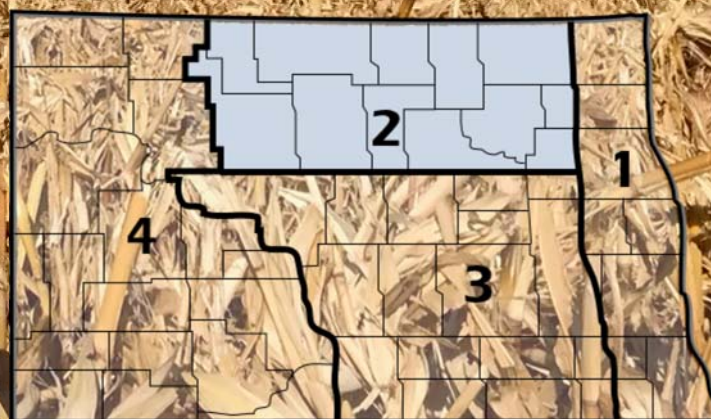


2019 ANNUAL REPORT

North Central North Dakota

North Dakota Farm and Ranch Business
Management Education





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and Technical Education

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NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION

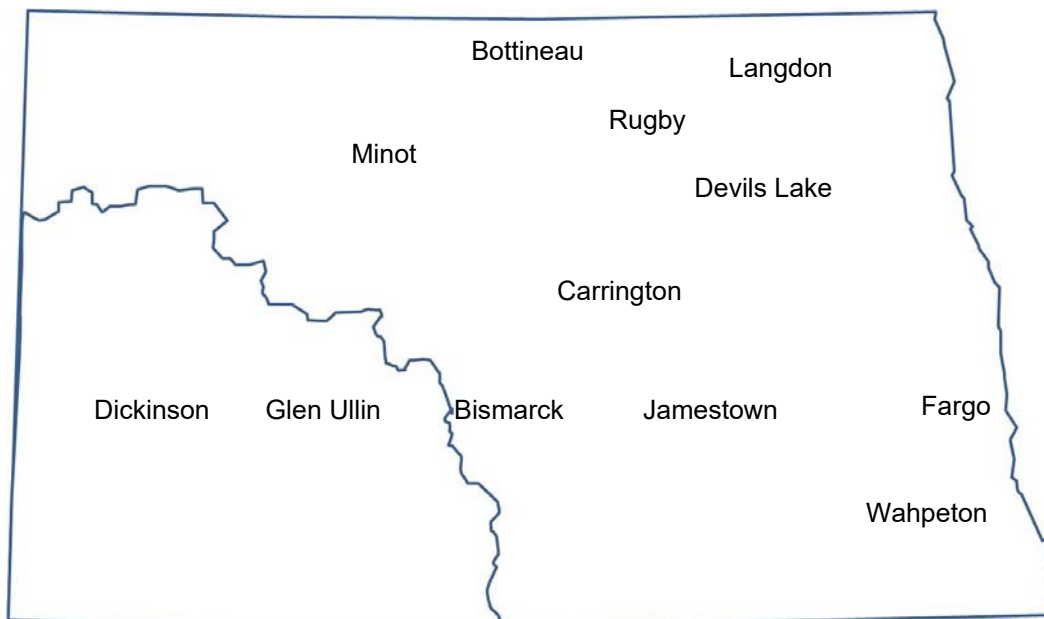
REGION 2 – NORTH CENTRAL AVERAGES 2019 ANNUAL REPORT

The North Central (Region 2) farm business analyses were submitted by the following instructors represented by their cooperating schools.

<u>School</u>	<u>Instructor</u>
Dakota College at Bottineau	Rodney Armstrong
Dakota College at Bottineau - Minot	Lynsey Aberle
Dakota College at Bottineau - Rugby	Sheila Braaten
Lake Region State College - Devils Lake.....	Darren Wilcox
Lake Region State College - Langdon	Jeremiah Halley

This report was made possible by the farm families who cooperated with their farm management instructors in getting the records for 2019 closed out on a timely basis. The farm management instructors cited above generated the Finpack year-end farm analyses. Andrew Swenson, NDSU Extension Service, databased the Finpack analyses of farms and generated the comparative tables for this report.

