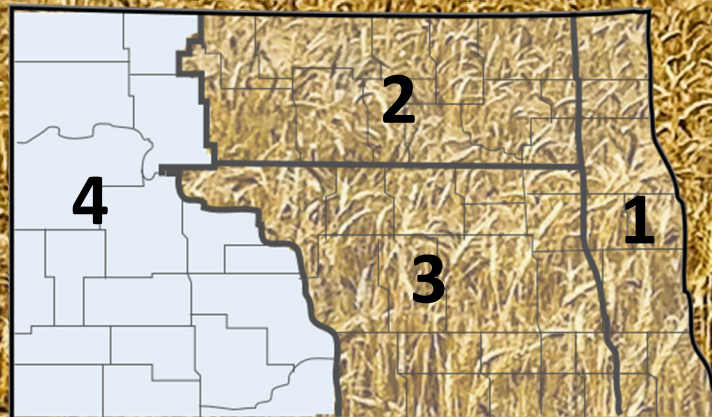


2023 ANNUAL REPORT

Western North Dakota

North Dakota Farm Management Education



www.ndfarmmanagement.com



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The N.D. Farm Management Education Association recognizes the listed organizations for their contribution toward the production and distribution of the N.D. Farm and Ranch Business Management Regional and State Averages for 2023.

THANK YOU TO ALL OF OUR STARS for sponsoring the averages:

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This project is also funded partly by the USDA NIFA Farm Business Management and Benchmarking Grant.

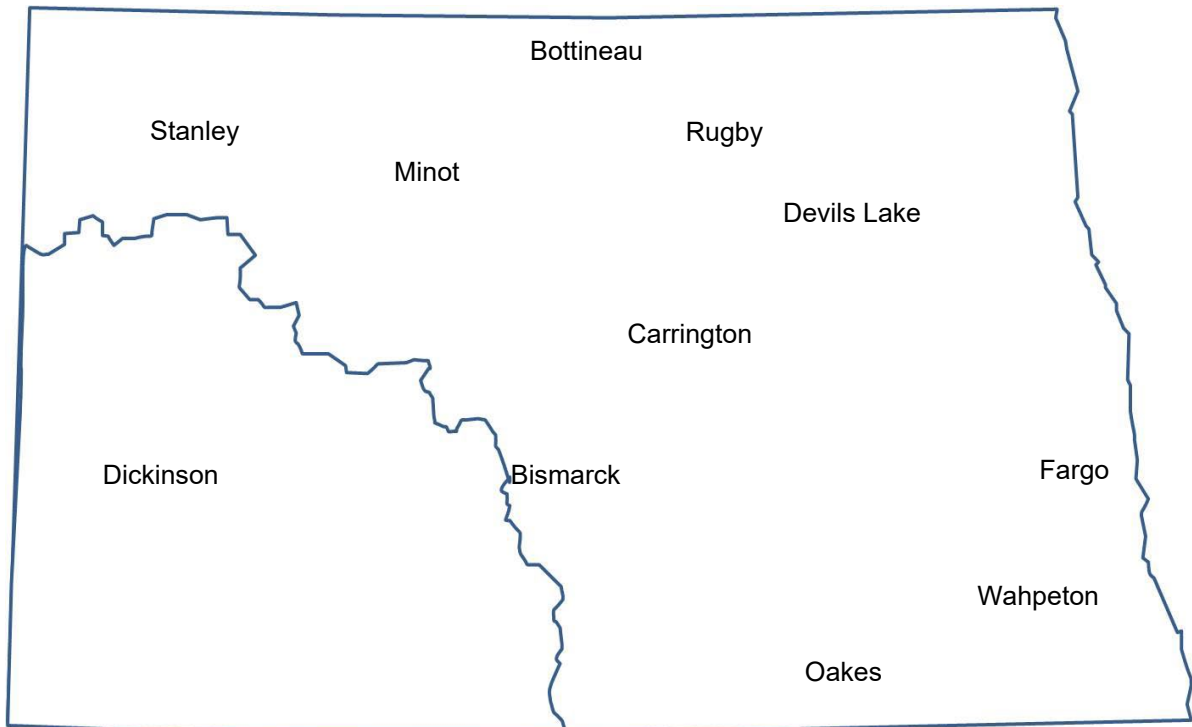
NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION

REGION 4 – WESTERN NORTH DAKOTA 2023 ANNUAL REPORT

The Western North Dakota (Region 4) farm business analyses were submitted by the following instructors represented by their cooperating schools.

<u>School</u>	<u>Instructor</u>
Bismarck State College.....	Kyle Olson
Dakota College at Bottineau – Minot.....	Lynsey Aberle
Dakota College at Bottineau – Stanley.....	Duane Kabanuk

This report was made possible by the farm families who cooperated with their farm management instructors in getting the records for 2023 closed out on a timely basis. The farm management instructors cited above generated the Finpack year-end farm analyses. Bryon Parman, NDSU Extension Service, databased the Finpack analyses of farms and generated the comparative tables for this report.



2023 Western North Dakota Report
North Dakota Farm Business Management Education

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INTRODUCTION

This report summarizes the individual farm records of the specific region or the whole state as identified on the acknowledgement page. The current financial status of farm operators and net returns from each crop and livestock enterprise is reported. In addition to the average of all farms, the averages for the high, middle, and low-income groups are also presented. All participating farm/ranch families are provided a copy of the regional averages report. They can compare their own Finan business analysis to the regional and/or state averages report 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 regional and state averages reports are divided into three major sections; farm operators' reports, crop reports, and livestock reports. Explanatory notes precede each section. The first section contains 15 tables with whole farm financial and operator information. The last three tables of this section are financial summaries in which farms are categorized by gross revenue, age of operator and farm type, respectively. The second section provides performance information on crop enterprises. The third section provides performance results on livestock enterprises. Lastly, figures 1 through 10 provide trend information for various measures of finance and/or production.

The 2023 summary reports are based upon data generated by the Finan individual farm analysis completed by farm/ranch families enrolled in the statewide Adult Farm and Ranch Business Management Education program in North Dakota. Instructors pooled the individual business analysis and submitted the combined school data to the FINPACK Center located at North Dakota State University. The FINPACK Center did provide schools with local averages in order to assist instructors with obtaining relevant local management trends.

Farm/ranch families enrolled in the statewide program are encouraged to request assistance from their instructors to determine short-term cash flow and long-term projections. Each instructor has access to FINPACK computer programs, which can be used to generate annual or multi-year (cash flow) farm plans and/or long term alternative projections.

This is the 35th year that the regional averages have been generated in North Dakota based upon the four regions shown in the state map on the cover of this publication. A regional report has been generated and published for Regions 2 – North Central, 3 – South Central and 4 - Western identified on the North Dakota map. Farms in Region 1 – Red River Valley are located within the Red River Valley. Those farms are contained in a combined Minnesota-North Dakota Red River Valley report. The state averages report includes all farms participating in the North Dakota Farm Business Management Education Program that were represented in the regional averages and also those farms which were processed and submitted after the March deadline date. All of these reports may be ordered from Farm Business Management, P.O. Box 6022, Bismarck, ND, 58506-6022 for \$5 per copy. The reports are available online at www.ndfarmmanagement.com.

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, and CSP.

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 value of farm production is used.

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

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

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

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

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

Liquidity & Repayment Capacity Measures

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

Balance Sheets

The ending balance sheet statements and solvency measures are 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.

Working Capital to Operating Expenses: Measures the operating capital available against the amount of the business's operating expenses.

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.

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.

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.

Debt Coverage Ratio: Indicates whether your business generated enough income to cover current interest expense and all intermediate and long-term debt payments.

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.

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."

Household and Personal Expenses

For those farms that keep records, the household and personal expenses are summarized. The farms are grouped in the same ranking as in the Income Statement. Since not all farms keep these records, the number of farms in the low profit and high profit groups may be different. Averages are determined by the number of farms keeping these records. The Statement of Cash Flows presents calculated family living and includes all farms. Income tax paid is also shown in the Statement of Cash Flows and includes all farms.

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.

