Minnesota and North Dakota

Farm Business Management Education

Red River Valley 2022 Report

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RED RIVER VALLEY AVERAGES
2022 ANNUAL REPORT

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A special acknowledgment is due AgCentric, Minnesota State Northern Center of Excellence in Agriculture, and the North Dakota State Board for Vocational and Technical Education for cooperation in the development of the 28th annual Red River Valley Report.

2022 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 2022 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.

You may contact Ron Dvergsten, Northland Community and Technical College, Highway 1 East, Thief River Falls, MN 56701, phone: (218) 683-8747, 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, phone: (701) 224-8390. A state average book for North Dakota farms is also available. The reports are available online at www.ndfarmmanagement.com and 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 income statement is a table which lists cash farm income. There are several sources of cash farm income. Cash sales of crops are listed first followed by cash sales of livestock.

Government payments are categorized. “Crop government payments” are Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC) payments. “LDP payments” are loan deficiency payments that may be received on production when local prices are below the county loan rate for the crop. “Livestock government payments” include dairy MPP payments and other livestock related payments. “CRP payments” are funds received for land enrolled in the Conservation Reserve Program. “Other government payments” refers to all other government payments such as disaster payments, EQIP, CSP, and Market Facilitation Payments (MFP).

Lastly, cash income is categorized by sources such as custom work, cash patronage dividends, crop and property insurance indemnities, sale of resale items, and other.

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 $30,000 per full time operator plus 5% of gross farm income 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

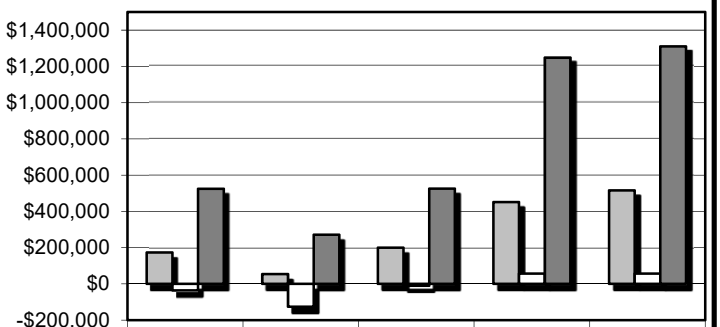
This table reports the average for the number of operators per farm, the operator's age, and the number of years farming.

Nonfarm Summary

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

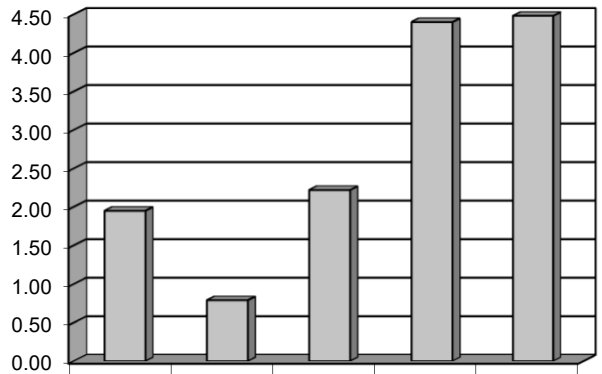
Five Year Trend of Financial Measures
Red River Valley Farm Business Management Education

Net Farm Income



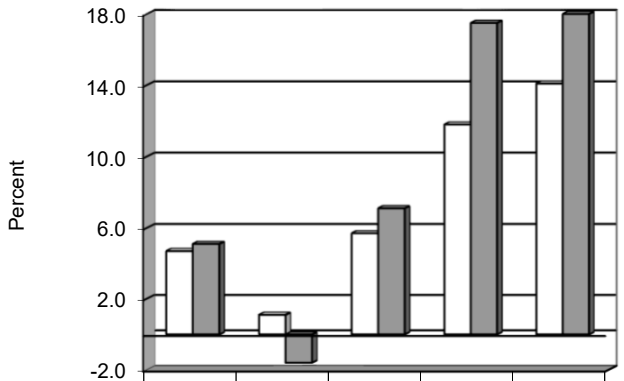
	2018	2019	2020	2021	2022
Average	173,275	53,472	199,529	451,303	515,612
Low 20%	-36,524	-126,535	-10,912	56,422	56,238
High20%	524,352	271,005	525,459	1,248,025	1,310,377

Term Debt Coverage Ratio (accrual)



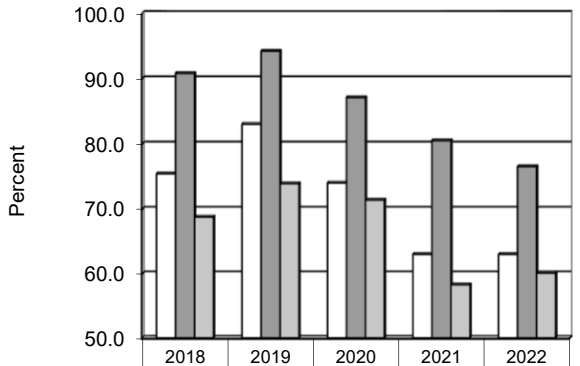
	2018	2019	2020	2021	2022
Ratio	1.95	0.79	2.22	4.40	4.48

Rate of Return (cost)



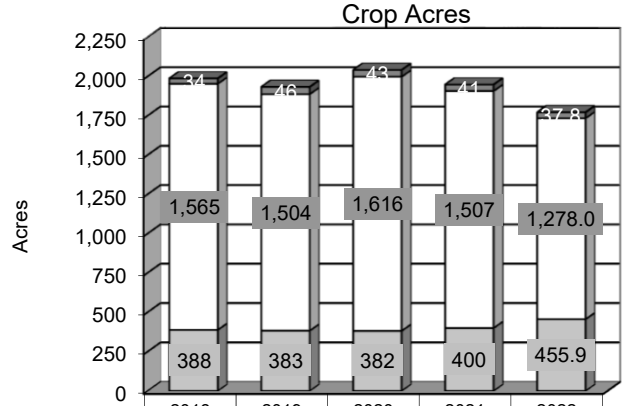
	2018	2019	2020	2021	2022
RR on Assets	4.7	1.1	5.7	11.8	14.1
RR on Equity	5.1	-1.6	7.1	17.5	19.9

Operating Expense Ratio



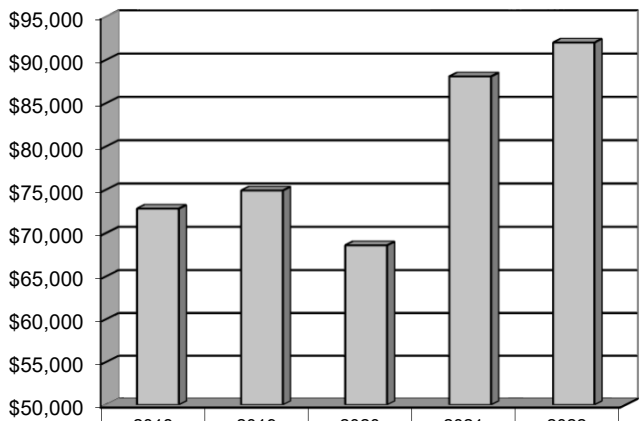
	2018	2019	2020	2021	2022
Average	75.4	83.0	74.0	63.0	63.0
Low 20%	90.8	94.2	87.1	80.5	76.5
High 20%	68.8	73.9	71.4	58.3	60.1

Crop Acres



	2018	2019	2020	2021	2022
Share Rent	34	46	43	41	37.8
Cash Rent	1,565	1,504	1,616	1,507	1,278.0
Owned	388	383	382	400	455.9

Apparent Family Living



	2018	2019	2020	2021	2022
Dollars	$72,837	$74,926	$68,597	$88,095	$92,002

Farm Income Statement
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Cash Farm Income				
Barley	6,852	-	-	12,239
Beans, Black Turtle	15,853	-	7,952	69,918
Beans, Navy	7,321	-	5,074	10,225
Beans, Pink	1,072	-	-	1,332
Beans, Pinto	4,450	-	4,862	8,106
Canola	3,781	-	-	6,520
Corn	438,615	208,074	342,205	971,170
Corn Silage	7,407	-	12,672	-
Hay, Alfalfa	7,398	2,897	2,627	9,439
Oats	823	218	-	1,094
Peas, Field	1,349	-	-	6,659
Potatoes	28,439	19,074	-	117,351
Rye	187	-	-	549
Soybeans	381,104	158,055	288,200	762,558
Sugar Beets	280,805	76,813	197,588	687,280
Sunflowers	12,842	4,537	7,742	5,487
Wheat, Spring	152,036	51,649	114,209	376,563
Hay	1,480	4,512	73	963
Miscellaneous crop income	12,893	40,233	2,508	7,592
Beef Cow-Calf, Beef Calves	170	596	-	-
Beef Backgrounding	4,015	1,367	206	-
Beef Finishing	660	197	-	2,998
Cull breeding livestock	157	414	-	-
Misc. livestock income	529	2,195	-	-
Crop government payments	7,874	2,379	2,610	23,242
CRP payments	1,326	737	2,123	2,041
Livestock govt payments	83	138	-	-
Conservation govt payment	2,306	833	1,767	3,004
Other government payments	62,255	15,770	43,117	133,213
Custom work income	19,873	14,642	20,735	24,585
Patronage dividends, cash	15,951	6,200	10,904	40,115
Crop insurance income	50,886	32,255	29,698	113,638
Farm rental income	18,109	6,840	8,549	46,274
Other farm income	43,638	15,840	22,862	80,648
Gross Cash Farm Income	1,592,540	666,466	1,128,281	3,524,802

Farm Income Statement (continued)
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Cash Farm Expense				
Seed and plants	162,619	57,720	119,564	363,098
Fertilizer	221,022	86,718	159,679	494,415
Crop chemicals	129,781	39,522	91,751	278,671
Crop insurance	48,623	18,547	34,262	100,892
Drying expense	4,998	1,577	3,166	13,341
Storage	722	380	616	1,658
Irrigation energy	857	-	264	3,942
Packaging and supplies	84	340	-	-
Transaction fees	34	-	169	-
Crop miscellaneous	3,346	1,644	4,576	7,144
Consultants	4,581	1,488	3,960	10,930
Feeder livestock purchase	2,153	1,812	226	-
Purchased feed	1,261	1,122	-	1,318
Veterinary	106	226	26	-
Supplies	131	160	20	-
Contract production exp.	48	-	-	239
Interest	46,405	16,296	33,086	91,635
Fuel & oil	69,958	34,581	51,913	146,497
Repairs	113,993	63,084	85,204	225,831
Custom hire	18,842	11,308	16,421	28,944
Hired labor	62,826	25,357	28,621	156,648
Land rent	222,794	85,858	162,965	506,285
Stock/quota lease	23,134	1,800	12,361	57,192
Machinery leases	15,388	6,219	10,948	43,735
Building leases	1,928	636	1,276	4,940
Real estate taxes	12,437	6,061	6,491	27,692
Personal property taxes	131	114	147	49
Farm insurance	19,915	11,655	13,399	40,456
Utilities	11,037	7,678	8,921	20,634
Hauling and trucking	3,481	1,649	1,897	8,547
Marketing	2,961	749	3,526	3,290
Dues & professional fees	9,846	5,445	8,340	18,614
Purchase of resale items	3,654	16,789	-	1,315
Miscellaneous	12,582	7,301	8,230	14,703
Advertising & promotion	79	-	-	154
Total cash expense	1,231,756	513,833	872,022	2,672,811
Net cash farm income	360,784	152,632	256,259	851,992
Inventory Changes				
Prepaids and supplies	45,561	22,307	18,563	117,090
Accounts receivable	8,963	8,189	-7,616	-5,250
Hedging accounts	-11,242	-10,579	-5,324	-25,882
Other current assets	4,359	1,778	56	20,340
Crops and feed	218,828	-36,778	183,742	547,492
Market livestock	-1,393	-761	-	-2,381
Breeding livestock	-494	-557	-	-
Other assets	8,115	-829	6,424	26,022
Accounts payable	-7,451	-4,063	-13,620	8,534
Accrued interest	-4,804	-1,083	-3,046	-15,778
Total inventory change	260,441	-22,375	179,180	670,187
Net operating profit	621,225	130,257	435,439	1,522,179
Depreciation				
Machinery and equipment	-85,939	-63,511	-59,851	-171,839
Titled vehicles	-9,092	-7,125	-8,786	-13,018
Buildings and improvements	-10,582	-3,382	-10,358	-26,945
Total depreciation	-105,613	-74,019	-78,995	-211,802
Net farm income from operations	515,612	56,238	356,444	1,310,377
Gain or loss on capital sales	4,225	-3,303	8,779	13,162
Net farm income	519,837	52,935	365,223	1,323,539