Location of all Farm Business Management Education Programs in North Dakota



2019 North Central 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 2019 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 31st 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, 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 \$25,000 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.

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."

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 2 - North Central North Dakota, 2019
(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	127	25	26	26
Cash Farm Income				
Barley	31,862	9,993	8,196	91,836
Beans, Faba	245	514	-	-
Beans, Garbonzo	1,730	7,965	-	127
Beans, Navy	3,376	6,056	-	-
Beans, Pinto	23,626	7,794	1,484	87,287
Canola	71,547	44,360	36,947	132,707
Corn	30,752	38,668	11,044	68,574
Hay, Small Grain	176	-	628	-
Oats	1,137	-	4,122	1,432
Peas, Field	6,107	4,944	4,903	8,216
Potatoes	3,822	18,398	-	-
Rye	423	-	-	-
Soybeans	146,643	144,515	97,287	284,146
Sunflowers	5,718	14,659	-	11,937
Wheat, Durum	1,578	3,304	-	1,785
Wheat, Spring	179,922	192,128	95,191	340,906
Wheat, Winter	278	-	-	1,356
Soybeans, Natto	890	-	-	4,349
Other Crops	155	-	-	757
Miscellaneous crop income	3,249	1,014	1,540	13,210
Beef Cow-Calf, Beef Calves	21,279	15,481	22,225	22,539
Beef Replacement Heifers	363	576	968	-
Beef Backgrounding	6,674	4,038	6,676	4,248
Beef Finishing	817	667	190	3,159
Beef Finish Yearlings	59	299	-	-
Cull breeding livestock	5,141	3,563	6,003	3,422
Misc. livestock income	70	-	322	20
Crop government payments	27,417	24,237	15,666	54,038
CRP payments	1,116	1,213	613	2,603
Other government payments	58,268	63,195	30,144	114,548
Conservation govt payment	4,958	4,537	3,193	7,684
Custom work income	9,028	14,475	1,518	20,512
Patronage dividends, cash	6,012	7,257	5,035	9,971
Crop insurance income	49,758	80,589	14,407	69,316
Property insurance income	1,268	1,396	258	1,790
Sale of resale items	530	-	-	2,588
Other farm income	11,333	8,973	15,505	17,474
Gross Cash Farm Income	717,325	724,808	384,063	1,382,536

Farm Income Statement (continued)
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	127	25	26	26
Cash Farm Expense				
Seed and plants	77,006	74,288	42,954	154,531
Fertilizer	98,789	123,567	37,613	190,987
Crop chemicals	72,362	74,694	35,151	130,669
Crop insurance	27,102	36,401	11,293	45,932
Drying expense	868	960	499	2,065
Storage	151	497	-	9
Crop miscellaneous	1,233	1,126	796	2,402
Consultants	2,194	1,177	568	6,395
Feeder livestock purchase	1,062	2,871	2,098	34
Purchased feed	4,481	2,242	3,146	4,268
Veterinary	1,487	1,211	1,678	1,327
Supplies	1,339	1,668	1,664	1,031
Livestock leases	65	-	108	156
Interest	36,205	53,892	22,259	47,385
Fuel & oil	28,347	37,288	16,292	45,450
Repairs	56,434	69,820	32,925	91,768
Custom hire	16,590	17,516	11,303	21,481
Hired labor	18,827	26,646	9,661	32,674
Land rent	88,332	93,436	36,959	163,414
Machinery leases	9,489	17,386	4,202	16,218
Building leases	1,040	150	608	2,510
Real estate taxes	4,256	4,505	2,799	6,799
Farm insurance	10,403	12,481	8,001	16,002
Utilities	8,400	9,874	5,041	13,374
Marketing	599	907	1,420	388
Dues & professional fees	2,634	1,883	1,568	6,178
Purchase of resale items	559	-	-	2,732
Miscellaneous	8,260	7,645	3,606	18,150
Total cash expense	578,514	674,135	294,212	1,024,327
Net cash farm income	138,811	50,673	89,851	358,210
Inventory Changes				
Prepays and supplies	-4,945	-13,825	-10,541	12,420
Accounts receivable	25,736	35,995	17,862	28,126
Hedging accounts	1,378	2,324	1,520	1,690
Other current assets	-122	1,720	-241	-2,745
Crops and feed	-21,502	-78,595	-22,244	12,145
Market livestock	5,080	-830	13,916	11,447
Breeding livestock	-1,836	-2,557	-7,126	-753
Other assets	849	-1,669	390	3,619
Accounts payable	-4,390	10,984	-4,524	-5,701
Accrued interest	-2,232	-3,545	-191	-2,459
Total inventory change	-1,984	-49,999	-11,179	57,789
Net operating profit	136,826	674	78,672	415,999
Depreciation				
Machinery and equipment	-59,239	-76,440	-33,393	-114,329
Titled vehicles	-6,001	-5,352	-2,865	-12,891
Buildings and improvements	-3,630	-3,754	-1,659	-8,776
Total depreciation	-68,871	-85,546	-37,918	-135,997
Net farm income from operations	67,955	-84,871	40,755	280,002
Gain or loss on capital sales	3,095	-4,380	-4,086	12,356
Net farm income	71,050	-89,252	36,668	292,358