Farm Income Statement
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Cash Farm Income				
Buckwheat	5,643	28,213	-	-
Canola	35,175	87,307	-	88,568
Corn	110,956	86,311	46,065	113,736
Corn Silage	5,073	14,859	-	10,507
Hay, Alfalfa	344	-	-	1,572
Lentils	3,385	-	-	16,927
Oats	520	2,599	-	-
Peas, Dry Edible	12,618	-	-	63,090
Soybeans	116,328	29,793	29,725	222,903
Sunflowers	89,986	64,341	-	79,858
Wheat, Durum	65,952	112,765	-	109,619
Wheat, Spring	219,510	238,076	28,779	310,312
Wheat, Winter	644	-	-	-
Hay	8,173	13,050	6,184	16,843
Miscellaneous crop income	2,317	6,961	-	288
Beef Bulls	2,810	-	-	-
Beef Cow-Calf, Beef Calves	147,357	119,250	103,923	275,899
Beef Backgrounding	64,914	182,660	86,649	6,805
Beef Finishing	17,080	85,402	-	-
Sheep, Market Lamb Prod, Mkt Lambs	357	-	-	-
Cull breeding livestock	60,838	65,511	20,656	130,083
Misc. livestock income	91	-	-	453
Livestock govt payments	445	-	2,061	164
Conservation govt payment	6,154	7,819	-	12,259
Other government payments	12,927	12,562	17,021	9,918
Custom work income	7,433	13,695	140	12,991
Patronage dividends, cash	6,601	11,570	2,564	8,980
Crop insurance income	59,435	127,292	17,069	20,372
Property insurance income	243	-	-	-
Farm rental income	5,738	-	1,800	8,610
Other farm income	10,504	8,456	7,056	16,933
Gross Cash Farm Income	1,079,550	1,318,493	369,693	1,537,688

Farm Income Statement (continued)
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Ava. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Cash Farm Expense				
Seed and plants	71,872	63,202	25,781	118,468
Fertilizer	145,962	198,910	24,451	162,302
Crop chemicals	91,052	120,800	10,198	112,191
Crop insurance	40,991	58,643	16,893	47,136
Drying expense	44	219	-	-
Storage	216	-	-	-
Irrigation energy	1,282	-	-	4,855
Crop miscellaneous	5,233	2,729	17,438	6,000
Consultants	1,293	6,191	-	53
Feeder livestock purchase	45,624	136,743	1,625	49,915
Purchased feed	48,658	101,124	13,531	32,546
Breeding fees	629	-	1,703	1,049
Veterinary	8,938	5,339	9,648	16,083
Supplies	3,433	1,418	1,713	770
Livestock insurance	217	71	-	-
Interest	51,001	125,535	18,307	54,333
Fuel & oil	40,526	55,120	19,667	50,448
Repairs	78,911	111,145	52,027	80,692
Custom hire	38,801	44,532	10,380	61,812
Hired labor	23,292	18,066	3,092	28,429
Land rent	114,456	117,990	38,875	164,758
Machinery leases	2,736	986	1,062	332
Building leases	334	-	-	470
Real estate taxes	3,418	2,684	1,239	8,357
Farm insurance	15,100	19,656	10,177	22,620
Utilities	9,261	15,920	3,965	10,002
Hauling and trucking	1,903	4,078	-	5,435
Marketing	4,427	6,532	3,774	2,752
Dues & professional fees	2,349	1,787	4,505	3,200
Miscellaneous	18,096	12,802	17,545	29,672
Licenses & registrations	119	595	-	-
Total cash expense	870,175	1,232,816	307,598	1,074,680
Net cash farm income	209,374	85,677	62,095	463,008
Inventory Changes				
Prepays and supplies	-16,286	-26,785	432	-66,726
Accounts receivable	-14,520	-17,438	-48,432	216
Heading accounts	1,936	-791	-8,006	17,908
Other current assets	436	-	2,130	-133
Crops and feed	-21,602	-125,301	56,566	82,891
Market livestock	51,462	95,306	56,872	64,471
Breeding livestock	-21,440	-89,329	-23,105	-24,274
Other assets	4,826	7,104	500	-109
Accounts payable	-4,067	-9,075	-1,566	5,590
Accrued interest	-10,844	-24,572	-6,237	-18,308
Total inventory change	-30,099	-190,881	29,155	61,525
Net operating profit	179,275	-105,204	91,250	524,533
Depreciation				
Machinery and equipment	-72,641	-98,065	-17,843	-91,871
Titled vehicles	-17,492	-26,728	-5,808	-20,074
Buildings and improvements	-8,280	-9,537	-2,800	-8,643
Total depreciation	-98,414	-134,330	-26,450	-120,588
Net farm income from operations	80,862	-239,534	64,800	403,945
Gain or loss on capital sales	8,575	-22,188	-215	48,000
Net farm income	89,437	-261,722	64,585	451,945

Inventory Changes
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Net cash farm income	209,374	85,677	62,095	463,008
Crops and Feed				
Ending inventory	547,101	731,186	147,590	880,784
Beginning inventory	568,703	856,487	91,024	797,894
Inventory change	-21,602	-125,301	56,566	82,891
Market Livestock				
Ending inventory	192,127	352,337	115,700	264,212
Beginning inventory	140,665	257,031	58,828	199,741
Inventory change	51,462	95,306	56,872	64,471
Accts Receivable				
Ending inventory	14,759	9,400	8,206	16,593
Beginning inventory	29,279	26,838	56,638	16,377
Inventory change	-14,520	-17,438	-48,432	216
Prepaid Expenses and Supplies				
Ending inventory	81,604	15,025	7,463	146,047
Beginning inventory	97,891	41,810	7,030	212,773
Inventory change	-16,286	-26,785	432	-66,726
Hedging Activities				
Ending inventory	5,410	3,595	1,211	17,908
Withdrawals	2,410	-	6,691	-
Beginning inventory	4,830	4,386	15,908	-
Deposits	1,054	-	-	-
Gain or loss	1,936	-791	-8,006	17,908
Other Current Assets				
Ending inventory	1,367	-	2,130	1,116
Beginning inventory	932	-	-	1,250
Inventory change	436	-	2,130	-133
Breeding Livestock				
Ending inventory	224,522	214,732	200,488	380,645
Capital sales	1,530	-	-	-
Beginning inventory	228,931	288,716	204,796	356,319
Capital purchases	18,560	15,345	18,797	48,601
Depreciation, capital adjust	-21,440	-89,329	-23,105	-24,274
Other Capital Assets				
Ending inventory	77,409	56,360	10,778	133,177
Capital sales	-	-	-	-
Beginning inventory	72,022	48,456	8,278	133,286
Capital purchases	560	800	2,000	-
Depreciation, capital adjust	4,826	7,104	500	-109
Accounts Payable				
Beginning inventory	16,332	18,977	234	13,642
Ending inventory	20,399	28,052	1,800	8,052
Inventory change	-4,067	-9,075	-1,566	5,590
Accrued Interest				
Beginning inventory	15,438	30,227	7,490	16,084
Ending inventory	26,282	54,799	13,726	34,391
Inventory change	-10,844	-24,572	-6,237	-18,308
Total inventory change	-30,099	-190,881	29,155	61,525
Net operating profit	179,275	-105,204	91,250	524,533

Depreciation
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Net operating profit	179,275	-105,204	91,250	524,533
Machinery and Equipment				
Ending inventory	793,058	1,072,107	217,915	1,224,652
Capital sales	73,013	156,893	2,415	58,551
Beginning inventory	671,815	946,630	202,916	949,025
Capital purchases	266,897	380,435	35,257	426,048
Depreciation, capital adjust.	-72,641	-98,065	-17,843	-91,871
Titled Vehicles				
Ending inventory	138,739	233,718	52,220	210,762
Capital sales	5,986	21,165	-	939
Beginning inventory	120,145	223,242	42,511	162,542
Capital purchases	42,073	58,369	15,517	69,234
Depreciation, capital adjust.	-17,492	-26,728	-5,808	-20,074
Buildings and Improvements				
Ending inventory	202,979	233,107	61,304	306,217
Capital sales	-	-	-	-
Beginning inventory	182,024	220,003	64,104	242,788
Capital purchases	29,235	22,641	-	72,073
Depreciation, capital adjust.	-8,280	-9,537	-2,800	-8,643
Total depreciation, capital adj.	-98,414	-134,330	-26,450	-120,588
Net farm income from operations	80,862	-239,534	64,800	403,945
Gain or loss on capital sales	8,575	-22,188	-215	48,000
Net farm income	89,437	-261,722	64,585	451,945

Profitability Measures
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Profitability (assets valued at cost)				
Net farm income from operations	80,862	-239,534	64,800	403,945
Rate of return on assets	2.1 %	-4.0 %	3.5 %	7.8 %
Rate of return on equity	0.1 %	-19.5 %	2.2 %	9.6 %
Operating profit margin	6.5 %	-17.5 %	10.3 %	23.1 %
Asset turnover rate	33.1 %	22.8 %	33.7 %	33.7 %
Farm interest expense	61,845	150,107	24,544	72,641
Value of operator lbr and mgmt.	78,839	77,071	49,447	108,020
Return on farm assets	63,867	-166,498	39,897	368,566
Average farm assets	2,976,865	4,176,584	1,152,745	4,734,925
Return on farm equity	2,022	-316,605	15,353	295,925
Average farm equity	1,779,113	1,623,706	696,841	3,092,896
Value of farm production	985,931	950,177	388,931	1,596,329