Inventory Changes
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Net cash farm income	360,784	152,632	256,259	851,992
Crops and Feed				
Ending inventory	952,929	292,925	629,521	2,298,253
Beginning inventory	734,101	329,704	445,779	1,750,761
Inventory change	218,828	-36,778	183,742	547,492
Market Livestock				
Ending inventory	3,862	2,333	-	-
Beginning inventory	5,256	3,094	-	2,381
Inventory change	-1,393	-761	-	-2,381
Accts Receivable				
Ending inventory	96,036	45,074	66,578	205,436
Beginning inventory	87,073	36,884	74,194	210,686
Inventory change	8,963	8,189	-7,616	-5,250
Prepaid Expenses and Supplies				
Ending inventory	194,563	63,503	135,384	493,055
Beginning inventory	149,002	41,196	116,821	375,965
Inventory change	45,561	22,307	18,563	117,090
Hedging Activities				
Ending inventory	15,811	2,848	3,389	56,005
Withdrawals	18,174	-	932	78,035
Beginning inventory	14,573	2,226	2,941	52,614
Deposits	30,655	11,200	6,703	107,308
Gain or loss	-11,242	-10,579	-5,324	-25,882
Other Current Assets				
Ending inventory	19,614	2,839	2,653	63,827
Beginning inventory	15,255	1,061	2,597	43,487
Inventory change	4,359	1,778	56	20,340
Breeding Livestock				
Ending inventory	2,324	2,443	-	-
Capital sales	525	2,648	-	-
Beginning inventory	3,310	5,648	-	-
Capital purchases	34	-	-	-
Depreciation, capital adjust	-494	-557	-	-
Other Capital Assets				
Ending inventory	346,869	89,632	261,703	846,423
Capital sales	3,058	978	1,433	9,480
Beginning inventory	321,134	90,096	244,068	767,714
Capital purchases	20,679	1,343	12,644	62,166
Depreciation, capital adjust	8,115	-829	6,424	26,022
Accounts Payable				
Beginning inventory	48,194	19,632	34,405	102,476
Ending inventory	55,645	23,695	48,025	93,942
Inventory change	-7,451	-4,063	-13,620	8,534
Accrued Interest				
Beginning inventory	21,084	7,848	17,388	41,327
Ending inventory	25,888	8,930	20,434	57,105
Inventory change	-4,804	-1,083	-3,046	-15,778
Total inventory change	260,441	-22,375	179,180	670,187
Net operating profit	621,225	130,257	435,439	1,522,179

Depreciation
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Net operating profit	621,225	130,257	435,439	1,522,179
Machinery and Equipment				
Ending inventory	799,883	324,713	509,233	1,844,750
Capital sales	32,529	16,240	16,084	93,644
Beginning inventory	735,870	359,852	461,129	1,648,917
Capital purchases	182,482	44,613	124,040	461,316
Depreciation, capital adjust.	-85,939	-63,511	-59,851	-171,839
Titled Vehicles				
Ending inventory	72,836	45,715	66,795	127,980
Capital sales	2,405	2,325	2,401	3,937
Beginning inventory	61,452	44,890	52,044	106,458
Capital purchases	22,880	10,276	25,937	38,477
Depreciation, capital adjust.	-9,092	-7,125	-8,786	-13,018
Buildings and Improvements				
Ending inventory	327,870	120,846	220,843	875,839
Capital sales	3,661	28	5,829	7,426
Beginning inventory	300,562	121,166	220,706	751,035
Capital purchases	41,551	3,090	16,324	159,175
Depreciation, capital adjust.	-10,582	-3,382	-10,358	-26,945
Total depreciation, capital adj.	-105,613	-74,019	-78,995	-211,802
Net farm income from operations	515,612	56,238	356,444	1,310,377
Gain or loss on capital sales	4,225	-3,303	8,779	13,162
Net farm income	519,837	52,935	365,223	1,323,539

Profitability Measures
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Profitability (assets valued at cost)				
Net farm income from operations	515,612	56,238	356,444	1,310,377
Rate of return on assets	12.4 %	2.0 %	11.8 %	14.1 %
Rate of return on equity	17.9 %	1.3 %	18.3 %	19.9 %
Operating profit margin	25.8 %	4.7 %	24.1 %	30.1 %
Asset turnover rate	48.0 %	42.5 %	49.0 %	46.7 %
Farm interest expense	51,209	17,378	36,132	107,412
Value of operator lbr and mgmt.	98,860	44,967	78,630	189,048
Return on farm assets	467,962	28,649	313,947	1,228,742
Average farm assets	3,780,048	1,428,770	2,666,221	8,743,521
Return on farm equity	416,752	11,271	277,815	1,121,329
Average farm equity	2,322,975	889,198	1,515,219	5,625,730
Value of farm production	1,812,742	607,246	1,305,300	4,082,356

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Profitability (assets valued at market)				
Net farm income from operations	507,526	95,118	395,945	1,213,451
Rate of return on assets	9.0 %	3.3 %	10.0 %	9.8 %
Rate of return on equity	13.1 %	3.7 %	15.0 %	14.5 %
Operating profit margin	25.4 %	11.1 %	27.1 %	27.7 %
Asset turnover rate	35.7 %	30.0 %	37.0 %	35.2 %
Farm interest expense	51,209	17,378	36,132	107,412
Value of operator lbr and mgmt.	98,860	44,967	78,630	189,048
Return on farm assets	459,875	67,530	353,448	1,131,815
Average farm assets	5,083,247	2,026,780	3,526,511	11,596,881
Return on farm equity	408,666	50,151	317,315	1,024,403
Average farm equity	3,114,308	1,372,977	2,111,299	7,088,489
Value of farm production	1,812,742	607,246	1,305,300	4,082,356

Liquidity & Repayment Capacity Measures
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Liquidity				
Current ratio	2.58	2.44	2.47	2.73
Working capital	851,401	273,295	538,569	2,148,810
Change in working capital	257,047	619	157,294	680,492
Working capital to gross revenue	46.8 %	43.6 %	41.3 %	52.6 %
Working capital to oper expense	74.2 %	57.0 %	64.6 %	87.5 %
Current assets	1,391,540	463,308	905,474	3,390,419
Current liabilities	540,139	190,013	366,905	1,241,609
Gross revenues (accrual)	1,819,810	626,970	1,305,526	4,084,990
Total operating expenses	1,147,375	479,334	833,955	2,455,398
Repayment capacity				
Net farm income from operations	515,612	56,238	356,444	1,310,377
Depreciation	105,613	74,019	78,995	211,802
Personal income	42,048	39,049	36,786	36,211
Family living/owner withdrawals	-94,902	-65,132	-90,085	-138,478
Cash discrepancy	-19	-213	86	9
Income taxes	-34,242	-15,722	-28,057	-70,269
Interest expense	51,209	17,378	36,132	107,412
Debt repayment capacity	588,489	107,492	393,107	1,462,143
Debt payments	143,021	60,542	107,967	294,659
Repayment margin	445,467	46,950	285,141	1,167,484
Cash replacement allowance	-62,233	-34,520	-37,638	-134,372
Replacement margin	383,234	12,430	247,503	1,033,112
Debt coverage ratio	4.11	1.78	3.64	4.96
Term debt coverage ratio	4.48	1.84	3.82	5.42
Replacement coverage ratio	2.87	1.13	2.70	3.41

Balance Sheet at Cost Values
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Assets				
Current Farm Assets				
Cash and checking balance	108,725	53,786	67,948	273,843
Prepaid expenses & supplies	194,563	63,503	135,384	493,055
Growing crops	386	67	271	249
Accounts receivable	96,036	45,074	66,578	205,436
Hedging accounts	15,811	2,848	3,389	56,005
Crops held for sale or feed	952,929	292,925	629,521	2,298,253
Crops under government loan	-	-	-	-
Market livestock held for sale	3,862	2,333	-	-
Other current assets	19,228	2,772	2,382	63,578
Total current farm assets	1,391,540	463,308	905,474	3,390,419
Intermediate Farm Assets				
Breeding livestock	2,324	2,443	-	-
Machinery and equipment	799,883	324,713	509,233	1,844,750
Titled vehicles	72,836	45,715	66,795	127,980
Other intermediate assets	244,512	53,942	178,965	579,585
Total intermediate farm assets	1,119,556	426,814	754,993	2,552,314
Long Term Farm Assets				
Farm land	1,094,820	411,014	889,983	2,302,555
Buildings and improvements	327,870	120,846	220,843	875,839
Other long-term assets	102,357	35,690	82,738	266,838
Total long-term farm assets	1,525,046	567,550	1,193,564	3,445,232
Total Farm Assets	4,036,142	1,457,672	2,854,031	9,387,965
Total Nonfarm Assets	445,624	448,527	370,393	717,364
Total Assets	4,481,765	1,906,199	3,224,424	10,105,328
Liabilities				
Current Farm Liabilities				
Accrued interest	25,888	8,930	20,434	57,105
Accounts payable	55,645	23,695	48,025	93,942
Current notes	368,379	119,361	235,270	888,541
Government crop loans	-	-	-	-
Principal due on term debt	90,228	38,025	63,176	202,021
Total current farm liabilities	540,139	190,013	366,905	1,241,609
Total intermediate farm liabs	222,367	108,617	162,557	438,216
Total long term farm liabilities	744,378	268,881	675,958	1,534,650
Total farm liabilities	1,506,884	567,511	1,205,420	3,214,474
Total nonfarm liabilities	107,883	60,603	100,103	206,840
Total liabilities	1,614,768	628,114	1,305,524	3,421,314
Net worth (farm and nonfarm)	2,866,998	1,278,085	1,918,901	6,684,014
Net worth change	430,846	7,198	274,062	1,137,371
Percent net worth change	18 %	1 %	17 %	21 %
Ratio Analysis				
Current farm liabilities / assets	39 %	41 %	41 %	37 %
Intermediate farm liab. / assets	20 %	25 %	22 %	17 %
Long term farm liab. / assets	49 %	47 %	57 %	45 %
Total debt to asset ratio	36 %	33 %	40 %	34 %

Balance Sheet at Market Values
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Assets				
Current Farm Assets				
Cash and checking balance	108,725	53,786	67,948	273,843
Prepaid expenses & supplies	194,563	63,503	135,384	493,055
Growing crops	386	67	271	249
Accounts receivable	96,036	45,074	66,578	205,436
Hedging accounts	15,811	2,848	3,389	56,005
Crops held for sale or feed	952,929	292,925	629,521	2,298,253
Crops under government loan	-	-	-	-
Market livestock held for sale	3,862	2,333	-	-
Other current assets	19,228	2,772	2,382	63,578
Total current farm assets	1,391,540	463,308	905,474	3,390,419
Intermediate Farm Assets				
Breeding livestock	2,493	2,957	-	-
Machinery and equipment	1,077,955	504,217	704,325	2,358,755
Titled vehicles	95,984	60,398	89,516	161,642
Other intermediate assets	329,509	132,334	209,785	764,853
Total intermediate farm assets	1,505,941	699,906	1,003,626	3,285,251
Long Term Farm Assets				
Farm land	1,983,525	736,837	1,484,834	4,308,857
Buildings and improvements	377,570	142,178	264,248	984,005
Other long-term assets	119,614	35,414	105,963	317,119
Total long-term farm assets	2,480,708	914,429	1,855,045	5,609,981
Total Farm Assets	5,378,189	2,077,643	3,764,145	12,285,651
Total Nonfarm Assets	565,223	592,860	484,921	858,370
Total Assets	5,943,412	2,670,503	4,249,066	13,144,020
Liabilities				
Current Farm Liabilities				
Accrued interest	25,888	8,930	20,434	57,105
Accounts payable	55,645	23,695	48,025	93,942
Current notes	368,379	119,361	235,270	888,541
Government crop loans	-	-	-	-
Principal due on term debt	90,228	38,025	63,176	202,021
Total current farm liabilities	540,139	190,013	366,905	1,241,609
Total intermediate farm liabs	222,367	108,617	162,557	438,216
Total long term farm liabilities	744,378	268,881	675,958	1,534,650
Total farm liabilities	1,506,884	567,511	1,205,420	3,214,474
Total nonfarm liabilities	107,883	60,603	100,103	206,840
Total liabs excluding deferreds	1,614,768	628,114	1,305,524	3,421,314
Total deferred liabilities	571,032	120,172	315,131	1,512,628
Total liabilities	2,185,800	748,286	1,620,655	4,933,943
Retained earnings	2,866,998	1,278,085	1,918,901	6,684,014
Market valuation equity	890,614	644,132	709,511	1,526,064
Net worth (farm and nonfarm)	3,757,611	1,922,217	2,628,411	8,210,077
Net worth excluding deferreds	4,328,644	2,042,390	2,943,542	9,722,706
Net worth change	409,171	15,637	295,760	1,018,993
Percent net worth change	12 %	1 %	13 %	14 %
Ratio Analysis				
Current farm liabilities / assets	39 %	41 %	41 %	37 %
Intermediate farm liab. / assets	15 %	16 %	16 %	13 %
Long term farm liab. / assets	30 %	29 %	36 %	27 %
Total debt to asset ratio	37 %	28 %	38 %	38 %
Debt to assets excl deferreds	27 %	24 %	31 %	26 %