Inventory Changes
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	127	25	26	26
Net cash farm income	138,811	50,673	89,851	358,210
Crops and Feed				
Ending inventory	419,206	401,483	182,272	891,376
Beginning inventory	440,708	480,079	204,517	879,230
Inventory change	-21,502	-78,595	-22,244	12,145
Market Livestock				
Ending inventory	32,345	19,473	39,142	44,415
Beginning inventory	27,265	20,303	25,226	32,969
Inventory change	5,080	-830	13,916	11,447
Accts Receivable				
Ending inventory	59,871	84,996	25,102	102,886
Beginning inventory	34,135	49,000	7,239	74,760
Inventory change	25,736	35,995	17,862	28,126
Prepaid Expenses and Supplies				
Ending inventory	49,744	24,595	16,964	156,001
Beginning inventory	54,689	38,420	27,506	143,581
Inventory change	-4,945	-13,825	-10,541	12,420
Hedging Activities				
Ending inventory	5,009	6,618	1,138	15,418
Withdrawals	4,693	3,880	3,077	13,770
Beginning inventory	4,893	6,903	2,695	13,461
Deposits	3,431	1,272	-	14,036
Gain or loss	1,378	2,324	1,520	1,690
Other Current Assets				
Ending inventory	1,349	2,381	147	1,455
Beginning inventory	1,471	660	387	4,200
Inventory change	-122	1,720	-241	-2,745
Breeding Livestock				
Ending inventory	72,772	49,526	73,020	65,048
Capital sales	1,220	2,260	1,323	2,229
Beginning inventory	68,446	41,739	72,615	66,011
Capital purchases	7,382	12,604	8,854	2,019
Depreciation, capital adjust	-1,836	-2,557	-7,126	-753
Other Capital Assets				
Ending inventory	68,752	99,615	54,358	110,476
Capital sales	962	334	336	2,090
Beginning inventory	66,495	98,832	53,097	105,718
Capital purchases	2,370	2,786	1,208	3,229
Depreciation, capital adjust	849	-1,669	390	3,619
Accounts Payable				
Beginning inventory	22,567	60,288	4,970	24,329
Ending inventory	26,957	49,304	9,494	30,030
Inventory change	-4,390	10,984	-4,524	-5,701
Accrued Interest				
Beginning inventory	14,617	22,257	6,850	21,729
Ending inventory	16,850	25,802	7,041	24,187
Inventory change	-2,232	-3,545	-191	-2,459
Total inventory change	-1,984	-49,999	-11,179	57,789
Net operating profit	136,826	674	78,672	415,999

Depreciation
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	127	25	26	26
Net operating profit	136,826	674	78,672	415,999
Machinery and Equipment				
Ending inventory	636,997	718,273	370,898	1,286,731
Capital sales	36,389	30,801	10,934	122,267
Beginning inventory	630,998	737,768	380,953	1,207,355
Capital purchases	101,627	87,747	34,273	315,972
Depreciation, capital adjust.	-59,239	-76,440	-33,393	-114,329
Titled Vehicles				
Ending inventory	53,651	47,477	29,877	115,907
Capital sales	2,279	4,031	769	2,432
Beginning inventory	52,823	51,140	32,025	110,532
Capital purchases	9,108	5,720	1,486	20,699
Depreciation, capital adjust.	-6,001	-5,352	-2,865	-12,891
Buildings and Improvements				
Ending inventory	148,934	138,772	78,733	360,806
Capital sales	-	-	-	-
Beginning inventory	144,999	141,992	80,219	348,685
Capital purchases	7,566	534	173	20,897
Depreciation, capital adjust.	-3,630	-3,754	-1,659	-8,776
Total depreciation, capital adj.	-68,871	-85,546	-37,918	-135,997
Net farm income from operations	67,955	-84,871	40,755	280,002
Gain or loss on capital sales	3,095	-4,380	-4,086	12,356
Net farm income	71,050	-89,252	36,668	292,358