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Profitability (assets valued at market)				
Net farm income from operations	126,821	-186,456	92,209	472,214
Rate of return on assets	2.9 %	-2.5 %	4.6 %	7.1 %
Rate of return on equity	1.9 %	-12.7 %	4.3 %	8.1 %
Operating profit margin	11.1 %	-11.9 %	17.3 %	27.4 %
Asset turnover rate	26.5 %	20.5 %	26.7 %	26.0 %
Farm interest expense	61,845	150,107	24,544	72,641
Value of operator lbr and mgmt.	78,839	77,071	49,447	108,020
Return on farm assets	109,827	-113,420	67,306	436,835
Average farm assets	3,723,470	4,627,266	1,457,520	6,132,957
Return on farm equity	47,982	-263,527	42,762	364,194
Average farm equity	2,495,831	2,074,387	1,001,616	4,490,929
Value of farm production	985,931	950,177	388,931	1,596,329

Liquidity & Repayment Capacity Measures
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Liquidity				
Current ratio	1.87	0.90	3.11	2.95
Working capital	416,699	-122,405	272,613	905,693
Change in working capital	-80,564	-297,682	16,256	154,958
Working capital to gross revenue	38.6 %	-10.3 %	67.5 %	53.9 %
Working capital to oper expense	49.7 %	-10.7 %	94.6 %	83.7 %
Current assets	896,841	1,144,547	401,537	1,370,680
Current liabilities	480,142	1,266,952	128,924	464,987
Gross revenues (accrual)	1,080,213	1,188,044	404,088	1,678,790
Total operating expenses	839,093	1,143,141	288,293	1,081,616
Repayment capacity				
Net farm income from operations	80,862	-239,534	64,800	403,945
Depreciation	98,414	134,330	26,450	120,588
Personal income	63,848	68,068	54,556	120,114
Family living/owner withdrawals	-74,566	-79,420	-57,530	-97,896
Cash discrepancy	-280	291	144	-1,358
Income taxes	-10,629	-2,673	-8,938	-32,877
Interest expense	64,478	156,853	25,591	74,373
Debt repayment capacity	222,126	37,915	105,073	586,889
Debt payments	155,254	320,658	51,911	205,779
Repayment margin	66,872	-282,743	53,162	381,110
Cash replacement allowance	-49,286	-35,046	-28,206	-82,500
Replacement margin	17,586	-317,789	24,956	298,609
Debt coverage ratio	1.43	0.12	2.02	2.85
Term debt coverage ratio	1.54	-0.20	2.31	3.25
Replacement coverage ratio	1.09	0.11	1.31	2.04

Balance Sheet at Cost Values
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Assets				
Current Farm Assets				
Cash and checking balance	54,472	33,004	119,238	44,020
Prepaid expenses & supplies	81,604	15,025	7,463	146,047
Growing crops	1,367	-	2,130	1,116
Accounts receivable	14,759	9,400	8,206	16,593
Hedging accounts	5,410	3,595	1,211	17,908
Crops held for sale or feed	547,101	731,186	147,590	880,784
Crops under government loan	-	-	-	-
Market livestock held for sale	192,127	352,337	115,700	264,212
Other current assets	-	-	-	-
Total current farm assets	896,841	1,144,547	401,537	1,370,680
Intermediate Farm Assets				
Breeding livestock	224,522	214,732	200,488	380,645
Machinery and equipment	793,058	1,072,107	217,915	1,224,652
Titled vehicles	138,739	233,718	52,220	210,762
Other intermediate assets	6,824	2,680	10,778	2,700
Total intermediate farm assets	1,163,143	1,523,236	481,401	1,818,760
Long Term Farm Assets				
Farm land	735,145	1,260,693	255,427	1,353,969
Buildings and improvements	202,979	233,107	61,304	306,217
Other long-term assets	70,585	53,680	-	130,477
Total long-term farm assets	1,008,709	1,547,480	316,731	1,790,663
Total Farm Assets	3,068,692	4,215,263	1,199,670	4,980,103
Total Nonfarm Assets	441,630	401,269	292,179	729,769
Total Assets	3,510,322	4,616,532	1,491,849	5,709,872
Liabilities				
Current Farm Liabilities				
Accrued interest	26,282	54,799	13,726	34,391
Accounts payable	20,399	28,052	1,800	8,052
Current notes	330,208	995,010	87,239	266,028
Government crop loans	-	-	-	-
Principal due on term debt	103,254	189,091	26,159	156,515
Total current farm liabilities	480,142	1,266,952	128,924	464,987
Total intermediate farm liabs	296,496	574,984	43,236	424,888
Total long term farm liabilities	489,303	888,733	308,089	808,359
Total farm liabilities	1,265,941	2,730,668	480,250	1,698,235
Total nonfarm liabilities	74,845	82,740	24,248	129,726
Total liabilities	1,340,786	2,813,407	504,498	1,827,961
Net worth (farm and nonfarm)	2,169,536	1,803,125	987,351	3,881,911
Net worth change	77,926	-240,801	39,845	440,890
Percent net worth change	4 %	-12 %	4 %	13 %
Ratio Analysis				
Current farm liabilities / assets	54 %	111 %	32 %	34 %
Intermediate farm liab. / assets	25 %	38 %	9 %	23 %
Long term farm liab. / assets	49 %	57 %	97 %	45 %
Total debt to asset ratio	38 %	61 %	34 %	32 %

Statement Of Cash Flows
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Beginning cash (farm & nonfarm)	84,897	121,618	134,105	65,313
Cash Provided By Operating Activities				
Gross cash farm income	1,079,550	1,318,493	369,693	1,537,688
Total cash farm expense	-870,175	-1,232,816	-307,598	-1,074,680
Net cash from hedging transactions	1,356	-	6,691	-
Cash provided by operating	210,730	85,677	68,786	463,008
Cash Provided By Investing Activities				
Sale of breeding livestock	1,530	-	-	-
Sale of machinery & equipment	80,101	131,485	2,200	106,440
Sale of titled vehicles	6,437	19,200	-	1,050
Sale of farm land	10,600	53,002	-	-
Sale of farm buildings	-	-	-	-
Sale of other farm assets	-	-	-	-
Sale of nonfarm assets	48	-	240	-
Purchase of breeding livestock	-18,560	-15,345	-18,797	-48,601
Purchase of machinery & equip.	-266,897	-380,435	-35,257	-426,048
Purchase of titled vehicles	-42,073	-58,369	-15,517	-69,234
Purchase of farm land	-37,440	-155,198	-	-
Purchase of farm buildings	-29,235	-22,641	-	-72,073
Purchase of other farm assets	-560	-800	-2,000	-
Purchase of nonfarm assets	-33,335	-25,237	-30,764	-95,784
Cash provided by investing	-329,385	-454,338	-99,895	-604,250
Cash Provided By Financing Activities				
Money borrowed	838,003	2,132,572	258,503	1,033,721
Principal payments	-710,824	-1,818,559	-219,869	-885,412
Personal income	63,848	68,068	54,556	120,114
Family living/owner withdrawals	-74,566	-79,420	-57,530	-97,896
Income and social security tax	-12,909	-2,673	-8,938	-27,877
Capital contributions	26,363	118,109	13,708	-
Capital distributions	-24,220	-118,318	-	-
Dividends paid	-	-	-	-
Cash gifts and inheritances	4,131	6,000	-	-
Gifts given	-	-	-	-
Other cash flows	-	-	-	-
Cash provided by financing	109,826	305,779	40,430	142,650
Net change in cash balance	-8,829	-62,882	9,321	1,408
Ending cash (farm & nonfarm)	75,788	59,028	143,570	65,363
Discrepancy	280	-291	-144	1,358

Financial Standards Measures
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Liquidity				
Current ratio	1.87	0.90	3.11	2.95
Working capital to gross revenue	38.6 %	-10.3 %	67.5 %	53.9 %
Working capital to oper expense	49.7 %	-10.7 %	94.6 %	83.7 %
Solvency (market)				
Farm debt to asset ratio	34 %	58 %	32 %	26 %
Farm equity to asset ratio	66 %	42 %	68 %	74 %
Farm debt to equity ratio	0.51	1.39	0.46	0.36
Profitability (cost)				
Rate of return on farm assets	2.1 %	-4.0 %	3.5 %	7.8 %
Rate of return on farm equity	0.1 %	-19.5 %	2.2 %	9.6 %
Operating profit margin	6.5 %	-17.5 %	10.3 %	23.1 %
Asset turnover rate	33.1 %	22.8 %	33.7 %	33.7 %
Repayment Capacity				
Debt coverage ratio	1.43	0.12	2.02	2.85
Term debt coverage ratio	1.54	-0.20	2.31	3.25
Replacement coverage ratio	1.09	0.11	1.31	2.04
Efficiency				
Operating expense ratio	77.7 %	96.2 %	71.3 %	64.4 %
Depreciation expense ratio	9.1 %	11.3 %	6.5 %	7.2 %
Interest expense ratio	5.7 %	12.6 %	6.1 %	4.3 %
Net farm income ratio	7.5 %	-20.2 %	16.0 %	24.1 %