Statement Of Cash Flows
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Beginning cash (farm & nonfarm)	113,330	84,036	107,412	187,174
Cash Provided By Operating Activities				
Gross cash farm income	1,592,540	666,466	1,128,281	3,524,802
Total cash farm expense	-1,231,756	-513,833	-872,022	-2,672,811
Net cash from hedging transactions	-12,481	-11,200	-5,771	-29,273
Cash provided by operating	348,303	141,432	250,488	822,718
Cash Provided By Investing Activities				
Sale of breeding livestock	375	1,890	-	-
Sale of machinery & equipment	34,661	13,069	18,626	105,195
Sale of titled vehicles	2,834	2,882	3,209	4,305
Sale of farm land	8,710	1,976	177	8,544
Sale of farm buildings	5,013	28	11,258	8,669
Sale of other farm assets	3,072	1,046	1,433	9,480
Sale of nonfarm assets	5,237	4,722	11,277	5,512
Purchase of breeding livestock	-34	-	-	-
Purchase of machinery & equip.	-182,482	-44,613	-124,040	-461,316
Purchase of titled vehicles	-22,880	-10,276	-25,937	-38,477
Purchase of farm land	-100,231	-102,713	-137,969	-93,316
Purchase of farm buildings	-41,551	-3,090	-16,324	-159,175
Purchase of other farm assets	-20,679	-1,343	-12,644	-62,166
Purchase of nonfarm assets	-41,188	-12,228	-66,167	-79,316
Cash provided by investing	-349,141	-148,648	-337,101	-752,062
Cash Provided By Financing Activities				
Money borrowed	568,491	203,015	495,862	1,321,595
Principal payments	-467,359	-150,654	-355,783	-1,112,493
Personal income	42,048	39,049	36,786	36,211
Family living/owner withdrawals	-94,902	-65,132	-90,085	-138,478
Income and social security tax	-29,341	-14,891	-25,103	-66,776
Capital contributions	500	-	690	1,779
Capital distributions	-451	-1,321	-376	-472
Dividends paid	-	-	-	-
Cash gifts and inheritances	16,133	11,904	15,240	11,966
Gifts given	-5,053	-593	-1,246	-18,514
Other cash flows	-	-	-	-
Cash provided by financing	30,067	21,377	75,985	34,818
Net change in cash balance	29,229	14,161	-10,628	105,475
Ending cash (farm & nonfarm)	142,540	97,984	96,869	292,657
Discrepancy	19	213	-86	-9

Financial Standards Measures
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Liquidity				
Current ratio	2.58	2.44	2.47	2.73
Working capital to gross revenue	46.8 %	43.6 %	41.3 %	52.6 %
Working capital to oper expense	74.2 %	57.0 %	64.6 %	87.5 %
Solvency (market)				
Farm debt to asset ratio	38 %	33 %	40 %	38 %
Farm equity to asset ratio	62 %	67 %	60 %	62 %
Farm debt to equity ratio	0.62	0.49	0.66	0.62
Profitability (cost)				
Rate of return on farm assets	12.4 %	2.0 %	11.8 %	14.1 %
Rate of return on farm equity	17.9 %	1.3 %	18.3 %	19.9 %
Operating profit margin	25.8 %	4.7 %	24.1 %	30.1 %
Asset turnover rate	48.0 %	42.5 %	49.0 %	46.7 %
Repayment Capacity				
Debt coverage ratio	4.11	1.78	3.64	4.96
Term debt coverage ratio	4.48	1.84	3.82	5.42
Replacement coverage ratio	2.87	1.13	2.70	3.41
Efficiency				
Operating expense ratio	63.0 %	76.5 %	63.9 %	60.1 %
Depreciation expense ratio	5.8 %	11.8 %	6.1 %	5.2 %
Interest expense ratio	2.8 %	2.8 %	2.8 %	2.6 %
Net farm income ratio	28.3 %	9.0 %	27.3 %	32.1 %

Crop Production and Marketing Summary
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Acreage Summary				
Total acres owned	515	235	314	1,087
Total crop acres	1,858	766	1,338	3,918
Crop acres owned	371	150	247	754
Crop acres cash rented	1,444	613	1,070	3,128
Crop acres share rented	43	3	21	36
Total pasture acres	3	3	-	-
Percent crop acres owned	20 %	20 %	18 %	19 %
Mach invest/crop acre cost	434	506	373	462
Mach invest/crop acre market	575	733	516	575
Average Price Received (Cash Sales Only)				
Soybeans per bushel	13.50	13.41	13.50	13.55
Corn per bushel	5.88	6.08	5.84	5.87
Wheat, Spring per bushel	8.98	9.26	9.40	8.77
Sunflowers per cwt	31.34	-	-	-
Hay, Alfalfa per ton	154.72	-	-	-
Soybeans Seed per bushel	15.28	-	-	-
Straw per ton	82.89	-	-	-
Beans, Navy per cwt	37.58	-	-	-
Barley per bushel	7.21	-	-	-
Beans, Pinto per cwt	37.59	-	-	-
Beans, Black Turtle per cwt	39.62	-	-	-
Soybeans, Food per bushel	16.39	-	-	-
Average Yield Per Acre				
Soybeans (bushel)	42.61	41.81	42.55	43.36
Corn (bushel)	171.83	147.90	171.96	175.85
Wheat, Spring (bushel)	68.07	62.30	66.24	70.02
Sugar Beets (ton)	25.43	22.44	25.15	25.74
Hay, Alfalfa (ton)	3.81	3.05	3.89	-
Soybeans Seed (bushel)	47.25	-	47.24	47.26
Sunflowers (cwt)	26.38	-	22.91	-
Soybeans, Food (bushel)	35.44	34.91	-	42.22
Corn Silage (ton)	20.31	-	18.57	-
Soybeans, Natto (bushel)	33.44	-	-	32.42
Barley (bushel)	85.74	-	-	-
Beans, Pinto (cwt)	19.56	-	-	-
Beans, Navy (cwt)	25.50	-	-	-
Canola (cwt)	22.93	-	-	22.79
Beans, Black Turtle (cwt)	24.89	-	-	25.28
Oats (bushel)	127.89	-	-	-
Potatoes (cwt)	372.82	-	-	-
Hay, Grass (ton)	4.45	-	-	-
Straw (ton)	1.01	-	-	-

Operator and Labor Information
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	232	46	47	47
Operator Information				
Average number of operators	1.1	0.9	1.1	1.6
Average age of operators	48.0	46.3	45.6	50.8
Average number of years farming	24.4	22.6	20.4	28.5
Results Per Operator				
Working capital	753,682	291,819	506,255	1,328,869
Total assets (market)	5,261,262	2,851,512	3,994,122	8,128,539
Total liabilities	1,934,927	799,005	1,523,416	3,051,254
Net worth (market)	3,326,335	2,052,507	2,470,707	5,077,285
Net worth excl deferred liabs	3,831,828	2,180,825	2,766,930	6,012,726
Gross farm income	1,610,943	669,466	1,227,194	2,526,244
Total farm expense	1,154,509	609,416	892,137	1,715,879
Net farm income from operations	456,433	60,050	335,058	810,365
Net nonfarm income	37,222	41,696	34,578	22,394
Family living & tax withdrawals	114,338	86,562	110,973	129,088
Total acres owned	455.9	250.9	295.6	672.5
Total crop acres	1,644.7	818.2	1,258.1	2,422.9
Crop acres owned	328.6	160.3	232.4	466.4
Crop acres cash rented	1,278.2	654.2	1,006.1	1,934.2
Crop acres share rented	37.8	3.7	19.6	22.3
Total pasture acres	2.9	2.7	-	-
Labor Analysis				
Number of farms	230	46	47	46
Total unpaid labor hours	2,012	1,533	1,899	2,807
Total hired labor hours	2,088	617	1,008	5,599
Total labor hours per farm	4,100	2,150	2,907	8,405
Unpaid hours per operator	1,779	1,637	1,785	1,721
Value of farm production / hour	442.75	282.46	448.98	490.53
Net farm income / unpaid hour	255.98	36.69	187.71	469.95
Average hourly hired labor wage	31.65	36.23	26.90	31.56
Partnerships & LLCs				
Number of farms	22	3	2	14
Number of operators	2.1	-	-	2.4
Owner withdrawals per farm	-	-	-	-
Withdrawals per operator	-	-	-	-
Corporations				
Number of farms	16	2	-	8
Number of operators	1.4	-	-	1.8

Household and Personal Expenses
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	42	10	8	6
Average family size	2.5	2.0	3.1	3.3
Family Living Expenses				
Food and meals expense	15,667	10,845	15,939	19,637
Medical care	5,277	3,101	5,927	7,356
Health insurance	6,132	4,426	4,767	10,797
Cash donations	3,350	1,094	1,583	11,102
Household supplies	5,639	6,997	5,470	5,932
Clothing	2,590	747	3,817	3,319
Personal care	3,099	1,858	4,054	5,717
Child / Dependent care	582	982	150	168
Alimony and child support	-	-	-	-
Gifts	4,655	4,599	7,949	5,039
Education	2,105	805	2,683	2,485
Recreation	8,444	4,377	8,636	15,483
Utilities (household share)	3,975	3,667	3,019	5,812
Personal vehicle operating exp	5,045	6,274	5,295	2,652
Household real estate taxes	1,541	550	805	3,117
Dwelling rent	1,228	1,380	300	3,563
Household repairs	3,543	1,106	6,445	3,342
Personal interest	4,042	2,050	2,203	12,746
Disability / Long term care ins	388	-	462	942
Life insurance payments	3,988	1,389	1,923	5,113
Personal property insurance	488	331	334	561
Miscellaneous	10,224	5,580	6,452	9,733
Total cash family living expense	92,002	62,156	88,213	134,615
Family living from the farm	-	-	-	-
Total family living	92,002	62,156	88,213	134,615
Other Nonfarm Expenditures				
Income taxes	30,096	16,875	41,732	38,462
Furnishing & appliance purchases	110	213	-	-
Nonfarm vehicle purchases	10,649	-	17,478	25,684
Nonfarm real estate purchases	3,280	1,290	1,045	13,893
Other nonfarm capital purchases	-3,159	-	-17,313	2,837
Nonfarm savings & investments	24,431	21,166	58,796	8,081
Total other nonfarm expenditures	65,406	39,543	101,738	88,957
Total cash family living investment & nonfarm capital purch	157,408	101,699	189,951	223,571

Financial Summary
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Gross Farm Income)

	Avg. Of All Farms	*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	232	16	22	71	60	60
Income Statement						
Gross cash farm income	1,592,540	164,970	358,606	749,402	1,467,794	3,624,183
Total cash farm expense	1,231,756	129,169	283,357	577,504	1,146,015	2,792,315
Net cash farm income	360,784	35,801	75,249	171,897	321,779	831,868
Inventory change	260,441	61,729	117,625	168,554	281,948	464,477
Depreciation	-105,613	-11,348	-21,347	-49,204	-89,795	-249,218
Net farm income from operations	515,612	86,182	171,528	291,248	513,932	1,047,127
Gain or loss on capital sales	4,225	3,062	-1,834	-573	7,271	9,598
Average net farm income	519,837	89,244	169,694	290,675	521,202	1,056,725
Median net farm income	364,291	80,717	154,117	271,206	485,315	962,941
Profitability (cost)						
Rate of return on assets	12.4 %	13.8 %	12.1 %	11.6 %	14.0 %	12.0 %
Rate of return on equity	17.9 %	26.7 %	15.9 %	15.7 %	21.3 %	17.4 %
Operating profit margin	25.8 %	31.5 %	29.9 %	27.6 %	26.4 %	24.8 %
Asset turnover rate	48.0 %	43.8 %	40.6 %	42.0 %	53.2 %	48.3 %
Profitability (market)						
Rate of return on assets	9.0 %	11.6 %	9.0 %	8.8 %	10.5 %	8.5 %
Rate of return on equity	13.1 %	22.3 %	11.8 %	12.0 %	15.8 %	12.5 %
Operating profit margin	25.4 %	29.2 %	30.8 %	28.8 %	26.3 %	23.7 %
Asset turnover rate	35.7 %	39.9 %	29.3 %	30.7 %	40.1 %	35.8 %
Liquidity & Repayment (end of year)						
Current assets	1,391,540	188,489	398,851	819,405	1,253,514	2,953,667
Current liabilities	540,139	85,944	129,714	255,591	477,535	1,236,848
Current ratio	2.58	2.19	3.07	3.21	2.62	2.39
Working capital	851,401	102,545	269,137	563,815	775,979	1,716,819
Change in working capital	257,047	44,153	127,052	129,857	272,636	507,924
Working capital to gross revenue	46.8 %	42.5 %	57.5 %	61.6 %	44.4 %	43.3 %
Working capital to oper expense	74.2 %	76.7 %	101.5 %	102.1 %	70.7 %	67.3 %
Debt coverage ratio	4.11	2.87	5.40	4.25	4.07	4.09
Term debt coverage ratio	4.48	3.08	5.69	4.52	4.40	4.50
Replacement coverage ratio	2.87	2.57	3.10	2.96	3.00	2.78
Term debt to EBITDA	1.36	1.75	0.98	1.26	1.30	1.42
Solvency (end of year at cost)						
Number of farms	232	16	22	71	60	60
Total assets	4,481,765	819,802	1,455,030	2,773,936	3,889,925	9,368,805
Total liabilities	1,614,768	453,564	407,822	823,946	1,481,802	3,493,561
Net worth	2,866,998	366,237	1,047,208	1,949,990	2,408,123	5,875,244
Net worth change	430,846	82,385	155,439	229,577	445,370	864,075
Farm debt to asset ratio	37 %	56 %	28 %	32 %	39 %	38 %
Total debt to asset ratio	36 %	55 %	28 %	30 %	38 %	37 %
Change in earned net worth %	18 %	29 %	17 %	13 %	23 %	17 %
Solvency (end of year at market)						
Number of farms	232	16	22	71	60	60
Total assets	5,943,412	907,043	1,949,246	3,823,136	5,067,274	12,396,143
Total liabilities	2,185,800	494,525	551,901	1,128,685	1,928,430	4,829,932
Net worth	3,757,611	412,518	1,397,346	2,694,451	3,138,843	7,566,211
Total net worth change	409,171	77,431	165,787	212,892	435,535	807,111
Farm debt to asset ratio	38 %	57 %	29 %	33 %	39 %	40 %
Total debt to asset ratio	37 %	55 %	28 %	30 %	38 %	39 %
Change in total net worth %	12 %	23 %	13 %	9 %	16 %	12 %
Nonfarm Information						
Net nonfarm income	42,048	56,813	45,735	61,745	20,219	36,452
Farms reporting living expenses	42	5	3	17	10	7
Total family living expense	92,002	49,206	-	79,102	104,872	145,677
Total living, invest, cap. purch	157,408	62,229	-	168,616	155,029	240,454
Crop Acres						
Total crop acres	1,858	288	599	1,089	1,758	3,832
Total crop acres owned	371	66	191	257	331	709
Total crop acres cash rented	1,444	222	360	772	1,402	3,071
Total crop acres share rented	43	-	48	60	25	51
Machinery value per crop acre	575	389	509	518	545	615