Profitability Measures
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	127	25	26	26
Profitability (assets valued at cost)				
Net farm income from operations	67,955	-84,871	40,755	280,002
Rate of return on assets	2.3 %	-4.0 %	1.8 %	5.8 %
Rate of return on equity	0.7 %	-14.0 %	0.0 %	6.5 %
Operating profit margin	6.5 %	-12.4 %	5.8 %	16.1 %
Asset turnover rate	35.8 %	32.4 %	31.3 %	35.8 %
Farm interest expense	38,438	57,437	22,449	49,843
Value of operator lbr and mgmt.	59,423	56,688	40,885	99,408
Return on farm assets	46,970	-84,123	22,319	230,437
Average farm assets	2,015,923	2,086,804	1,222,932	4,001,667
Return on farm equity	8,532	-141,560	-131	180,594
Average farm equity	1,207,049	1,008,737	789,209	2,766,124
Value of farm production	721,281	676,082	383,153	1,431,776

Liquidity & Repayment Capacity Measures
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	127	25	26	26
Liquidity				
Current ratio	1.59	1.01	1.76	2.14
Working capital	231,735	7,739	126,341	707,712
Working capital to gross inc	31.9 %	1.1 %	32.5 %	49.2 %
Current assets	622,450	579,441	291,917	1,328,442
Current liabilities	390,715	571,702	165,575	620,730
Gross revenues (accrual)	727,384	681,195	388,397	1,438,810
Repayment capacity				
Net farm income from operations	67,955	-84,871	40,755	280,002
Depreciation	68,871	85,546	37,918	135,997
Personal income	38,984	33,073	29,641	64,097
Family living/owner withdrawals	-71,345	-69,469	-53,017	-102,859
Cash discrepancy	3	-106	-125	519
Payments on personal debt	-4,786	-4,987	-5,725	-5,558
Income taxes paid	-15,465	-13,026	-11,225	-36,805
Interest on term debt	20,505	27,748	13,336	28,198
Capital debt repayment capacity	104,722	-26,093	51,558	363,590
Scheduled term debt payments	-85,285	-94,650	-54,154	-134,523
Capital debt repayment margin	19,438	-120,743	-2,596	229,067
Cash replacement allowance	-31,352	-36,054	-17,545	-67,179
Replacement margin	-11,914	-156,797	-20,142	161,888
Term debt coverage ratio	1.23	-0.28	0.95	2.70
Replacement coverage ratio	0.90	-0.20	0.72	1.80