Crop Production and Marketing Summary
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Acreage Summary				
Total acres owned	1,082	1,216	519	2,384
Total crop acres	1,952	2,998	894	2,189
Crop acres owned	461	502	261	991
Crop acres cash rented	1,459	2,446	633	1,178
Crop acres share rented	32	50	-	21
Total pasture acres	1,833	2,201	1,526	1,694
Percent crop acres owned	24 %	17 %	29 %	45 %
Mach invest/crop acre cost	425	413	288	526
Mach invest/crop acre market	554	515	434	675
Average Price Received (Cash Sales Only)				
Corn per bushel	5.64	4.99	-	-
Wheat, Spring per bushel	7.44	-	-	-
Soybeans per bushel	12.74	-	-	-
Sunflowers per cwt	23.17	-	-	-
Average Yield Per Acre				
Wheat, Spring (bushel)	53.23	41.43	-	-
Corn (bushel)	141.44	113.59	-	-
Wheat, Durum (bushel)	44.58	-	-	41.53
Hay, Mixed Alfalfa/Grass (ton)	1.54	1.29	-	2.15
Soybeans (bushel)	40.32	-	-	45.14
Canola (cwt)	19.76	-	-	19.28
Corn Silage (ton)	19.13	-	-	-
Hay, Small Grain (ton)	2.66	-	-	-

Operator and Labor Information
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Operator Information				
Average number of operators	1.0	1.0	1.0	1.0
Average age of operators	48.2	37.2	48.8	51.2
Average number of years farming	21.6	14.6	23.4	28.4
Results Per Operator				
Working capital	416,699	-122,405	272,613	905,693
Total assets (market)	4,349,170	5,132,692	1,989,662	7,230,728
Total liabilities	1,370,434	2,813,407	504,498	1,827,961
Net worth (market)	2,978,736	2,319,285	1,485,164	5,402,767
Net worth excl deferred liabs	3,008,384	2,319,285	1,485,164	5,402,767
Gross farm income	1,080,213	1,188,044	404,088	1,678,790
Total farm expense	999,351	1,427,578	339,288	1,274,845
Net farm income from operations	80,862	-239,534	64,800	403,945
Net nonfarm income	63,848	68,068	54,556	120,114
Family living & tax withdrawals	85,476	81,802	66,324	132,132
Total acres owned	1,081.8	1,216.4	519.0	2,384.4
Total crop acres	1,952.2	2,998.3	893.7	2,188.9
Crop acres owned	461.4	502.0	260.6	990.6
Crop acres cash rented	1,458.5	2,446.1	633.1	1,177.7
Crop acres share rented	32.3	50.2	-	20.7
Total pasture acres	1,833.2	2,201.3	1,525.6	1,693.8
Labor Analysis				
Number of farms	25	5	5	5
Total unpaid labor hours	2,416	2,640	2,140	3,040
Total hired labor hours	750	996	-	1,096
Total labor hours per farm	3,166	3,636	2,140	4,136
Unpaid hours per operator	2,416	2,640	2,140	3,040
Value of farm production / hour	311.37	261.31	181.74	385.96
Net farm income / unpaid hour	33.47	-90.73	30.28	132.88
Average hourly hired labor wage	29.11	18.03	-	25.94

Nonfarm Summary
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Nonfarm Income				
Personal wages & salary	20,780	33,513	23,596	11,214
Net nonfarm business income	10,279	24,243	1,769	-8,310
Personal rental income	-234	-69	-1,100	-
Personal interest income	74	78	26	63
Tax refunds	3,467	4,216	3,048	8,725
Other nonfarm income	29,483	6,087	27,218	108,421
Total nonfarm income	63,848	68,068	54,556	120,114
Gifts and inheritances	4,131	6,000	-	-
Nonfarm Assets (market)				
Checking & savings	21,316	26,024	24,332	21,343
Stocks & bonds	6,945	-	22,563	-
Other current assets	1,380	134	-	-
Furniture & appliances	1,849	-	1,246	4,000
Nonfarm vehicles	32,534	43,360	15,836	67,344
Cash value of life ins.	7,881	-	240	21,428
Retirement accounts	226,765	218,346	368,023	194,393
Other intermediate assets	1,921	1,293	2,074	1,289
Nonfarm real estate	149,677	138,327	37,200	272,860
Personal bus. investment	13,145	12,725	-	45,000
Other long term assets	47,360	-	-	190,800
Total nonfarm assets	510,773	440,209	471,513	818,458
Nonfarm Liabilities				
Accrued interest	516	2,332	39	123
Accounts payable	6,462	-	2,511	15,000
Current notes	4,804	24,020	-	-
Princ due on term debt	6,781	6,660	2,091	16,015
Total current liabilities	18,563	33,013	4,641	31,138
Intermediate liabilities	14,315	30,630	9,356	17,832
Long term liabilities	41,966	19,097	10,251	80,756
Total nonfarm liabilities	74,845	82,740	24,248	129,726
Nonfarm net worth	435,928	357,469	447,265	688,731
Nonfarm debt to asset ratio	15 %	19 %	5 %	16 %

Financial Summary
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Gross Farm Income)

	<u>Avg. Of All Farms</u>	<u>250,001 - 500,000</u>	<u>500,001 - 1,000,000</u>	<u>1,000,001- 2,000,000</u>
Number of farms	25	7	5	7
Income Statement				
Gross cash farm income	1,079,550	401,357	760,742	1,374,703
Total cash farm expense	870,175	362,636	767,637	1,165,449
Net cash farm income	209,374	38,721	-6,895	209,255
Inventory change	-30,099	58,566	13,520	109,547
Depreciation	-98,414	-36,998	-49,152	-103,339
Net farm income from operations	80,862	60,289	-42,527	215,462
Gain or loss on capital sales	8,575	259	5,091	22,646
Average net farm income	89,437	60,547	-37,436	238,108
Median net farm income	57,842	70,135	6,689	346,154
Profitability (cost)				
Rate of return on assets	2.1 %	2.1 %	-2.1 %	4.6 %
Rate of return on equity	0.1 %	0.9 %	-16.5 %	4.3 %
Operating profit margin	6.5 %	6.6 %	-5.7 %	15.1 %
Asset turnover rate	33.1 %	31.3 %	37.6 %	30.3 %
Profitability (market)				
Rate of return on assets	2.9 %	3.0 %	-0.5 %	4.6 %
Rate of return on equity	1.9 %	2.5 %	-7.9 %	4.6 %
Operating profit margin	11.1 %	13.3 %	-1.7 %	19.1 %
Asset turnover rate	26.5 %	22.7 %	31.2 %	24.3 %
Liquidity & Repayment (end of year)				
Current assets	896,841	428,962	461,485	1,553,749
Current liabilities	480,142	150,406	367,503	649,408
Current ratio	1.87	2.85	1.26	2.39
Working capital	416,699	278,556	93,982	904,341
Change in working capital	-80,564	1,953	-134,345	25,381
Working capital to gross revenue	38.6 %	59.9 %	11.7 %	57.4 %
Working capital to oper expense	49.7 %	80.3 %	12.9 %	77.3 %
Debt coverage ratio	1.43	2.20	0.53	2.12
Term debt coverage ratio	1.54	2.48	0.39	2.45
Replacement coverage ratio	1.09	1.42	0.46	1.62
Term debt to EBITDA	3.00	2.81	10.18	2.65
Solvency (end of year at cost)				
Number of farms	25	7	5	7
Total assets	3,510,322	1,853,707	2,313,783	5,142,806
Total liabilities	1,340,786	491,059	1,456,937	1,868,210
Net worth	2,169,536	1,362,648	856,846	3,274,596
Net worth change	77,926	56,682	-28,541	249,635
Farm debt to asset ratio	41 %	33 %	69 %	39 %
Total debt to asset ratio	38 %	26 %	63 %	36 %
Change in earned net worth %	4 %	4 %	-3 %	8 %
Solvency (end of year at market)				
Number of farms	25	7	5	7
Total assets	4,349,170	2,531,649	2,680,101	6,315,991
Total liabilities	1,370,434	491,059	1,456,937	1,974,096
Net worth	2,978,736	2,040,590	1,223,164	4,341,895
Total net worth change	140,377	149,684	-19,154	303,610
Farm debt to asset ratio	34 %	24 %	57 %	33 %
Total debt to asset ratio	32 %	19 %	54 %	31 %
Change in total net worth %	5 %	8 %	-2 %	8 %
Nonfarm Information				
Net nonfarm income	63,848	54,367	65,788	96,453
Crop Acres				
Total crop acres	1,952	1,112	1,260	2,469
Total crop acres owned	461	286	235	819
Total crop acres cash rented	1,459	793	981	1,636
Total crop acres share rented	32	33	45	15
Machinery value per crop acre	554	434	292	467