Financial Summary
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Age of Operator)

	Avg. Of All Farms	*Less Than 31*	*31 - 40*	*41 - 50*	*51 - 60*	*Over 60*
Number of farms	232	29	50	47	42	64
Income Statement						
Gross cash farm income	1,592,540	555,986	1,319,457	1,761,810	2,365,111	1,644,267
Total cash farm expense	1,231,756	436,048	1,049,105	1,385,588	1,791,990	1,254,384
Net cash farm income	360,784	119,938	270,352	376,222	573,121	389,883
Inventory change	260,441	147,137	245,988	312,955	371,644	211,533
Depreciation	-105,613	-15,158	-71,847	-112,145	-144,847	-142,435
Net farm income from operations	515,612	251,917	444,492	577,032	799,918	458,982
Gain or loss on capital sales	4,225	1,192	1,099	11,543	10,684	-1,573
Average net farm income	519,837	253,108	445,591	588,575	810,602	457,409
Median net farm income	364,291	229,585	370,159	388,033	656,386	278,084
Profitability (cost)						
Rate of return on assets	12.4 %	20.4 %	17.2 %	12.1 %	13.8 %	8.8 %
Rate of return on equity	17.9 %	40.1 %	28.5 %	18.2 %	20.1 %	11.5 %
Operating profit margin	25.8 %	31.7 %	25.4 %	25.8 %	27.9 %	23.1 %
Asset turnover rate	48.0 %	64.4 %	67.7 %	47.0 %	49.6 %	38.2 %
Profitability (market)						
Rate of return on assets	9.0 %	19.2 %	13.7 %	9.0 %	9.6 %	6.4 %
Rate of return on equity	13.1 %	41.3 %	23.5 %	13.9 %	14.1 %	8.2 %
Operating profit margin	25.4 %	31.6 %	24.6 %	24.4 %	27.0 %	24.1 %
Asset turnover rate	35.7 %	60.7 %	55.8 %	37.0 %	35.7 %	26.6 %
Liquidity & Repayment (end of year)						
Current assets	1,391,540	420,806	1,024,494	1,656,783	1,933,230	1,567,887
Current liabilities	540,139	133,268	445,287	685,753	686,497	595,625
Current ratio	2.58	3.16	2.30	2.42	2.82	2.63
Working capital	851,401	287,538	579,207	971,030	1,246,733	972,263
Change in working capital	257,047	120,172	235,034	282,278	392,521	228,833
Working capital to gross revenue	46.8 %	41.2 %	37.3 %	47.7 %	46.7 %	53.4 %
Working capital to oper expense	74.2 %	69.6 %	57.9 %	75.3 %	75.9 %	83.4 %
Debt coverage ratio	4.11	5.56	4.06	4.10	4.26	3.81
Term debt coverage ratio	4.48	6.51	4.46	4.36	4.69	4.12
Replacement coverage ratio	2.87	4.93	3.27	3.00	3.01	2.28
Term debt to EBITDA	1.36	1.31	1.07	1.38	1.38	1.52
Solvency (end of year at cost)						
Number of farms	232	29	50	47	42	64
Total assets	4,481,765	1,468,700	2,838,425	5,135,451	6,197,879	5,524,671
Total liabilities	1,614,768	770,923	1,243,930	2,000,735	2,176,675	1,634,655
Net worth	2,866,998	697,777	1,594,495	3,134,716	4,021,204	3,890,016
Net worth change	430,846	251,435	371,346	485,123	659,376	368,792
Farm debt to asset ratio	37 %	52 %	44 %	40 %	36 %	32 %
Total debt to asset ratio	36 %	52 %	44 %	39 %	35 %	30 %
Change in earned net worth %	18 %	56 %	30 %	18 %	20 %	10 %
Solvency (end of year at market)						
Number of farms	232	29	50	47	42	64
Total assets	5,943,412	1,573,299	3,424,857	6,413,592	8,516,827	7,857,147
Total liabilities	2,185,800	876,090	1,571,667	2,636,091	3,132,194	2,307,301
Net worth	3,757,611	697,209	1,853,190	3,777,502	5,384,633	5,549,846
Total net worth change	409,171	253,100	365,838	451,144	609,474	351,473
Farm debt to asset ratio	38 %	57 %	47 %	42 %	38 %	31 %
Total debt to asset ratio	37 %	56 %	46 %	41 %	37 %	29 %
Change in total net worth %	12 %	57 %	25 %	14 %	13 %	7 %
Nonfarm Information						
Net nonfarm income	42,048	46,347	40,510	41,682	61,096	29,069
Farms reporting living expenses	42	6	7	2	10	17
Total family living expense	92,002	51,182	73,299	-	129,138	90,226
Total living, invest, cap. purch	157,408	47,327	91,555	-	216,875	185,303
Crop Acres						
Total crop acres	1,858	769	1,495	2,122	2,606	1,951
Total crop acres owned	371	90	118	346	575	581
Total crop acres cash rented	1,444	650	1,341	1,725	1,999	1,313
Total crop acres share rented	43	29	35	51	32	56
Machinery value per crop acre	575	290	474	514	545	760

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.

Coronavirus Food Assistance Program 3, a 2020 USDA FSA program that provides producers with financial assistance that gives them the ability to absorb some of the increased marketing costs associated with the COVID-19 pandemic, are included under “Other crop income per acre.” “Government payments” are ARC and PLC payments as well as Coronavirus Food Assistance Program 1.

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.

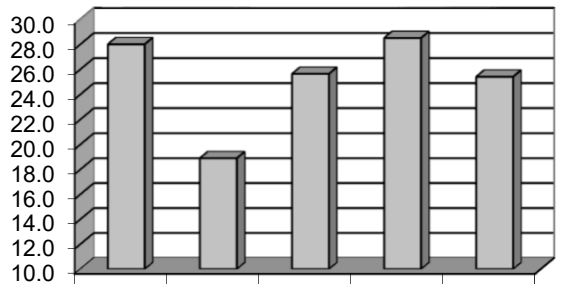
"Total direct expense per unit" and "Total dir & ovhd exp per unit" are calculated by dividing "Total direct expense per acre" and "Total dir & ovhd expenses per acre," respectively, by "Yield per acre." “With labor & management” is the breakeven yield after direct, overhead and a labor and management 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.

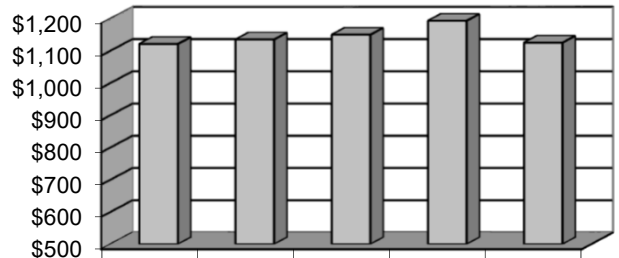
Five Year Crop History of
Yields and Cost of Production
Red River Valley Farm Business Management Education

Sugar Beet Yields



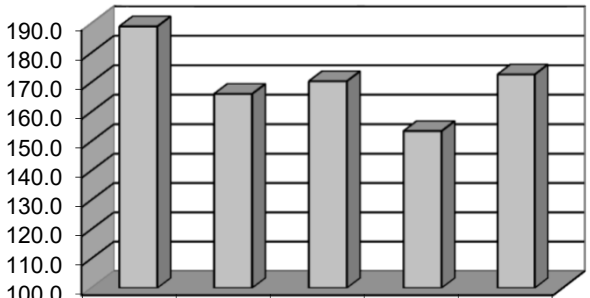
	2018	2019	2020	2021	2022
Tons	28.0	18.9	25.6	28.5	25.4

Sugar Beet Total Listed Cost (cash rented land)



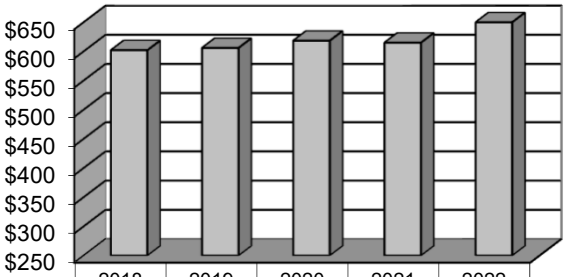
	2018	2019	2020	2021	2022
Dollars	$1,121	$1,135	$1,150	$1,193	$1,125

Corn Yields



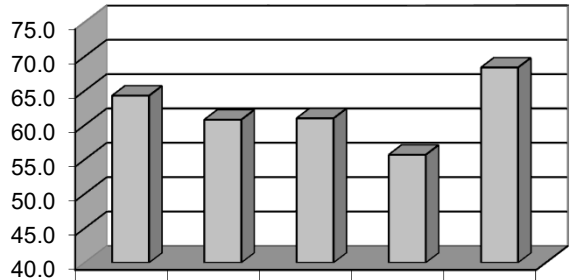
	2018	2019	2020	2021	2022
Bu.	189.0	166.1	170.4	153.5	172.7

Corn Total Listed Cost (cash rented land)



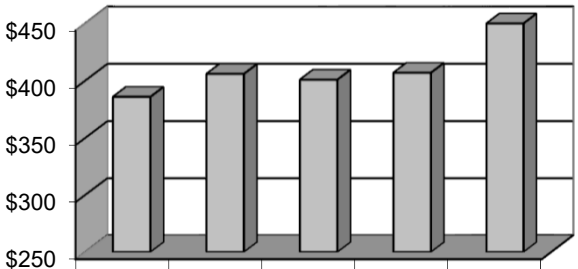
	2018	2019	2020	2021	2022
Dollars	$602	$606	$618	$615	$809

Spring Wheat Yields



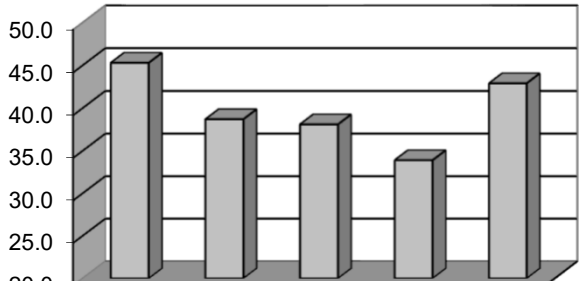
	2018	2019	2020	2021	2022
Bu.	64.3	60.8	61.0	55.7	68.4

Spring Wheat Total Listed Cost (cash rented land)



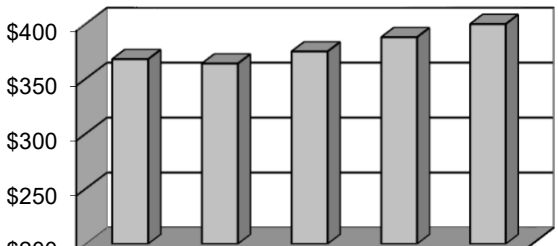
	2018	2019	2020	2021	2022
Dollars	$386	$406	$401	$407	$526

Soybeans Yields



	2018	2019	2020	2021	2022
Bu.	45.3	38.7	38.1	33.9	42.9

Soybeans Total Listed Cost (cash rented land)



	2018	2019	2020	2021	2022
Dollars	$368	$364	$375	$388	$447

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Barley on Cash Rent

	Avg. Of All Farms
Number of farms	7
Acres	311.29
Yield per acre (bu.)	85.68
Operators share of yield %	100.00
Value per bu.	7.26
Total product return per acre	621.76
Crop insurance per acre	8.18
Other crop income per acre	6.14
Gross return per acre	636.08
Direct Expenses	
Seed and plants	19.83
Fertilizer	109.52
Crop chemicals	38.55
Crop insurance	22.21
Drying expense	1.83
Fuel & oil	27.74
Repairs	37.36
Custom hire	3.87
Land rent	132.79
Marketing	0.16
Operating interest	7.92
Miscellaneous	0.80
Total direct expenses per acre	402.58
Return over direct exp per acre	233.50
Overhead Expenses	
Custom hire	2.79
Hired labor	22.40
Machinery leases	3.72
Building leases	0.70
Farm insurance	7.66
Utilities	3.82
Dues & professional fees	3.36
Interest	2.50
Mach & bldg depreciation	22.13
Miscellaneous	4.97
Total overhead expenses per acre	74.06
Total dir & ovhd expenses per acre	476.64
Net return per acre	159.44
Government payments	2.09
Net return with govt pmts	161.53
Labor & management charge	34.98
Net return over lbr & mgt	126.55
Cost of Production	
Total direct expense per bu.	4.70
Total dir & ovhd exp per bu.	5.56
Less govt & other income	5.37
With labor & management	5.78
Net value per unit	7.26
Machinery cost per acre	97.24
Est. labor hours per acre	1.93

