
Fertilizer	30.74
Crop chemicals	26.31
Crop insurance	14.51
Fuel & oil	17.09
Repairs	32.39
Custom hire	3.82
Hired labor	4.17
Land rent	116.55
Operating interest	6.31
Miscellaneous	3.65
Total direct expenses per acre	291.20
Return over direct exp per acre	165.63
Overhead Expenses	
Custom hire	0.61
Hired labor	4.73
Machinery leases	5.49
Building leases	2.50
Farm insurance	7.87
Utilities	6.88
Dues & professional fees	8.30
Interest	3.46
Mach & bldg depreciation	57.22
Miscellaneous	2.37
Total overhead expenses per acre	99.44
Total dir & ovhd expenses per acre	390.64
Net return per acre	66.20
Government payments	2.27
Net return with govt pmts	68.46
Labor & management charge	36.84
Net return over lbr & mgt	31.62
Cost of Production	
Total direct expense per cwt.	12.75
Total dir & ovhd exp per cwt.	17.10
Less govt & other income	16.40
With labor & management	18.02
Net value per unit	19.40
Machinery cost per acre	113.69
Est. labor hours per acre	1.77

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Wheat, Spring on Owned Land

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	74	14	15	15
Acres	218.77	167.01	223.86	221.68
Yield per acre (bu.)	74.61	62.82	72.60	85.82
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	5.95	5.73	5.97	5.98
Total product return per acre	443.81	360.12	433.08	513.47
Hedging gains/losses per acre	-0.12	-	-0.60	-
Crop insurance per acre	6.86	2.45	6.15	0.27
Other crop income per acre	2.44	0.67	3.24	3.38
Gross return per acre	452.98	363.24	441.86	517.12
Direct Expenses				
Seed and plants	20.83	19.61	19.69	18.96
Fertilizer	73.94	70.54	75.02	71.40
Crop chemicals	28.14	29.38	26.28	29.32
Crop insurance	13.93	13.85	13.87	12.64
Fuel & oil	15.26	14.85	14.60	14.63
Repairs	30.59	27.95	23.64	25.52
Custom hire	5.88	3.47	6.00	9.60
Hired labor	2.60	10.60	4.44	0.73
Operating interest	4.41	3.81	5.83	3.21
Miscellaneous	3.81	4.61	4.67	1.90
Total direct expenses per acre	199.39	198.67	194.02	187.91
Return over direct exp per acre	253.59	164.56	247.84	329.21
Overhead Expenses				
Hired labor	12.89	5.92	16.17	12.11
Machinery leases	3.09	2.16	1.47	5.85
Building leases	1.21	0.34	1.95	0.77
RE & pers. property taxes	21.17	17.64	21.40	25.24
Farm insurance	8.59	6.42	9.19	5.87
Utilities	4.30	3.58	3.53	3.79
Dues & professional fees	3.86	2.79	3.12	3.31
Interest	38.96	35.40	47.68	40.20
Mach & bldg depreciation	32.26	29.42	26.85	31.10
Miscellaneous	4.00	4.07	2.73	4.95
Total overhead expenses per acre	130.32	107.74	134.10	133.18
Total dir & ovhd expenses per acre	329.71	306.41	328.12	321.09
Net return per acre	123.27	56.83	113.74	196.03
Government payments	18.29	11.22	17.76	31.07
Net return with govt pmts	141.56	68.05	131.50	227.10
Labor & management charge	27.58	26.95	29.83	24.79
Net return over lbr & mgt	113.97	41.10	101.67	202.31
Cost of Production				
Total direct expense per bu.	2.67	3.16	2.67	2.19
Total dir & ovhd exp per bu.	4.42	4.88	4.52	3.74
Less govt & other income	4.05	4.65	4.15	3.34
With labor & management	4.42	5.08	4.56	3.63
Net value per unit	5.95	5.73	5.96	5.98
Machinery cost per acre	86.21	77.17	74.14	85.66
Est. labor hours per acre	1.57	1.54	1.59	1.42

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2017
(Farms Sorted By Return to Overhead)