Financial Summary
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Age of Operator)

	<u>Avg. Of All Farms</u>	<u>31 - 40</u>	<u>51 - 60</u>
Number of farms	25	8	8
Income Statement			
Gross cash farm income	1,079,550	971,808	1,295,502
Total cash farm expense	870,175	840,895	975,040
Net cash farm income	209,374	130,912	320,463
Inventory change	-30,099	-101,825	-18,316
Depreciation	-98,414	-86,854	-122,318
Net farm income from operations	80,862	-57,767	179,829
Gain or loss on capital sales	8,575	-12,627	14,069
Average net farm income	89,437	-70,394	193,898
Median net farm income	57,842	-73,547	149,147
Profitability (cost)			
Rate of return on assets	2.1 %	-0.6 %	3.5 %
Rate of return on equity	0.1 %	-11.1 %	3.3 %
Operating profit margin	6.5 %	-2.5 %	9.0 %
Asset turnover rate	33.1 %	26.2 %	38.6 %
Profitability (market)			
Rate of return on assets	2.9 %	0.5 %	4.2 %
Rate of return on equity	1.9 %	-5.9 %	4.3 %
Operating profit margin	11.1 %	2.3 %	13.4 %
Asset turnover rate	26.5 %	23.7 %	31.6 %
Liquidity & Repayment (end of year)			
Current assets	896,841	779,282	1,118,544
Current liabilities	480,142	713,691	334,510
Current ratio	1.87	1.09	3.34
Working capital	416,699	65,591	784,034
Change in working capital	-80,564	-110,983	-108,405
Working capital to gross revenue	38.6 %	7.2 %	61.0 %
Working capital to oper expense	49.7 %	8.5 %	82.2 %
Debt coverage ratio	1.43	0.54	2.69
Term debt coverage ratio	1.54	0.39	2.89
Replacement coverage ratio	1.09	0.49	1.76
Term debt to EBITDA	3.00	9.27	1.14
Solvency (end of year at cost)			
Number of farms	25	8	8
Total assets	3,510,322	3,524,246	4,008,181
Total liabilities	1,340,786	2,179,870	848,276
Net worth	2,169,536	1,344,376	3,159,906
Net worth change	77,926	-67,056	205,232
Farm debt to asset ratio	41 %	65 %	23 %
Total debt to asset ratio	38 %	62 %	21 %
Change in earned net worth %	4 %	-5 %	7 %
Solvency (end of year at market)			
Number of farms	25	8	8
Total assets	4,349,170	3,892,096	4,900,980
Total liabilities	1,370,434	2,179,870	848,276
Net worth	2,978,736	1,712,225	4,052,705
Total net worth change	140,377	-26,939	289,818
Farm debt to asset ratio	34 %	59 %	19 %
Total debt to asset ratio	32 %	56 %	17 %
Change in total net worth %	5 %	-2 %	8 %
Nonfarm Information			
Net nonfarm income	63,848	53,570	97,679
Crop Acres			
Total crop acres	1,952	1,542	2,749
Total crop acres owned	461	316	529
Total crop acres cash rented	1,459	1,195	2,179
Total crop acres share rented	32	31	41
Machinery value per crop acre	554	565	529

Financial Summary
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Farm Type)

	<u>Avg. Of All Farms</u>	<u>Crop</u>	<u>Crop and Beef</u>
Number of farms	25	12	6
Income Statement			
Gross cash farm income	1,079,550	1,424,011	1,038,006
Total cash farm expense	870,175	1,067,830	1,067,263
Net cash farm income	209,374	356,181	-29,257
Inventory change	-30,099	-131,305	145,307
Depreciation	-98,414	-145,684	-81,659
Net farm income from operations	80,862	79,192	34,391
Gain or loss on capital sales	8,575	18,168	-2,648
Average net farm income	89,437	97,360	31,743
Median net farm income	57,842	85,645	-33,941
Profitability (cost)			
Rate of return on assets	2.1 %	1.4 %	1.7 %
Rate of return on equity	0.1 %	-0.7 %	-2.6 %
Operating profit margin	6.5 %	3.6 %	6.2 %
Asset turnover rate	33.1 %	38.6 %	28.2 %
Profitability (market)			
Rate of return on assets	2.9 %	2.4 %	2.9 %
Rate of return on equity	1.9 %	1.4 %	0.6 %
Operating profit margin	11.1 %	7.8 %	12.1 %
Asset turnover rate	26.5 %	30.9 %	23.6 %
Liquidity & Repayment (end of year)			
Current assets	896,841	926,240	1,330,976
Current liabilities	480,142	524,782	802,495
Current ratio	1.87	1.76	1.66
Working capital	416,699	401,458	528,482
Change in working capital	-80,564	-166,475	-69,433
Working capital to gross revenue	38.6 %	30.5 %	42.5 %
Working capital to oper expense	49.7 %	39.0 %	51.8 %
Debt coverage ratio	1.43	1.46	0.98
Term debt coverage ratio	1.54	1.55	0.98
Replacement coverage ratio	1.09	1.05	0.83
Term debt to EBITDA	3.00	2.45	4.46
Solvency (end of year at cost)			
Number of farms	25	12	6
Total assets	3,510,322	4,104,593	3,935,312
Total liabilities	1,340,786	1,372,609	2,031,835
Net worth	2,169,536	2,731,984	1,903,478
Net worth change	77,926	86,877	5,656
Farm debt to asset ratio	41 %	37 %	53 %
Total debt to asset ratio	38 %	33 %	52 %
Change in earned net worth %	4 %	3 %	0 %
Solvency (end of year at market)			
Number of farms	25	12	6
Total assets	4,349,170	5,010,587	4,691,178
Total liabilities	1,370,434	1,434,376	2,031,835
Net worth	2,978,736	3,576,212	2,659,344
Total net worth change	140,377	140,003	85,425
Farm debt to asset ratio	34 %	31 %	44 %
Total debt to asset ratio	32 %	29 %	43 %
Change in total net worth %	5 %	4 %	3 %
Nonfarm Information			
Net nonfarm income	63,848	87,537	50,182
Crop Acres			
Total crop acres	1,952	2,515	2,350
Total crop acres owned	461	491	683
Total crop acres cash rented	1,459	1,982	1,655
Total crop acres share rented	32	42	12
Machinery value per crop acre	554	651	343

EXPLANATORY NOTES FOR CROPS TABLES

The "Crop Enterprise Analysis" tables show the average physical production, gross return, direct costs, overhead costs, and net returns per acre. The "Net Return per Acre" is the "Gross Return per Acre" minus the direct and overhead costs. "Net Return" represents the return to the operators and family's unpaid labor, management, and equity. It represents the return to all of the resources which are owned by the farm family and hence, not purchased or paid a wage. Net returns are also calculated after a charge for unpaid operator labor and management and after an allocation of direct government payments. The last section of each crop table contains breakeven yield measures which provide useful standards or goals for the individual managers.

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

Several cost items, such as "utilities," "hired labor," and "interest paid," are listed under both "direct" and "overhead" costs because some of these costs are specific to that crop whereas others are general overhead costs of the farm. For example, "Machinery leases" as direct expense refers to machinery leased and used only in that crop enterprise; the most common example is the lease of equipment that is crop specific. However, cost of leasing machinery that is used for the entire farm operation is listed as an overhead cost. Interest payments are likewise divided into those incurred directly for a specific crop and those that are not. "Land Rent" is listed as a direct cost for each crop enterprise on cash rented land. In the case of double cropping, one-half of the rent is charged to each crop.