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Beans, Navy on Cash Rent

	Avg. Of All Farms
Number of farms	6
Acres	351.87
Yield per acre (cwt.)	24.97
Operators share of yield %	100.00
Value per cwt.	38.45
Total product return per acre	959.99
Crop insurance per acre	96.65
Gross return per acre	1,056.64
Direct Expenses	
Seed and plants	70.46
Fertilizer	87.34
Crop chemicals	112.72
Crop insurance	46.13
Fuel & oil	36.92
Repairs	46.87
Custom hire	0.53
Hired labor	0.97
Land rent	151.19
Operating interest	7.98
Miscellaneous	0.81
Total direct expenses per acre	561.90
Return over direct exp per acre	494.74
Overhead Expenses	
Hired labor	30.97
Machinery leases	3.39
Building leases	1.64
Farm insurance	9.77
Utilities	4.60
Dues & professional fees	6.67
Interest	5.04
Mach & bldg depreciation	29.40
Miscellaneous	2.14
Total overhead expenses per acre	93.62
Total dir & ovhd expenses per acre	655.52
Net return per acre	401.12
Government payments	-
Net return with govt pmts	401.12
Labor & management charge	34.21
Net return over lbr & mgt	366.92
Cost of Production	
Total direct expense per cwt.	22.50
Total dir & ovhd exp per cwt.	26.25
Less govt & other income	22.38
With labor & management	23.75
Net value per unit	38.45
Machinery cost per acre	120.58
Est. labor hours per acre	1.86

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Beans, Pinto on Owned Land

	Avg. Of All Farms
Number of farms	5
Acres	137.86
Yield per acre (cwt.)	10.39
Operators share of yield %	100.00
Value per cwt.	37.48
Total product return per acre	389.49
Crop insurance per acre	248.80
Gross return per acre	638.28
Direct Expenses	
Seed and plants	80.20
Fertilizer	89.51
Crop chemicals	64.69
Crop insurance	35.85
Fuel & oil	25.06
Repairs	44.71
Operating interest	6.22
Total direct expenses per acre	346.23
Return over direct exp per acre	292.05
Overhead Expenses	
Hired labor	26.89
Machinery leases	10.62
RE & pers. property taxes	19.92
Farm insurance	6.11
Utilities	4.35
Dues & professional fees	5.98
Interest	52.89
Mach & bldg depreciation	31.60
Miscellaneous	1.83
Total overhead expenses per acre	160.18
Total dir & ovhd expenses per acre	506.42
Net return per acre	131.87
Government payments	-
Net return with govt pmts	131.87
Labor & management charge	45.16
Net return over lbr & mgt	86.71
Cost of Production	
Total direct expense per cwt.	33.32
Total dir & ovhd exp per cwt.	48.73
Less govt & other income	24.79
With labor & management	29.14
Net value per unit	37.48
Machinery cost per acre	114.80
Est. labor hours per acre	1.83

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Beans, Pinto on Cash Rent

	Avg. Of All Farms
Number of farms	6
Acres	180.51
Yield per acre (cwt.)	19.30
Operators share of yield %	100.00
Value per cwt.	36.62
Total product return per acre	706.65
Crop insurance per acre	35.33
Gross return per acre	741.98
Direct Expenses	
Seed and plants	44.37
Fertilizer	61.63
Crop chemicals	84.21
Crop insurance	20.00
Fuel & oil	35.21
Repairs	62.40
Land rent	115.14
Operating interest	6.10
Total direct expenses per acre	429.07
Return over direct exp per acre	312.91
Overhead Expenses	
Hired labor	23.01
Machinery leases	1.64
Farm insurance	10.51
Utilities	4.95
Dues & professional fees	8.15
Interest	3.94
Mach & bldg depreciation	50.00
Miscellaneous	2.30
Total overhead expenses per acre	104.52
Total dir & ovhd expenses per acre	533.58
Net return per acre	208.40
Government payments	-
Net return with govt pmts	208.40
Labor & management charge	50.47
Net return over lbr & mgt	157.92
Cost of Production	
Total direct expense per cwt.	22.23
Total dir & ovhd exp per cwt.	27.65
Less govt & other income	25.82
With labor & management	28.44
Net value per unit	36.62
Machinery cost per acre	148.12
Est. labor hours per acre	2.34

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Corn on Owned Land

	Avg. Of All Farms	Low 20%	40 - 60%	High 20%
Number of farms	81	16	16	17
Acres	273.64	226.61	267.31	332.47
Yield per acre (bu.)	174.59	143.86	178.19	190.42
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	6.21	5.94	6.26	6.37
Total product return per acre	1,084.45	854.28	1,114.75	1,213.04
Hedging gains/losses per acre	-5.25	0.38	-0.42	1.34
Crop insurance per acre	5.73	27.65	-	4.33
Other crop income per acre	2.22	1.31	1.09	0.36
Gross return per acre	1,087.15	883.62	1,115.42	1,219.06
Direct Expenses				
Seed and plants	97.92	105.77	93.88	92.94
Fertilizer	199.87	175.93	228.88	174.36
Crop chemicals	37.99	57.99	33.73	30.95
Crop insurance	32.40	35.93	30.47	36.03
Drying expense	6.95	2.38	8.78	5.86
Fuel & oil	39.03	38.83	36.86	43.22
Repairs	71.65	79.75	63.57	68.18
Custom hire	4.35	5.34	6.91	3.12
Hired labor	1.91	1.61	0.49	0.76
Machinery leases	1.02	2.31	-	0.32
Utilities	0.25	0.20	1.14	-
Hauling and trucking	0.59	-	-	-
Marketing	1.59	6.99	1.10	-
Operating interest	10.73	14.06	10.22	8.26
Miscellaneous	2.70	2.17	1.62	1.76
Total direct expenses per acre	508.94	529.25	517.65	465.76
Return over direct exp per acre	578.21	354.37	597.77	753.31
Overhead Expenses				
Custom hire	2.48	1.71	0.01	8.59
Hired labor	28.15	38.67	35.55	28.06
Machinery leases	7.77	8.22	12.81	7.64
Building leases	1.09	2.24	0.10	-
RE & pers. property taxes	27.01	27.72	20.69	31.89
Farm insurance	11.43	16.18	11.06	11.67
Utilities	6.49	8.20	8.62	6.86
Dues & professional fees	5.13	6.78	4.84	6.57
Interest	72.75	82.51	61.57	50.05
Mach & bldg depreciation	70.78	101.33	63.03	77.29
Miscellaneous	6.16	12.58	6.68	4.13
Total overhead expenses per acre	239.22	306.14	224.97	232.73
Total dir & ovhd expenses per acre	748.16	835.39	742.62	698.49
Net return per acre	338.99	48.23	372.80	520.57
Government payments	0.21	-	-	0.82
Net return with govt pmts	339.20	48.23	372.80	521.40
Labor & management charge	54.16	53.84	58.27	46.17
Net return over lbr & mgt	285.04	-5.61	314.54	475.23
Cost of Production				
Total direct expense per bu.	2.92	3.68	2.91	2.45
Total dir & ovhd exp per bu.	4.29	5.81	4.17	3.67
Less govt & other income	4.27	5.60	4.16	3.63
With labor & management	4.58	5.98	4.49	3.87
Net value per unit	6.18	5.94	6.25	6.38
Machinery cost per acre	196.87	240.15	183.94	208.19
Est. labor hours per acre	2.33	2.92	2.22	2.28

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Corn on Cash Rent

	Avg. Of All Farms	Low 20%	40 - 60%	High 20%
Number of farms	138	27	27	28
Acres	489.31	551.24	435.19	411.91
Yield per acre (bu.)	171.60	153.45	172.42	191.04
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	6.10	5.73	6.00	6.33
Total product return per acre	1,047.15	879.54	1,035.10	1,209.98
Hedging gains/losses per acre	-4.63	-11.26	4.76	0.45
Crop insurance per acre	5.51	15.89	1.02	6.77
Other crop income per acre	2.72	1.23	3.61	3.29
Gross return per acre	1,050.75	885.39	1,044.50	1,220.49
Direct Expenses				
Seed and plants	98.73	111.46	101.52	92.29
Fertilizer	202.69	214.72	189.72	187.40
Crop chemicals	34.74	34.86	34.58	34.30
Crop insurance	28.11	28.42	25.61	28.90
Drying expense	8.89	6.58	14.08	7.49
Fuel & oil	40.00	39.79	35.96	42.35
Repairs	69.13	77.26	62.74	61.44
Custom hire	8.11	5.99	10.25	7.04
Hired labor	1.88	5.39	0.69	0.45
Land rent	163.10	187.93	150.83	131.60
Stock/quota lease	0.99	-	-	-
Machinery leases	1.31	1.11	0.12	3.52
Marketing	0.91	1.98	1.31	0.43
Operating interest	10.19	16.57	14.01	7.47
Miscellaneous	3.24	3.75	1.06	1.89
Total direct expenses per acre	672.02	735.81	642.48	606.58
Return over direct exp per acre	378.72	149.58	402.02	613.92
Overhead Expenses				
Custom hire	2.14	1.51	0.77	0.59
Hired labor	28.84	21.01	15.77	44.02
Machinery leases	5.68	8.65	4.87	6.38
Building leases	1.41	4.62	0.04	0.84
Farm insurance	10.48	12.07	9.89	11.24
Utilities	5.58	5.53	4.44	7.48
Dues & professional fees	5.30	4.86	4.06	7.09
Interest	5.74	8.75	6.37	3.24
Mach & bldg depreciation	66.33	72.66	48.71	69.84
Miscellaneous	5.54	4.60	5.16	5.57
Total overhead expenses per acre	137.04	144.25	100.08	156.29
Total dir & ovhd expenses per acre	809.06	880.06	742.56	762.87
Net return per acre	241.68	5.33	301.94	457.63
Government payments	0.16	0.00	0.20	0.71
Net return with govt pmts	241.85	5.34	302.13	458.33
Labor & management charge	56.04	47.45	56.23	65.12
Net return over lbr & mgt	185.81	-42.11	245.90	393.21
Cost of Production				
Total direct expense per bu.	3.92	4.80	3.73	3.18
Total dir & ovhd exp per bu.	4.71	5.74	4.31	3.99
Less govt & other income	4.69	5.70	4.25	3.93
With labor & management	5.02	6.01	4.58	4.28
Net value per unit	6.08	5.66	6.03	6.34
Machinery cost per acre	192.60	209.12	165.32	189.21
Est. labor hours per acre	2.38	2.15	2.08	2.84

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Corn Silage on Owned Land

	Avg. Of All Farms
Number of farms	5
Acres	128.38
Yield per acre (ton)	19.42
Operators share of yield %	100.00
Value per ton	48.74
Total product return per acre	946.74
Crop insurance per acre	4.83
Other crop income per acre	0.83
Gross return per acre	952.41
Direct Expenses	
Seed and plants	97.47
Fertilizer	216.10
Crop chemicals	32.69
Crop insurance	32.22
Fuel & oil	30.53
Repairs	47.83
Custom hire	2.80
Machinery leases	0.80
Operating interest	8.90
Miscellaneous	0.80
Total direct expenses per acre	470.13
Return over direct exp per acre	482.27
Overhead Expenses	
Hired labor	42.41
Machinery leases	8.50
Building leases	1.57
RE & pers. property taxes	24.97
Farm insurance	12.10
Utilities	9.05
Dues & professional fees	5.40
Interest	156.40
Mach & bldg depreciation	48.19
Miscellaneous	2.57
Total overhead expenses per acre	311.17
Total dir & ovhd expenses per acre	781.30
Net return per acre	171.11
Government payments	-
Net return with govt pmts	171.11
Labor & management charge	51.20
Net return over lbr & mgt	119.91
Cost of Production	
Total direct expense per ton	24.21
Total dir & ovhd exp per ton	40.23
Less govt & other income	39.93
With labor & management	42.57
Net value per unit	48.74
Machinery cost per acre	145.53
Est. labor hours per acre	2.48

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Corn Silage on Cash Rent

	Avg. Of All Farms
Number of farms	7
Acres	249.27
Yield per acre (ton)	20.75
Operators share of yield %	100.00
Value per ton	47.90
Total product return per acre	994.20
Crop insurance per acre	3.44
Other crop income per acre	0.95
Gross return per acre	998.58
Direct Expenses	
Seed and plants	104.81
Fertilizer	191.01
Crop chemicals	32.07
Crop insurance	30.35
Fuel & oil	31.12
Repairs	50.07
Custom hire	2.20
Hired labor	0.14
Land rent	132.19
Machinery leases	0.57
Operating interest	6.66
Miscellaneous	0.37
Total direct expenses per acre	581.57
Return over direct exp per acre	417.01
Overhead Expenses	
Hired labor	58.45
Machinery leases	6.94
Building leases	1.12
Farm insurance	12.12
Utilities	9.03
Dues & professional fees	6.60
Interest	9.60
Mach & bldg depreciation	59.76
Miscellaneous	3.32
Total overhead expenses per acre	166.94
Total dir & ovhd expenses per acre	748.51
Net return per acre	250.07
Government payments	-
Net return with govt pmts	250.07
Labor & management charge	53.79
Net return over lbr & mgt	196.28
Cost of Production	
Total direct expense per ton	28.02
Total dir & ovhd exp per ton	36.07
Less govt & other income	35.85
With labor & management	38.45
Net value per unit	47.90
Machinery cost per acre	156.26
Est. labor hours per acre	2.53