Wheat, Spring on Cash Rent

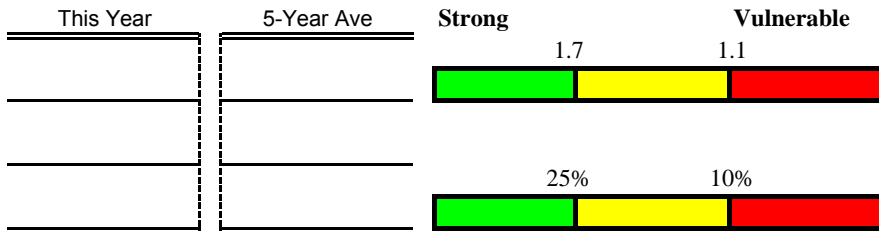
	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	113	22	22	23
Acres	440.04	340.68	507.82	495.38
Yield per acre (bu.)	74.33	66.64	75.67	81.51
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	5.96	5.82	5.88	6.09
Total product return per acre	443.28	387.70	444.93	496.43
Hedging gains/losses per acre	1.47	-	6.98	-
Crop insurance per acre	2.51	-	0.77	2.84
Other crop income per acre	2.18	3.66	3.71	0.34
Gross return per acre	449.45	391.37	456.40	499.61
Direct Expenses				
Seed and plants	19.50	19.89	21.64	17.19
Fertilizer	74.94	71.98	76.80	70.75
Crop chemicals	30.24	29.48	31.96	30.17
Crop insurance	13.83	12.88	15.04	13.56
Fuel & oil	13.50	12.96	12.62	15.31
Repairs	23.92	26.04	21.71	24.84
Custom hire	7.00	15.75	6.43	8.80
Hired labor	4.59	5.96	5.68	4.85
Land rent	119.38	139.92	124.57	89.02
Operating interest	4.77	5.95	3.63	4.63
Miscellaneous	4.95	8.67	4.42	3.02
Total direct expenses per acre	316.61	349.49	324.48	282.13
Return over direct exp per acre	132.84	41.88	131.92	217.48
Overhead Expenses				
Hired labor	12.53	13.75	14.15	10.12
Machinery leases	2.72	5.55	2.71	2.57
Building leases	1.59	1.39	1.59	0.89
Farm insurance	6.23	5.22	5.66	6.35
Utilities	3.31	3.14	2.99	3.94
Dues & professional fees	3.63	3.35	2.91	3.35
Interest	2.31	2.05	2.08	2.57
Mach & bldg depreciation	26.71	24.49	24.43	31.56
Miscellaneous	2.97	2.94	2.18	2.70
Total overhead expenses per acre	62.01	61.88	58.70	64.05
Total dir & ovhd expenses per acre	378.62	411.37	383.18	346.18
Net return per acre	70.83	-20.01	73.21	153.43
Government payments	13.10	9.20	13.28	20.09
Net return with govt pmts	83.92	-10.80	86.50	173.52
Labor & management charge	26.51	22.62	25.53	28.67
Net return over lbr & mgt	57.41	-33.42	60.97	144.84
Cost of Production				
Total direct expense per bu.	4.26	5.24	4.29	3.46
Total dir & ovhd exp per bu.	5.09	6.17	5.06	4.25
Less govt & other income	4.83	5.98	4.74	3.96
With labor & management	5.19	6.32	5.07	4.31
Net value per unit	5.98	5.82	5.97	6.09
Machinery cost per acre	74.72	85.02	68.79	82.63
Est. labor hours per acre	1.51	1.48	1.52	1.52

MyFarm Financial Scorecard

Year: _____

Name: _____

Liquidity

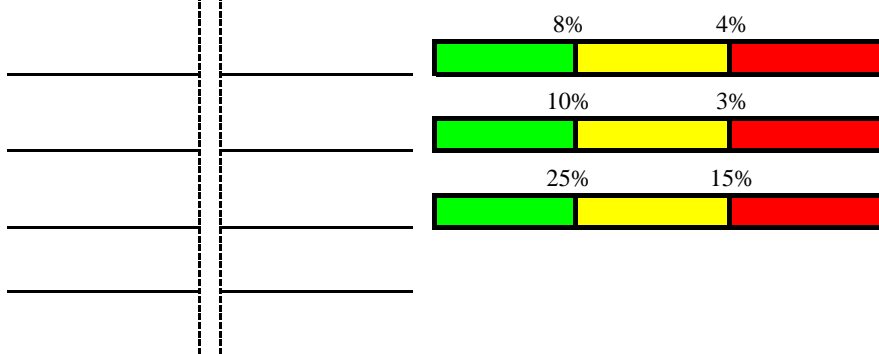


Solvency (market)

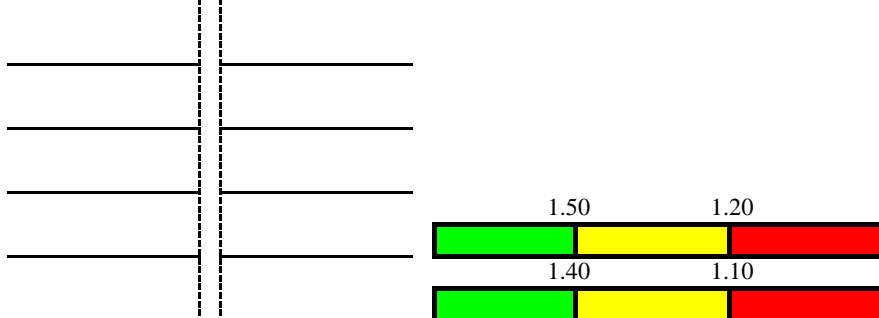
Note: These solvency ratios include deferred liabilities



Profitability (Cost)



Repayment Capacity (Accrual)



Financial Efficiency