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

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

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

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Return)

Corn on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	5
Acres	216.90
Yield per acre (bu.)	154.18
Operators share of yield %	100.00
Value per bu.	4.02
Total product return per acre	619.56
Other crop income per acre	1.62
Gross return per acre	621.18
 Direct Expenses	
Seed and plants	66.79
Fertilizer	119.92
Crop chemicals	38.29
Crop insurance	26.05
Fuel & oil	18.34
Repairs	36.32
Custom hire	5.43
Operating interest	12.10
Total direct expenses per acre	323.23
Return over direct exp per acre	297.95
 Overhead Expenses	
Custom hire	15.08
Hired labor	6.97
Machinery leases	0.64
RE & pers. property taxes	5.52
Farm insurance	8.57
Utilities	3.70
Interest	46.06
Mach & bldg depreciation	82.45
Miscellaneous	11.18
Total overhead expenses per acre	180.17
Total dir & ovhd expenses per acre	503.40
Net return per acre	117.78
Government payments	-
Net return with govt pmts	117.78
Labor & management charge	40.60
Net return over lbr & mgt	77.18
 Cost of Production	
Total direct expense per bu.	2.10
Total dir & ovhd exp per bu.	3.27
Less govt & other income	3.25
With labor & management	3.52
Net value per unit	4.02
Machinery cost per acre	151.32
Est. labor hours per acre	1.36

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Return)

Corn on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	9
Acres	354.26
Yield per acre (bu.)	144.14
Operators share of yield %	100.00
Value per bu.	4.14
Total product return per acre	596.17
Hedging gains/losses per acre	6.68
Other crop income per acre	0.09
Gross return per acre	602.93
Direct Expenses	
Seed and plants	73.22
Fertilizer	134.07
Crop chemicals	53.97
Crop insurance	22.44
Fuel & oil	19.93
Repairs	49.53
Custom hire	25.08
Hired labor	5.55
Land rent	54.00
Machinery leases	0.78
Operating interest	11.93
Miscellaneous	0.19
Total direct expenses per acre	450.71
Return over direct exp per acre	152.22
Overhead Expenses	
Custom hire	8.85
Hired labor	9.02
Machinery leases	1.43
Farm insurance	4.80
Utilities	2.69
Dues & professional fees	0.07
Interest	3.85
Mach & bldg depreciation	64.23
Miscellaneous	5.88
Total overhead expenses per acre	100.83
Total dir & ovhd expenses per acre	551.53
Net return per acre	51.39
Government payments	-
Net return with govt pmts	51.39
Labor & management charge	44.50
Net return over lbr & mgt	6.89
Cost of Production	
Total direct expense per bu.	3.13
Total dir & ovhd exp per bu.	3.83
Less govt & other income	3.78
With labor & management	4.09
Net value per unit	4.18
Machinery cost per acre	167.74
Est. labor hours per acre	1.53

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Return)

Soybeans on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	8
Acres	456.91
Yield per acre (bu.)	37.74
Operators share of yield %	100.00
Value per bu.	12.09
Total product return per acre	456.34
Crop insurance per acre	50.60
Other crop income per acre	2.02
Gross return per acre	508.96
Direct Expenses	
Seed and plants	60.36
Fertilizer	25.29
Crop chemicals	29.49
Crop insurance	17.97
Fuel & oil	12.71
Repairs	24.27
Custom hire	12.83
Hired labor	4.82
Land rent	68.31
Machinery leases	0.68
Operating interest	6.06
Total direct expenses per acre	262.80
Return over direct exp per acre	246.16
Overhead Expenses	
Custom hire	2.98
Hired labor	11.78
Machinery leases	1.48
Farm insurance	5.95
Utilities	2.51
Dues & professional fees	0.05
Interest	4.18
Mach & bldg depreciation	51.38
Miscellaneous	5.27
Total overhead expenses per acre	85.58
Total dir & ovhd expenses per acre	348.38
Net return per acre	160.58
Government payments	-
Net return with govt pmts	160.58
Labor & management charge	31.12
Net return over lbr & mgt	129.46
Cost of Production	
Total direct expense per bu.	6.96
Total dir & ovhd exp per bu.	9.23
Less govt & other income	7.84
With labor & management	8.66
Net value per unit	12.09
Machinery cost per acre	106.80
Est. labor hours per acre	1.13

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Return)

Wheat, Spring on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	276.19
Yield per acre (bu.)	46.20
Operators share of yield %	100.00
Value per bu.	6.85
Total product return per acre	316.63
Hedging gains/losses per acre	7.07
Crop insurance per acre	59.59
Other crop income per acre	0.97
Gross return per acre	384.26
Direct Expenses	
Seed and plants	22.79
Fertilizer	92.97
Crop chemicals	42.96
Crop insurance	27.96
Fuel & oil	13.86
Repairs	39.27
Custom hire	7.81
Machinery leases	1.01
Operating interest	10.35
Miscellaneous	0.82
Total direct expenses per acre	259.81
Return over direct exp per acre	124.45
Overhead Expenses	
Custom hire	0.42
Hired labor	4.12
Machinery leases	0.13
RE & pers. property taxes	6.16
Farm insurance	7.92
Utilities	4.65
Dues & professional fees	0.19
Interest	18.42
Mach & bldg depreciation	55.25
Miscellaneous	12.54
Total overhead expenses per acre	109.81
Total dir & ovhd expenses per acre	369.61
Net return per acre	14.65
Government payments	-
Net return with govt pmts	14.65
Labor & management charge	32.68
Net return over lbr & mgt	-18.03
Cost of Production	
Total direct expense per bu.	5.62
Total dir & ovhd exp per bu.	8.00
Less govt & other income	6.54
With labor & management	7.24
Net value per unit	7.01
Machinery cost per acre	118.00
Est. labor hours per acre	1.21

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Return)

Wheat, Spring on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	11
Acres	952.19
Yield per acre (bu.)	54.67
Operators share of yield %	100.00
Value per bu.	6.63
Total product return per acre	362.38
Crop insurance per acre	43.70
Other crop income per acre	0.74
Gross return per acre	406.82
Direct Expenses	
Seed and plants	26.94
Fertilizer	100.93
Crop chemicals	50.22
Crop insurance	21.66
Fuel & oil	14.72
Repairs	26.79
Custom hire	6.62
Hired labor	2.99
Land rent	54.48
Machinery leases	0.74
Operating interest	10.37
Miscellaneous	0.55
Total direct expenses per acre	317.00
Return over direct exp per acre	89.81
Overhead Expenses	
Custom hire	5.28
Hired labor	9.63
Machinery leases	1.20
Building leases	0.20
Farm insurance	5.75
Utilities	3.45
Interest	4.56
Mach & bldg depreciation	45.82
Miscellaneous	5.53
Total overhead expenses per acre	81.42
Total dir & ovhd expenses per acre	398.42
Net return per acre	8.40
Government payments	-
Net return with govt pmts	8.40
Labor & management charge	27.64
Net return over lbr & mgt	-19.24
Cost of Production	
Total direct expense per bu.	5.80
Total dir & ovhd exp per bu.	7.29
Less govt & other income	6.48
With labor & management	6.98
Net value per unit	6.63
Machinery cost per acre	101.87
Est. labor hours per acre	1.12

EXPLANATORY NOTES FOR LIVESTOCK TABLES

The "Livestock Enterprise Analysis" table shows the average physical production, gross returns, direct costs, overhead costs, and net return per unit. All costs are actual costs; no opportunity costs are included. The "Net Return" to the enterprise is the "Gross Margin" 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. The last section of each livestock table contains both economic and technical efficiency measures, which are particularly useful to individual managers in assessing their performance as compared to their peers.

When there are less than five farms with a particular livestock enterprise, that enterprise is not included in the report. When there is a sufficient number (i.e., more than 24), farms are divided into low 20%, middle 20% and high 20% on the basis of returns to overhead costs. The classification is done separately for each livestock enterprise.

The "Dairy" enterprise contains the information for only the milking herd (which includes dry cows). "Dairy Replacement Heifers" are those heifers kept for replacement into the milking herd. "Dairy Heifers (for sale)" are heifers intended for feeding and sale. "Dairy Steers" includes only steers for feeding. The "Dairy and Replacement Heifers" table includes both "Dairy" and "Dairy Replacement Heifers."

"Lbs. feed per lb. of gain" is the lbs. of total feed divided by total gain. The total feed is calculated by adding total pounds of feed. For grains, these pounds per unit are used: corn, 56; oats, 32; barley, 48; grain sorghum, 56; wheat, 60; and millet, 48. For these roughages, the pounds are calculated by these factors: alfalfa haylage, 0.5; corn silage, 0.33; oatlage, 0.5; and sorghum silage, 0.33; and small grain silage, 0.33.

The calving and weaning percentages are calculated as the number of calves, which are calved and weaned, respectively, divided by the number of cows, which are supposed to bear young.