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

CRP on Owned Land

	Avg. Of All Farms
Number of farms	18
Acres	40.35
Gross return per acre	150.12
Direct Expenses	
Seed and plants	21.11
Fuel & oil	4.62
Repairs	9.73
Operating interest	2.26
Total direct expenses per acre	37.72
Return over direct exp per acre	112.40
Overhead Expenses	
Hired labor	0.75
Machinery leases	0.17
RE & pers. property taxes	19.66
Farm insurance	3.21
Utilities	0.51
Dues & professional fees	0.54
Interest	16.08
Mach & bldg depreciation	69.05
Miscellaneous	1.93
Total overhead expenses per acre	111.91
Total dir & ovhd expenses per acre	149.63
Net return per acre	0.49
Government payments	-
Net return with govt pmts	0.49
Labor & management charge	7.91
Net return over lbr & mgt	-7.42
Net value per unit	1.50
Machinery cost per acre	28.40
Est. labor hours per acre	0.34

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

CRP on Cash Rent

	Avg. Of All Farms
Number of farms	9
Acres	27.19
Gross return per acre	147.81
Direct Expenses	
Fuel & oil	2.96
Repairs	7.38
Land rent	95.98
Machinery leases	1.44
Operating interest	1.22
Miscellaneous	0.12
Total direct expenses per acre	109.09
Return over direct exp per acre	38.72
Overhead Expenses	
Hired labor	4.47
Building leases	0.48
Farm insurance	2.23
Utilities	0.98
Dues & professional fees	1.40
Interest	0.82
Mach & bldg depreciation	4.55
Miscellaneous	2.05
Total overhead expenses per acre	16.98
Total dir & ovhd expenses per acre	126.06
Net return per acre	21.75
Government payments	8.63
Net return with govt pmts	30.37
Labor & management charge	4.83
Net return over lbr & mgt	25.55
Net value per unit	1.34
Machinery cost per acre	17.50
Est. labor hours per acre	0.34

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Hay, Alfalfa on Owned Land

	Avg. Of All Farms
Number of farms	5
Acres	53.09
Yield per acre (ton)	2.61
Operators share of yield %	100.00
Value per ton	134.58
Total product return per acre	351.73
Other crop income per acre	3.63
Gross return per acre	355.35
Direct Expenses	
Fertilizer	47.83
Crop chemicals	1.88
Crop insurance	0.40
Packaging and supplies	0.56
Fuel & oil	24.90
Repairs	37.15
Hired labor	0.53
Marketing	0.09
Operating interest	2.07
Miscellaneous	3.66
Total direct expenses per acre	119.08
Return over direct exp per acre	236.28
Overhead Expenses	
Custom hire	2.08
Hired labor	25.64
Machinery leases	0.60
Building leases	0.09
RE & pers. property taxes	29.55
Farm insurance	14.55
Utilities	9.60
Dues & professional fees	7.77
Interest	49.16
Mach & bldg depreciation	34.94
Miscellaneous	4.13
Total overhead expenses per acre	178.10
Total dir & ovhd expenses per acre	297.18
Net return per acre	58.18
Government payments	-
Net return with govt pmts	58.18
Labor & management charge	42.03
Net return over lbr & mgt	16.14
Cost of Production	
Total direct expense per ton	45.56
Total dir & ovhd exp per ton	113.71
Less govt & other income	112.32
With labor & management	128.40
Net value per unit	134.58
Machinery cost per acre	95.27
Est. labor hours per acre	1.93

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Hay, Alfalfa on Cash Rent

	Avg. Of All Farms
Number of farms	17
Acres	152.85
Yield per acre (ton)	3.73
Operators share of yield %	100.00
Value per ton	146.72
Total product return per acre	547.01
Crop insurance per acre	6.32
Other crop income per acre	0.78
Gross return per acre	554.12
Direct Expenses	
Seed and plants	10.63
Fertilizer	60.02
Crop chemicals	5.81
Crop insurance	4.88
Packaging and supplies	3.41
Fuel & oil	36.84
Repairs	63.97
Custom hire	1.71
Hired labor	2.24
Land rent	126.84
Machinery leases	2.11
Hauling and trucking	0.29
Operating interest	6.29
Miscellaneous	0.19
Total direct expenses per acre	325.20
Return over direct exp per acre	228.91
Overhead Expenses	
Custom hire	0.66
Hired labor	16.38
Machinery leases	2.24
Building leases	0.82
RE & pers. property taxes	0.15
Farm insurance	12.21
Utilities	6.82
Dues & professional fees	6.91
Interest	9.03
Mach & bldg depreciation	34.38
Miscellaneous	2.81
Total overhead expenses per acre	92.40
Total dir & ovhd expenses per acre	417.61
Net return per acre	136.51
Government payments	-
Net return with govt pmts	136.51
Labor & management charge	49.97
Net return over lbr & mgt	86.53
Cost of Production	
Total direct expense per ton	87.23
Total dir & ovhd exp per ton	112.02
Less govt & other income	110.11
With labor & management	123.51
Net value per unit	146.72
Machinery cost per acre	149.37
Est. labor hours per acre	2.18

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Prevented Planting on Owned Land

	Avg. Of All Farms
Number of farms	11
Acres	87.72
Yield per acre	363.42
Operators share of yield %	100.00
Value per 0	1.33
Total product return per acre	482.78
Gross return per acre	482.78
Direct Expenses	
Seed and plants	4.74
Fertilizer	0.34
Crop chemicals	10.81
Crop insurance	25.49
Fuel & oil	15.16
Repairs	19.07
Custom hire	4.63
Operating interest	3.27
Miscellaneous	1.75
Total direct expenses per acre	85.26
Return over direct exp per acre	397.52
Overhead Expenses	
Custom hire	0.28
Hired labor	5.56
Machinery leases	1.92
RE & pers. property taxes	39.97
Farm insurance	7.41
Utilities	3.73
Dues & professional fees	4.14
Interest	53.81
Mach & bldg depreciation	22.98
Miscellaneous	2.86
Total overhead expenses per acre	142.66
Total dir & ovhd expenses per acre	227.92
Net return per acre	254.86
Government payments	-
Net return with govt pmts	254.86
Labor & management charge	19.17
Net return over lbr & mgt	235.69
Net value per unit	1.33
Machinery cost per acre	68.15
Est. labor hours per acre	0.78

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Prevented Planting on Cash Rent

	Avg. Of All Farms	***Low 20%***	***40 - 60%***	***High 20%***
Number of farms	29	5	6	6
Acres	323.27	156.40	423.26	207.33
Yield per acre	228.84	80.19	254.61	347.51
Operators share of yield %	100.00	100.00	100.00	100.00
Value per 0	1.02	1.00	1.00	1.11
Total product return per acre	233.80	80.19	254.61	384.88
Crop insurance per acre	111.03	6.60	133.50	111.22
Other crop income per acre	0.40	-	0.30	-
Gross return per acre	345.22	86.79	388.41	496.09
Direct Expenses				
Seed and plants	5.26	5.03	0.49	2.57
Fertilizer	1.39	14.82	0.59	-
Crop chemicals	10.31	13.82	22.40	2.75
Crop insurance	16.69	28.27	9.17	5.83
Fuel & oil	16.06	9.67	6.15	27.40
Repairs	19.53	21.58	9.41	22.89
Custom hire	3.80	0.66	2.05	8.21
Hired labor	0.37	-	1.35	-
Land rent	158.00	246.08	199.98	139.27
Utilities	0.10	1.14	-	-
Operating interest	3.07	5.12	4.09	4.47
Miscellaneous	1.63	14.57	0.07	0.79
Total direct expenses per acre	236.20	360.77	255.75	214.19
Return over direct exp per acre	109.02	-273.98	132.67	281.90
Overhead Expenses				
Custom hire	0.59	5.85	0.21	0.35
Hired labor	4.43	5.04	5.56	0.87
Machinery leases	0.97	-	1.58	0.20
Building leases	0.28	-	1.02	-
Farm insurance	7.31	13.46	3.90	14.52
Utilities	3.87	5.13	1.21	9.50
Dues & professional fees	3.14	2.53	3.06	8.46
Interest	1.61	1.63	0.43	0.54
Mach & bldg depreciation	24.53	51.72	15.27	33.19
Miscellaneous	5.75	16.41	1.74	7.05
Total overhead expenses per acre	52.47	101.76	33.97	74.69
Total dir & ovhd expenses per acre	288.67	462.53	289.72	288.88
Net return per acre	56.56	-375.74	98.70	207.21
Government payments	-	-	-	-
Net return with govt pmts	56.56	-375.74	98.70	207.21
Labor & management charge	21.27	17.28	8.30	38.71
Net return over lbr & mgt	35.29	-393.03	90.40	168.50
Net value per unit	1.02	1.00	1.00	1.11
Machinery cost per acre	63.81	69.83	35.10	92.67
Est. labor hours per acre	0.72	0.51	0.37	1.22

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Soybeans on Owned Land

	Avg. Of All Farms	Low 20%	40 - 60%	High 20%
Number of farms	96	19	19	20
Acres	265.92	275.75	272.70	267.48
Yield per acre (bu.)	43.35	37.37	43.38	49.46
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	13.93	13.63	13.97	13.98
Total product return per acre	604.00	509.27	606.26	691.51
Hedging gains/losses per acre	-0.91	-3.33	-	0.86
Crop insurance per acre	11.19	15.69	12.78	13.02
Other crop income per acre	3.09	2.17	2.27	5.47
Gross return per acre	617.37	523.80	621.31	710.86
Direct Expenses				
Seed and plants	60.34	63.34	61.08	59.01
Fertilizer	16.87	28.58	13.72	6.59
Crop chemicals	47.54	52.64	52.26	42.43
Crop insurance	26.40	29.22	27.50	25.43
Fuel & oil	22.73	24.76	26.51	19.24
Repairs	37.00	41.83	39.03	35.01
Custom hire	6.94	15.84	4.92	4.37
Hired labor	0.73	1.25	-	1.51
Machinery leases	0.42	0.26	1.18	0.16
Marketing	1.10	3.89	0.12	0.04
Operating interest	4.86	5.15	4.82	5.87
Miscellaneous	1.92	3.46	1.36	1.87
Total direct expenses per acre	226.83	270.21	232.50	201.52
Return over direct exp per acre	390.53	253.58	388.81	509.34
Overhead Expenses				
Custom hire	0.94	0.46	1.19	2.94
Hired labor	16.12	10.30	24.43	13.30
Machinery leases	2.56	2.00	2.78	3.44
Building leases	0.64	1.63	0.27	1.08
RE & pers. property taxes	25.49	21.73	26.08	33.78
Farm insurance	8.98	10.35	9.23	8.90
Utilities	5.33	5.39	6.35	4.95
Dues & professional fees	4.61	5.63	6.64	3.38
Interest	57.42	62.72	81.27	61.92
Mach & bldg depreciation	45.53	43.46	43.61	47.35
Miscellaneous	5.02	3.77	4.65	2.57
Total overhead expenses per acre	172.64	167.43	206.50	183.61
Total dir & ovhd expenses per acre	399.47	437.65	438.99	385.13
Net return per acre	217.90	86.15	182.32	325.73
Government payments	0.10	0.44	-	0.03
Net return with govt pmts	217.99	86.59	182.32	325.76
Labor & management charge	37.14	36.20	43.82	24.78
Net return over lbr & mgt	180.85	50.39	138.50	300.98
Cost of Production				
Total direct expense per bu.	5.23	7.23	5.36	4.07
Total dir & ovhd exp per bu.	9.22	11.71	10.12	7.79
Less govt & other income	8.90	11.31	9.77	7.40
With labor & management	9.76	12.28	10.78	7.90
Net value per unit	13.91	13.54	13.97	14.00
Machinery cost per acre	114.80	130.15	119.32	109.00
Est. labor hours per acre	1.52	1.55	1.78	1.24

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Soybeans on Cash Rent

	Avg. Of All Farms	Low 20%	40 - 60%	High 20%
Number of farms	162	32	33	33
Acres	650.71	703.92	675.08	484.04
Yield per acre (bu.)	42.75	37.70	43.28	49.63
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	13.84	13.01	14.03	14.20
Total product return per acre	591.59	490.45	607.06	704.85
Hedging gains/losses per acre	-0.57	-3.01	-	1.83
Crop insurance per acre	10.48	13.02	3.59	12.98
Other crop income per acre	3.28	0.59	3.71	7.83
Gross return per acre	604.78	501.06	614.36	727.49
Direct Expenses				
Seed and plants	59.87	64.18	59.41	59.77
Fertilizer	16.32	15.16	11.40	19.54
Crop chemicals	47.16	57.74	45.91	43.37
Crop insurance	24.57	27.76	21.29	24.31
Storage	0.18	0.15	0.14	0.69
Fuel & oil	22.49	22.94	20.51	19.93
Repairs	37.15	42.28	35.25	31.73
Custom hire	5.23	8.00	6.11	4.10
Hired labor	1.00	1.64	0.29	1.72
Land rent	147.97	159.28	146.55	137.75
Machinery leases	0.97	0.44	3.00	0.54
Marketing	0.59	1.41	0.29	0.17
Operating interest	5.78	8.73	5.66	4.75
Miscellaneous	2.14	2.37	2.24	1.92
Total direct expenses per acre	371.40	412.07	358.03	350.30
Return over direct exp per acre	233.39	88.98	256.34	377.20
Overhead Expenses				
Custom hire	0.61	2.19	0.31	0.16
Hired labor	15.99	17.79	14.45	10.16
Machinery leases	3.32	2.41	2.31	3.55
Building leases	0.66	0.44	0.25	0.18
Farm insurance	7.36	8.05	7.66	6.78
Utilities	3.58	3.51	3.09	2.72
Dues & professional fees	3.71	4.03	4.29	2.78
Interest	3.42	3.92	2.15	3.20
Mach & bldg depreciation	33.45	38.00	35.50	26.46
Miscellaneous	3.58	5.08	4.24	2.77
Total overhead expenses per acre	75.68	85.43	74.26	58.76
Total dir & ovhd expenses per acre	447.08	497.50	432.28	409.06
Net return per acre	157.70	3.56	182.08	318.44
Government payments	0.18	0.05	0.48	0.14
Net return with govt pmts	157.88	3.60	182.56	318.57
Labor & management charge	33.96	34.06	36.53	37.11
Net return over lbr & mgt	123.92	-30.46	146.03	281.46
Cost of Production				
Total direct expense per bu.	8.69	10.93	8.27	7.06
Total dir & ovhd exp per bu.	10.46	13.20	9.99	8.24
Less govt & other income	10.14	12.92	9.81	7.78
With labor & management	10.94	13.82	10.65	8.53
Net value per unit	13.82	12.93	14.03	14.24
Machinery cost per acre	103.73	117.85	102.85	84.18
Est. labor hours per acre	1.33	1.29	1.28	1.34

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Soybeans, Food on Cash Rent

	Avg. Of All Farms
Number of farms	6
Acres	266.02
Yield per acre (bu.)	36.09
Operators share of yield %	100.00
Value per bu.	17.68
Total product return per acre	638.03
Crop insurance per acre	4.39
Other crop income per acre	8.82
Gross return per acre	651.24
Direct Expenses	
Seed and plants	42.16
Fertilizer	12.91
Crop chemicals	52.89
Crop insurance	27.68
Fuel & oil	23.46
Repairs	57.19
Custom hire	6.43
Land rent	149.45
Operating interest	5.10
Miscellaneous	3.77
Total direct expenses per acre	381.04
Return over direct exp per acre	270.20
Overhead Expenses	
Hired labor	17.61
Machinery leases	1.51
Farm insurance	7.77
Utilities	4.60
Dues & professional fees	7.47
Interest	5.53
Mach & bldg depreciation	54.18
Miscellaneous	2.85
Total overhead expenses per acre	101.52
Total dir & ovhd expenses per acre	482.56
Net return per acre	168.68
Government payments	-
Net return with govt pmts	168.68
Labor & management charge	44.50
Net return over lbr & mgt	124.18
Cost of Production	
Total direct expense per bu.	10.56
Total dir & ovhd exp per bu.	13.37
Less govt & other income	13.00
With labor & management	14.24
Net value per unit	17.68
Machinery cost per acre	141.88
Est. labor hours per acre	1.74

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Soybeans Seed on Owned Land

	Avg. Of All Farms
Number of farms	11
Acres	184.10
Yield per acre (bu.)	47.05
Operators share of yield %	100.00
Value per bu.	15.20
Total product return per acre	715.31
Other crop income per acre	1.43
Gross return per acre	716.74
Direct Expenses	
Seed and plants	63.74
Fertilizer	24.56
Crop chemicals	39.82
Crop insurance	22.42
Storage	1.61
Fuel & oil	20.96
Repairs	39.23
Custom hire	0.75
Machinery leases	3.27
Marketing	1.05
Operating interest	3.70
Miscellaneous	1.06
Total direct expenses per acre	222.16
Return over direct exp per acre	494.57
Overhead Expenses	
Hired labor	12.04
Machinery leases	5.35
RE & pers. property taxes	20.89
Farm insurance	9.60
Utilities	5.47
Dues & professional fees	5.38
Interest	60.11
Mach & bldg depreciation	34.81
Miscellaneous	5.96
Total overhead expenses per acre	159.60
Total dir & ovhd expenses per acre	381.77
Net return per acre	334.97
Government payments	-
Net return with govt pmts	334.97
Labor & management charge	43.29
Net return over lbr & mgt	291.67
Cost of Production	
Total direct expense per bu.	4.72
Total dir & ovhd exp per bu.	8.11
Less govt & other income	8.08
With labor & management	9.00
Net value per unit	15.20
Machinery cost per acre	107.16
Est. labor hours per acre	1.38

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Soybeans Seed on Cash Rent

	Avg. Of All Farms
Number of farms	15
Acres	496.91
Yield per acre (bu.)	47.35
Operators share of yield %	100.00
Value per bu.	15.09
Total product return per acre	714.46
Crop insurance per acre	0.29
Other crop income per acre	1.43
Gross return per acre	716.18
Direct Expenses	
Seed and plants	66.19
Fertilizer	25.76
Crop chemicals	44.64
Crop insurance	22.46
Storage	2.01
Fuel & oil	20.42
Repairs	34.78
Custom hire	1.14
Land rent	143.96
Machinery leases	3.15
Marketing	0.17
Operating interest	3.55
Miscellaneous	1.51
Total direct expenses per acre	369.74
Return over direct exp per acre	346.44
Overhead Expenses	
Hired labor	16.18
Machinery leases	2.51
Building leases	0.38
Farm insurance	7.62
Utilities	3.70
Dues & professional fees	4.03
Interest	6.06
Mach & bldg depreciation	23.77
Miscellaneous	1.39
Total overhead expenses per acre	65.64
Total dir & ovhd expenses per acre	435.38
Net return per acre	280.80
Government payments	0.00
Net return with govt pmts	280.80
Labor & management charge	38.88
Net return over lbr & mgt	241.93
Cost of Production	
Total direct expense per bu.	7.81
Total dir & ovhd exp per bu.	9.20
Less govt & other income	9.16
With labor & management	9.98
Net value per unit	15.09
Machinery cost per acre	89.28
Est. labor hours per acre	1.39

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Sugar Beets on Owned Land, Excluding Joint Venture

	Avg. Of All Farms	Low 20%	40 - 60%	High 20%
Number of farms	32	6	7	7
Acres	136.29	167.83	71.03	153.90
Yield per acre (ton)	24.43	20.38	24.02	26.43
Operators share of yield %	100.00	100.00	100.00	100.00
Value per ton	64.81	56.29	65.46	73.07
Total product return per acre	1,583.07	1,147.22	1,572.45	1,931.13
Crop insurance per acre	16.79	21.21	33.61	0.01
Other crop income per acre	7.92	8.40	1.28	1.66
Gross return per acre	1,607.78	1,176.83	1,607.34	1,932.80
Direct Expenses				
Seed and plants	242.36	264.96	236.35	231.40
Fertilizer	125.65	121.42	132.72	119.20
Crop chemicals	133.90	122.76	133.72	130.53
Crop insurance	37.29	39.77	44.11	37.27
Fuel & oil	82.16	90.01	78.49	62.27
Repairs	138.88	170.89	133.19	119.28
Custom hire	14.78	20.33	21.40	4.49
Hired labor	24.01	9.93	10.58	38.33
Hauling and trucking	12.74	-	39.23	6.62
Operating interest	16.06	16.26	22.09	23.60
Miscellaneous	4.17	2.51	8.19	3.70
Total direct expenses per acre	832.00	858.84	860.07	776.69
Return over direct exp per acre	775.78	317.99	747.27	1,156.11
Overhead Expenses				
Custom hire	0.94	-2.67	-	-
Hired labor	52.34	28.11	68.85	55.99
Machinery leases	19.38	14.70	15.23	7.72
Building leases	2.49	-	7.82	1.77
RE & pers. property taxes	27.22	30.10	33.51	20.85
Farm insurance	22.09	23.74	21.80	18.13
Utilities	10.81	11.52	10.32	13.20
Dues & professional fees	9.94	2.44	8.03	13.46
Interest	54.98	76.20	95.99	56.04
Mach & bldg depreciation	160.97	269.20	105.93	113.36
Miscellaneous	14.48	25.17	4.72	1.96
Total overhead expenses per acre	375.63	478.51	372.20	302.49
Total dir & ovhd expenses per acre	1,207.63	1,337.36	1,232.27	1,079.17
Net return per acre	400.15	-160.53	375.07	853.63
Government payments	0.55	-	0.03	0.13
Net return with govt pmts	400.70	-160.53	375.09	853.76
Labor & management charge	125.97	92.53	142.92	118.69
Net return over lbr & mgt	274.73	-253.06	232.17	735.06
Cost of Production				
Total direct expense per ton	34.06	42.14	35.80	29.39
Total dir & ovhd exp per ton	49.44	65.62	51.30	40.83
Less govt & other income	48.41	64.17	49.84	40.77
With labor & management	53.56	68.71	55.79	45.26
Net value per unit	64.81	56.29	65.46	73.07
Machinery cost per acre	423.91	579.15	355.90	324.92
Est. labor hours per acre	5.77	5.07	4.87	4.28

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Sugar Beets on Owned Land, Joint Venture

	Avg. Of All Farms
Number of farms	13
Acres	188.97
Yield per acre (ton)	26.29
Operators share of yield %	100.00
Value per ton	71.21
Total product return per acre	1,871.73
Crop insurance per acre	0.77
Other crop income per acre	8.74
Gross return per acre	1,881.25
Direct Expenses	
Seed and plants	240.08
Fertilizer	129.39
Crop chemicals	157.90
Crop insurance	42.41
Fuel & oil	80.01
Repairs	123.37
Custom hire	32.95
Hired labor	22.58
Stock/quota lease	221.36
Hauling and trucking	19.62
Operating interest	26.53
Miscellaneous	6.08
Total direct expenses per acre	1,102.30
Return over direct exp per acre	778.95
Overhead Expenses	
Hired labor	54.20
Machinery leases	6.10
Building leases	1.89
RE & pers. property taxes	29.08
Farm insurance	12.34
Utilities	9.99
Dues & professional fees	5.59
Interest	94.17
Mach & bldg depreciation	117.15
Miscellaneous	8.13
Total overhead expenses per acre	338.63
Total dir & ovhd expenses per acre	1,440.93
Net return per acre	440.32
Government payments	-
Net return with govt pmts	440.32
Labor & management charge	118.21
Net return over lbr & mgt	322.11
Cost of Production	
Total direct expense per ton	41.93
Total dir & ovhd exp per ton	54.82
Less govt & other income	54.45
With labor & management	58.95
Net value per unit	71.21
Machinery cost per acre	354.75
Est. labor hours per acre	4.43

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Sugar Beets on Cash Rent, Excluding Joint Venture

	Avg. Of All Farms	Low 20%	40 - 60%	High 20%
Number of farms	62	12	13	13
Acres	251.19	216.37	275.05	211.03
Yield per acre (ton)	25.17	22.00	24.85	27.97
Operators share of yield %	100.00	100.00	100.00	100.00
Value per ton	62.75	51.57	63.22	74.66
Total product return per acre	1,579.30	1,134.48	1,571.11	2,088.15
Crop insurance per acre	31.12	27.43	95.99	0.02
Other crop income per acre	6.82	6.77	4.35	4.88
Gross return per acre	1,617.25	1,168.68	1,671.45	2,093.04
Direct Expenses				
Seed and plants	243.24	255.64	248.03	235.28
Fertilizer	120.70	145.78	119.63	103.68
Crop chemicals	144.09	146.83	141.61	151.09
Crop insurance	38.71	32.42	41.83	40.38
Fuel & oil	84.34	97.47	98.18	69.19
Repairs	142.18	188.35	147.03	116.75
Custom hire	14.54	5.39	11.65	36.57
Hired labor	29.15	11.99	35.08	61.63
Land rent	143.44	142.52	133.20	143.51
Machinery leases	0.30	0.59	-	0.51
Hauling and trucking	24.10	9.55	14.45	29.45
Operating interest	14.66	13.68	12.90	15.69
Miscellaneous	2.90	3.96	1.13	3.61
Total direct expenses per acre	1,002.35	1,054.16	1,004.70	1,007.33
Return over direct exp per acre	614.89	114.52	666.75	1,085.71
Overhead Expenses				
Custom hire	2.99	4.01	1.00	-
Hired labor	65.93	50.27	80.21	58.29
Machinery leases	10.53	23.07	6.52	3.21
Building leases	1.77	2.21	1.38	0.12
RE & pers. property taxes	0.47	0.64	0.65	-
Farm insurance	21.26	26.10	27.91	16.30
Utilities	10.85	9.78	14.31	14.16
Dues & professional fees	10.56	9.24	16.63	10.71
Interest	11.73	7.37	14.26	21.32
Mach & bldg depreciation	126.85	116.89	133.13	103.43
Miscellaneous	10.53	11.04	8.56	18.65
Total overhead expenses per acre	273.47	260.63	304.57	246.19
Total dir & ovhd expenses per acre	1,275.82	1,314.79	1,309.26	1,253.52
Net return per acre	341.42	-146.11	362.18	839.52
Government payments	0.14	-	0.00	0.20
Net return with govt pmts	341.56	-146.11	362.19	839.72
Labor & management charge	120.20	125.16	115.90	132.66
Net return over lbr & mgt	221.36	-271.27	246.28	707.06
Cost of Production				
Total direct expense per ton	39.83	47.91	40.43	36.02
Total dir & ovhd exp per ton	50.69	59.76	52.68	44.82
Less govt & other income	49.18	58.21	48.65	44.64
With labor & management	53.95	63.90	53.31	49.38
Net value per unit	62.75	51.57	63.22	74.66
Machinery cost per acre	382.65	440.13	402.89	338.01
Est. labor hours per acre	5.35	6.33	4.80	5.56