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

Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Return)

Beef Cow-Calf Whole Herd w/backgrounding -- Average Per Cwt. Produced

	<u>Avg. Of All Farms</u>	
Number of farms	5	
	Quantity	Value
Beef Calves sold (lb)	50.18	123.25
Transferred out (lb)	24.53	50.40
Cull sales (lb)	-	38.66
Other income		1.58
Purchased (lb)	-	-13.22
Transferred in (lb)	-	-3.47
Inventory change (lb)	24.70	96.90
Gross margin		294.10
Direct Expenses		
Protein Vit Minerals (lb.)	115.89	17.27
Corn (bu.)	1.05	5.03
Corn Silage (lb.)	755.17	12.03
Hay, Grass (lb.)	2,038.23	74.62
Haylage, Grass (lb.)	205.79	2.88
Pasture (aum)	1.55	58.56
Cover crop grazing (aum)	0.10	2.06
Hay (lb.)	99.80	2.99
Other feed stuffs (lb)	49.47	3.99
Veterinary		7.00
Fuel & oil		7.19
Repairs		13.66
Operating interest		7.02
Miscellaneous		10.97
Total direct expenses		225.28
Return over direct expense		68.82
Overhead Expenses		
Interest		5.63
Mach & bldg depreciation		10.32
Miscellaneous		11.20
Total overhead expenses		27.15
Total dir & ovhd expenses		252.43
Net return		41.67
Labor & management charge		23.94
Net return over lbr & mgt		17.73
Cost of Production Per Cwt. Produced		
Total direct expense per unit		225.28
Total dir & ovhd expense per unit		252.43
With other revenue adjustments		245.26
With labor and management		269.20
Est. labor hours per unit		1.12
Other Information		
Number of cows		149.8
Pregnancy percentage		95.7
Pregnancy loss percentage		2.9
Culling percentage		15.5
Calving percentage		92.9
Weaning percentage		87.7
Calves sold per cow		0.60
Calf death loss percent		6.3
Cow death loss percent		2.5
Cows per FTE		500.2
Average weaning weight		546
Lb. weaned/exposed female		479
Feed cost per cow		897.14
Avg wgt/ Beef Calves sold		571
Avg price / cwt.		245.61

Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2023
(Farms Sorted By Net Return)

Beef Cow-Calf Whole Herd w/backgrounding -- Average Per Cow

	Avg. Of All Farms	
Number of farms		5
	Quantity	Value
Beef Calves sold (lb)	250.9	616.23
Transferred out (lb)	122.6	251.98
Cull sales (lb)	-	193.30
Other income		7.88
Purchased (lb)	-	-66.09
Transferred in (lb)	-	-17.36
Inventory change (lb)	123.5	484.46
Gross margin		1,470.41
Direct Expenses		
Protein Vit Minerals (lb.)	579.4	86.33
Corn (bu.)	5.3	25.16
Corn Silage (lb.)	3,775.6	60.16
Hay, Grass (lb.)	10,190.5	373.08
Haylage, Grass (lb.)	1,028.9	14.40
Pasture (aum)	7.7	292.78
Cover crop grazing (aum)	0.5	10.29
Hay (lb.)	499.0	14.97
Other feed stuffs (lb)	247.3	19.97
Veterinary		34.99
Fuel & oil		35.97
Repairs		68.31
Operating interest		35.08
Miscellaneous		54.84
Total direct expenses		1,126.33
Return over direct expense		344.08
Overhead Expenses		
Interest		28.17
Mach & bldg depreciation		51.61
Miscellaneous		55.98
Total overhead expenses		135.75
Total dir & ovhd expenses		1,262.08
Net return		208.33
Labor & management charge		119.67
Net return over lbr & mgt		88.66
Cost of Production Per Cwt. Produced		
Total direct expense per unit		225.28
Total dir & ovhd expense per unit		252.43
With other revenue adjustments		245.26
With labor and management		269.20
Est. labor hours per unit		5.60
Other Information		
Number of cows		149.8
Pregnancy percentage		95.7
Pregnancy loss percentage		2.9
Culling percentage		15.5
Calving percentage		92.9
Weaning percentage		87.7
Calves sold per cow		0.60
Calf death loss percent		6.3
Cow death loss percent		2.5
Cows per FTE		500.2
Average weaning weight		546
Lb. weaned/exposed female		479
Feed cost per cow		897.14
Avg wgt/ Beef Calves sold		571
Avg price / cwt.		245.61

Figure 1. Net Farm Income (Accrual) Per Farm

N.D. Farm Business Management Education Program – West Region

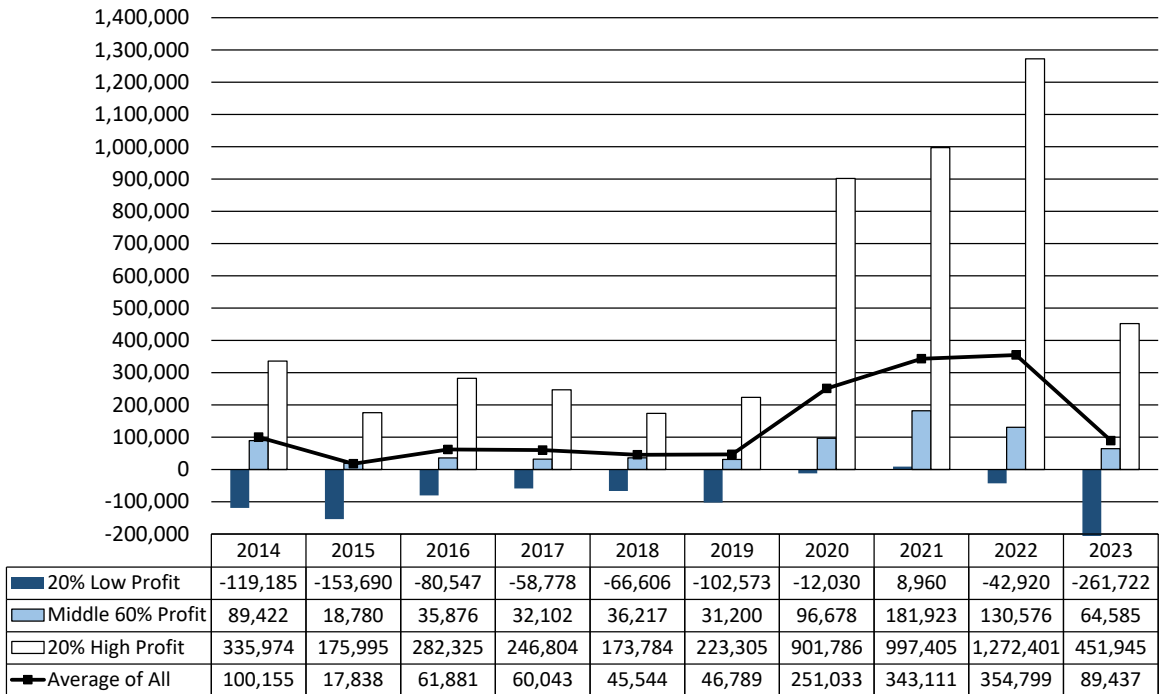


Figure 2. Financial Efficiency Measures (As Percent of Gross Revenue)

N.D. Farm Business Management Education Program – West Region

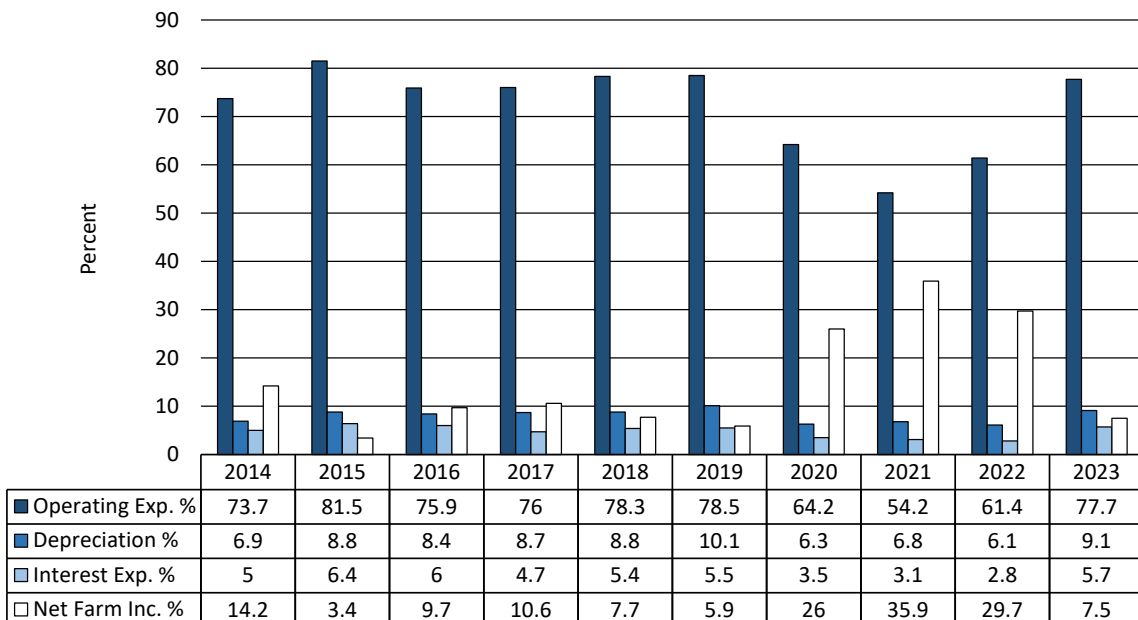
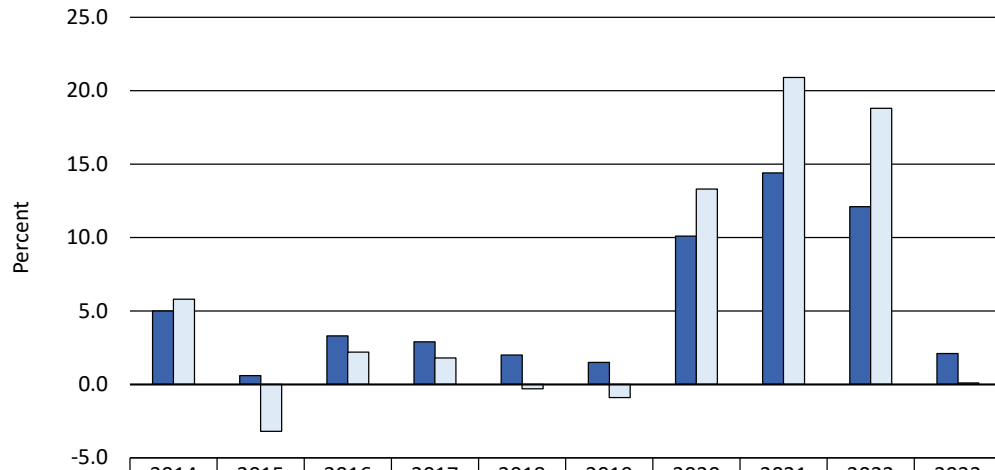