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Sugar Beets on Cash Rent, Joint Venture

	Avg. Of All Farms	Low 20%	40 - 60%	High 20%
Number of farms	45	9	9	9
Acres	269.45	255.36	237.89	211.92
Yield per acre (ton)	26.29	23.11	27.33	27.10
Operators share of yield %	100.00	100.00	100.00	100.00
Value per ton	68.35	62.25	67.42	75.34
Total product return per acre	1,796.99	1,438.94	1,842.32	2,041.58
Crop insurance per acre	9.80	11.65	38.12	-
Other crop income per acre	2.94	2.68	2.27	7.26
Gross return per acre	1,809.73	1,453.26	1,882.70	2,048.85
Direct Expenses				
Seed and plants	243.00	250.76	241.96	251.35
Fertilizer	124.26	132.58	126.22	121.28
Crop chemicals	139.16	139.83	108.76	152.87
Crop insurance	41.60	43.63	33.12	44.21
Fuel & oil	75.87	62.99	76.56	69.16
Repairs	131.21	161.51	157.59	76.20
Custom hire	24.71	19.17	22.79	32.52
Hired labor	31.61	15.59	38.02	36.05
Land rent	144.32	155.60	137.83	131.00
Stock/quota lease	281.16	278.34	315.66	158.36
Machinery leases	0.88	0.25	-	5.28
Hauling and trucking	24.31	38.88	6.83	37.12
Marketing	3.81	-	21.52	-
Operating interest	24.35	38.85	24.25	12.50
Miscellaneous	3.59	4.33	2.52	3.78
Total direct expenses per acre	1,293.84	1,342.31	1,313.62	1,131.69
Return over direct exp per acre	515.89	110.95	569.09	917.16
Overhead Expenses				
Custom hire	0.85	-	4.70	-
Hired labor	58.11	80.75	28.82	30.98
Machinery leases	12.51	1.58	7.97	5.81
Building leases	3.05	0.31	10.68	2.56
Farm insurance	16.45	17.75	28.65	9.92
Utilities	11.04	8.94	16.84	8.71
Dues & professional fees	8.98	11.62	16.22	7.15
Interest	13.44	8.49	18.02	18.85
Mach & bldg depreciation	80.75	70.00	99.02	75.33
Miscellaneous	6.06	5.79	9.69	3.92
Total overhead expenses per acre	211.25	205.21	240.62	163.23
Total dir & ovhd expenses per acre	1,505.08	1,547.52	1,554.23	1,294.92
Net return per acre	304.64	-94.26	328.47	753.92
Government payments	0.01	0.03	-	-
Net return with govt pmts	304.65	-94.23	328.47	753.92
Labor & management charge	143.97	148.33	159.17	137.67
Net return over lbr & mgt	160.68	-242.56	169.30	616.26
Cost of Production				
Total direct expense per ton	49.21	58.07	48.07	41.76
Total dir & ovhd exp per ton	57.25	66.95	56.87	47.78
Less govt & other income	56.76	66.33	55.40	47.52
With labor & management	62.24	72.75	61.22	52.60
Net value per unit	68.35	62.25	67.42	75.34
Machinery cost per acre	333.20	319.36	380.81	276.89
Est. labor hours per acre	4.90	6.51	4.84	3.74

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Sunflowers on Cash Rent

	Avg. Of All Farms
Number of farms	14
Acres	278.76
Yield per acre (cwt.)	25.45
Operators share of yield %	100.00
Value per cwt.	29.56
Total product return per acre	752.55
Crop insurance per acre	4.07
Other crop income per acre	1.39
Gross return per acre	758.00
Direct Expenses	
Seed and plants	38.71
Fertilizer	115.53
Crop chemicals	45.62
Crop insurance	23.10
Fuel & oil	26.31
Repairs	56.34
Custom hire	4.52
Land rent	115.03
Operating interest	9.06
Miscellaneous	0.98
Total direct expenses per acre	435.23
Return over direct exp per acre	322.77
Overhead Expenses	
Custom hire	3.50
Hired labor	25.66
Machinery leases	4.30
Building leases	0.90
Farm insurance	11.34
Utilities	3.91
Dues & professional fees	6.38
Interest	2.44
Mach & bldg depreciation	28.69
Miscellaneous	1.94
Total overhead expenses per acre	89.06
Total dir & ovhd expenses per acre	524.29
Net return per acre	233.71
Government payments	1.69
Net return with govt pmts	235.40
Labor & management charge	39.73
Net return over lbr & mgt	195.68
Cost of Production	
Total direct expense per cwt.	17.10
Total dir & ovhd exp per cwt.	20.60
Less govt & other income	20.32
With labor & management	21.88
Net value per unit	29.56
Machinery cost per acre	123.78
Est. labor hours per acre	2.06

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Wheat, Spring on Owned Land

	Avg. Of All Farms	***Low 20%***	***40 - 60%***	***High 20%***
Number of farms	58	11	11	12
Acres	216.68	161.11	178.61	231.18
Yield per acre (bu.)	69.25	61.47	66.68	77.24
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	8.97	8.50	9.06	9.15
Total product return per acre	620.95	522.62	604.34	706.68
Hedging gains/losses per acre	0.03	-	0.19	-
Crop insurance per acre	0.09	-	-	-
Other crop income per acre	11.27	0.97	15.68	25.62
Gross return per acre	632.35	523.60	620.21	732.29
Direct Expenses				
Seed and plants	30.60	29.89	32.78	33.86
Fertilizer	152.98	164.29	157.37	133.65
Crop chemicals	42.44	38.61	40.03	43.96
Crop insurance	22.15	20.63	20.67	23.95
Drying expense	0.33	0.05	-	1.20
Storage	0.15	0.28	0.68	-
Fuel & oil	21.78	24.76	19.68	20.68
Repairs	34.85	46.82	35.25	32.23
Custom hire	7.74	0.29	1.94	3.43
Hired labor	2.02	-	-	8.03
Machinery leases	0.26	1.00	0.09	-
Hauling and trucking	0.17	-	0.54	-
Marketing	0.25	0.36	0.60	-
Operating interest	4.02	4.78	4.48	3.15
Miscellaneous	2.82	1.83	0.98	2.06
Total direct expenses per acre	322.56	333.59	315.09	306.19
Return over direct exp per acre	309.78	190.01	305.12	426.10
Overhead Expenses				
Hired labor	11.67	11.87	13.14	11.44
Machinery leases	2.80	1.34	3.76	4.45
Building leases	0.78	0.37	0.08	1.06
RE & pers. property taxes	23.53	22.71	22.49	22.85
Farm insurance	8.80	7.89	10.97	8.51
Utilities	4.34	4.39	4.31	3.77
Dues & professional fees	3.93	3.35	3.67	3.61
Interest	55.57	59.06	95.62	28.59
Mach & bldg depreciation	32.70	36.62	26.79	36.75
Miscellaneous	4.20	4.93	4.57	3.83
Total overhead expenses per acre	148.31	152.52	185.40	124.85
Total dir & ovhd expenses per acre	470.87	486.11	500.49	431.05
Net return per acre	161.47	37.49	119.71	301.25
Government payments	0.72	3.41	1.35	0.06
Net return with govt pmts	162.19	40.89	121.06	301.31
Labor & management charge	40.59	38.09	36.14	33.20
Net return over lbr & mgt	121.60	2.81	84.92	268.10
Cost of Production				
Total direct expense per bu.	4.66	5.43	4.73	3.96
Total dir & ovhd exp per bu.	6.80	7.91	7.51	5.58
Less govt & other income	6.62	7.84	7.25	5.25
With labor & management	7.21	8.46	7.79	5.68
Net value per unit	8.97	8.50	9.07	9.15
Machinery cost per acre	99.23	111.76	88.70	96.38
Est. labor hours per acre	1.48	1.40	1.24	1.47

Crop Enterprise Analysis
Minnesota and North Dakota Farm Business Management Education
Red River Valley, 2022
(Farms Sorted By Return to Overhead)

Wheat, Spring on Cash Rent

	Avg. Of All Farms	Low 20%	40 - 60%	High 20%
Number of farms	117	23	24	24
Acres	477.13	352.00	451.10	425.81
Yield per acre (bu.)	68.01	56.38	65.49	77.87
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	9.13	8.77	9.14	9.11
Total product return per acre	620.78	494.33	598.60	709.09
Hedging gains/losses per acre	0.25	-1.63	-	1.08
Crop insurance per acre	0.94	1.66	0.35	-
Other crop income per acre	6.18	3.29	7.59	10.31
Gross return per acre	628.14	497.64	606.55	720.48
Direct Expenses				
Seed and plants	30.87	32.32	30.06	26.57
Fertilizer	152.20	152.87	151.02	136.51
Crop chemicals	40.70	30.25	39.16	45.74
Crop insurance	20.66	17.08	20.40	22.63
Drying expense	0.87	2.06	0.54	0.93
Storage	0.33	0.04	0.97	0.30
Fuel & oil	22.92	25.19	21.03	21.44
Repairs	34.45	41.47	38.33	28.81
Custom hire	6.27	4.72	4.79	3.69
Hired labor	0.83	0.97	-	2.79
Land rent	136.41	160.61	128.89	118.56
Machinery leases	0.58	0.08	0.57	0.07
Marketing	0.64	2.31	0.17	0.96
Operating interest	4.39	6.21	5.64	3.72
Miscellaneous	3.01	1.79	3.33	1.57
Total direct expenses per acre	455.14	477.97	444.91	414.29
Return over direct exp per acre	173.00	19.67	161.64	306.19
Overhead Expenses				
Custom hire	0.17	0.64	0.39	0.00
Hired labor	15.57	12.98	15.93	12.74
Machinery leases	2.91	2.14	3.56	2.76
Building leases	0.49	0.54	0.34	0.69
Farm insurance	7.78	7.50	8.54	6.72
Utilities	4.33	7.12	4.73	2.93
Dues & professional fees	3.49	3.87	3.86	3.28
Interest	3.12	3.48	5.13	3.16
Mach & bldg depreciation	29.76	31.80	36.45	26.71
Miscellaneous	3.18	7.57	3.62	2.25
Total overhead expenses per acre	70.82	77.63	82.53	61.23
Total dir & ovhd expenses per acre	525.96	555.61	527.44	475.52
Net return per acre	102.18	-57.96	79.11	244.96
Government payments	0.39	0.56	1.51	-
Net return with govt pmts	102.58	-57.40	80.62	244.96
Labor & management charge	35.23	26.79	32.27	37.06
Net return over lbr & mgt	67.34	-84.19	48.35	207.90
Cost of Production				
Total direct expense per bu.	6.69	8.48	6.79	5.32
Total dir & ovhd exp per bu.	7.73	9.85	8.05	6.11
Less govt & other income	7.62	9.79	7.91	5.96
With labor & management	8.14	10.26	8.40	6.44
Net value per unit	9.13	8.74	9.14	9.12
Machinery cost per acre	96.20	106.24	102.14	84.13
Est. labor hours per acre	1.43	1.36	1.40	1.33

Farm Financial Scorecard

Using Recommended Measures from the Farm Financial Standards Council (FFSC)

Year: 20___

	Your Farm:	Vulnerable		Strong	Desired Trend
Liquidity					
Current Ratio	___.___		1.3	2.0	↑
Working Capital as % of Gross Revenue	____%		10%	30%	↑
*Working Capital as % of Operating Expense**	____%		20%	40%	↑
Solvency					
Debt-to-Asset Ratio	____%		60%	30%	↓
*Equity-to-Asset Ratio**	____%		40%	70%	↑
*Debt-to-Equity Ratio**	___.___		1.5	0.43	↓
Profitability					
Rate of Return on Assets	____%		4%	8%	↑
Rate of Return on Equity	____%		3%	10%	↑
Operating Profit Margin Ratio	____%		15%	25%	↑
Asset Turnover Ratio	____%		30%	45%	↑
Repayment Capacity					
Debt Coverage Ratio	___.___		1.25	1.75	↑
Replacement Coverage Ratio	___.___		1.1	1.5	↑
*Term Debt & Finance Lease Coverage Ratio**	___.___		1.25	1.75	↑
Financial Efficiency					
Operating Expense Ratio	____%		80%	60%	↓
Depreciation Expense Ratio	____%		10%	5%	↓
Interest Expense Ratio	____%		10%	5%	↓
Net Farm Income Ratio	____%		10%	20%	↑

* Denotes Acceptable Alternate Measures of the FFSC (https://ffsc.org/)

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Center for Farm Financial Management
University of Minnesota
The University of Vermont Extension