Figure 3. Profitability Measures Per Farm

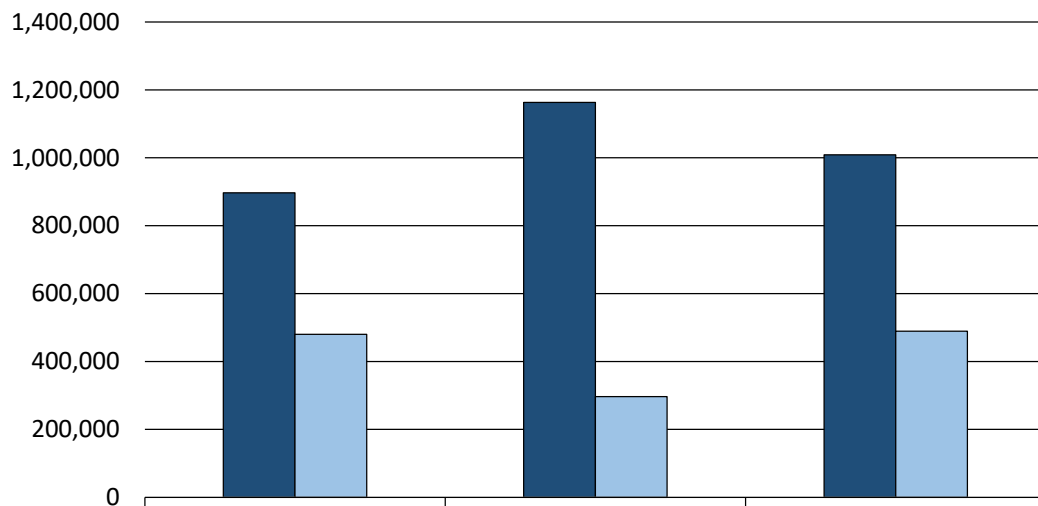
N.D. Farm Business Management Education Program – West Region



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Rate of Return on Assets	5.0	0.6	3.3	2.9	2.0	1.5	10.1	14.4	12.1	2.1
Rate of Return on Equity	5.8	-3.2	2.2	1.8	-0.3	-0.9	13.3	20.9	18.8	0.1

Figure 4. Assets and Liabilities Per Farm, 2023

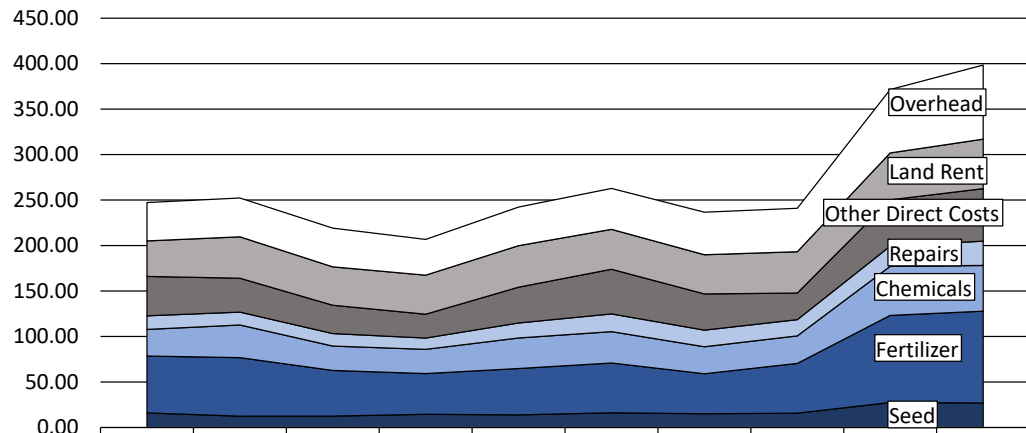
N.D. Farm Business Management Education Program – West Region



	Current	Intermediate	Longterm
Farm Assets	896,841	1,163,143	1,008,709
Farm Liabilities	480,142	296,496	489,303

Figure 5. Spring Wheat Costs Per Acre

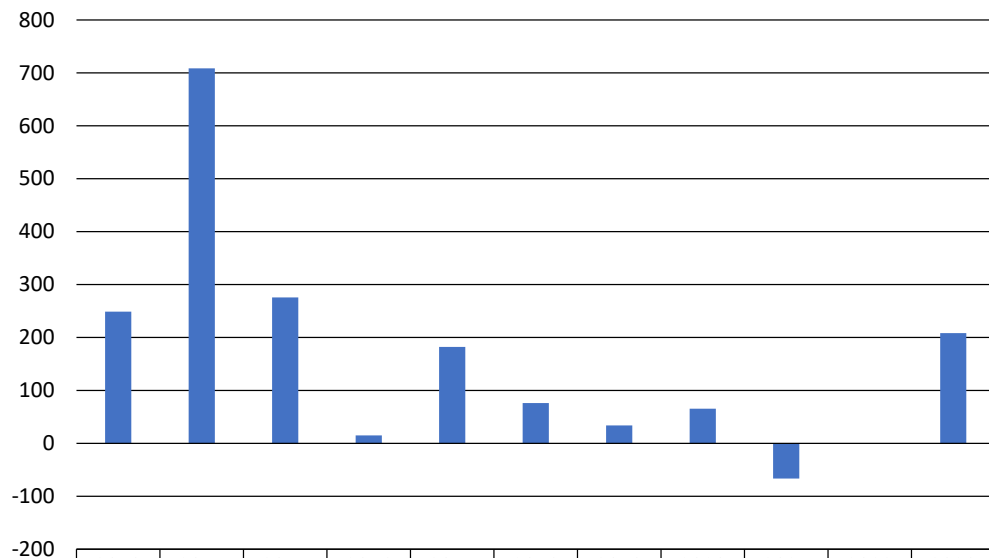
N.D. Farm Business Management Education Program – West Region



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Overhead	42.26	42.63	42.56	39.22	42.45	44.96	46.71	47.78	69.66	81.42
Land Rent	38.91	45.59	42.20	42.94	45.57	43.89	43.13	45.42	51.56	54.48
Other Direct Costs	43.40	37.16	31.22	26.19	39.39	49.00	39.82	29.24	50.95	57.64
Repairs	14.93	14.21	13.68	12.42	16.53	19.53	18.29	17.85	22.09	26.79
Chemicals	29.27	35.90	26.85	26.63	33.53	34.51	29.56	30.23	53.97	50.22
Fertilizer	62.44	64.33	50.14	44.85	51.01	54.67	44.05	54.69	95.76	100.93
Seed	16.07	12.44	12.53	14.44	13.79	16.19	15.07	15.74	27.45	26.94

Figure 6. Average Net Return Per Beef Cow

N.D. Farm Business Management Education Program – West Region



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Avg. Net Return	248.8	708.53	275.65	14.89	182.14	76.10	33.89	65.41	-66.47	N/A	208.33



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