Balance Sheet at Cost Values
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	127	25	26	26
Assets				
Current Farm Assets				
Cash and checking balance	54,926	39,896	27,152	116,892
Prepaid expenses & supplies	49,744	24,595	16,964	156,001
Growing crops	260	-	130	462
Accounts receivable	59,871	84,996	25,102	102,886
Hedging accounts	5,009	6,618	1,138	15,418
Crops held for sale or feed	419,206	401,483	182,272	891,376
Market livestock held for sale	32,345	19,473	39,142	44,415
Other current assets	1,089	2,381	17	993
Total current farm assets	622,450	579,441	291,917	1,328,442
Intermediate Farm Assets				
Breeding livestock	72,772	49,526	73,020	65,048
Machinery and equipment	636,997	718,273	370,898	1,286,731
Titled vehicles	53,651	47,477	29,877	115,907
Other intermediate assets	41,613	61,230	43,013	41,139
Total intermediate farm assets	805,033	876,506	516,808	1,508,825
Long Term Farm Assets				
Farm land	451,174	450,492	346,824	879,872
Buildings and improvements	148,934	138,772	78,733	360,806
Other long-term assets	27,139	38,386	11,345	69,337
Total long-term farm assets	627,246	627,650	436,902	1,310,015
Total Farm Assets	2,054,729	2,083,597	1,245,627	4,147,282
Total Nonfarm Assets	371,602	329,238	241,720	758,656
Total Assets	2,426,332	2,412,835	1,487,347	4,905,938
Liabilities				
Current Farm Liabilities				
Accrued interest	16,850	25,802	7,041	24,187
Accounts payable	26,957	49,304	9,494	30,030
Current notes	283,098	429,006	111,331	463,909
Principal due on term debt	63,811	67,590	37,709	102,604
Total current farm liabilities	390,715	571,702	165,575	620,730
Total intermediate farm liabs	170,493	201,039	104,326	294,590
Total long term farm liabilities	275,531	369,184	191,263	358,804
Total farm liabilities	836,739	1,141,926	461,164	1,274,124
Total nonfarm liabilities	75,082	79,830	64,322	107,351
Total liabilities	911,821	1,221,756	525,486	1,381,476
Net worth (farm and nonfarm)	1,514,511	1,191,079	961,861	3,524,462
Net worth change	44,332	-120,032	9,240	274,757
Percent net worth change	3 %	-9 %	1 %	8 %
Ratio Analysis				
Current farm liabilities / assets	63 %	99 %	57 %	47 %
Intermediate farm liab. / assets	21 %	23 %	20 %	20 %
Long term farm liab. / assets	44 %	59 %	44 %	27 %
Total debt to asset ratio	38 %	51 %	35 %	28 %

Statement Of Cash Flows
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	127	25	26	26
Beginning cash (farm & nonfarm)	76,415	50,583	33,078	188,633
Cash Provided By Operating Activities				
Gross cash farm income	717,325	724,808	384,063	1,382,536
Total cash farm expense	-578,514	-674,135	-294,212	-1,024,327
Net cash from hedging transactions	1,262	2,608	3,077	-266
Cash provided by operating	140,073	53,281	92,928	357,944
Cash Provided By Investing Activities				
Sale of breeding livestock	1,207	2,260	1,323	2,166
Sale of machinery & equipment	36,730	27,637	6,714	131,746
Sale of titled vehicles	2,118	3,095	904	2,441
Sale of farm land	5,390	9,195	-	3,462
Sale of farm buildings	-	-	-	-
Sale of other farm assets	962	334	336	2,090
Sale of nonfarm assets	11,572	8,401	535	11,456
Purchase of breeding livestock	-7,382	-12,604	-8,854	-2,019
Purchase of machinery & equip.	-101,627	-87,747	-34,273	-315,972
Purchase of titled vehicles	-9,108	-5,720	-1,486	-20,699
Purchase of farm land	-63,112	-81,750	-61,808	-152,392
Purchase of farm buildings	-7,566	-534	-173	-20,897
Purchase of other farm assets	-2,370	-2,786	-1,208	-3,229
Purchase of nonfarm assets	-19,723	-6,778	-5,758	-37,056
Cash provided by investing	-152,908	-146,998	-103,748	-398,904
Cash Provided By Financing Activities				
Money borrowed	688,579	925,541	379,247	1,266,669
Principal payments	-642,602	-793,417	-331,354	-1,205,191
Personal income	38,984	33,073	29,641	64,097
Family living/owner withdrawals	-71,345	-69,469	-53,017	-102,859
Income and social security tax	-14,937	-12,120	-13,174	-34,748
Capital contributions	182	-	-	891
Capital distributions	-47	-218	-19	-
Dividends paid	-	-	-	-
Cash gifts and inheritances	13,240	4,491	932	51,067
Gifts given	-1,615	-	-2,294	-4,132
Other cash flows	-	-	-	-
Cash provided by financing	10,440	87,881	9,962	35,795
Net change in cash balance	-2,396	-5,835	-857	-5,166
Ending cash (farm & nonfarm)	74,021	44,643	32,095	183,986
Discrepancy	-3	106	125	-519

Financial Standards Measures
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	127	25	26	26
Liquidity				
Current ratio	1.59	1.01	1.76	2.14
Working capital	231,735	7,739	126,341	707,712
Working capital to gross inc	31.9 %	1.1 %	32.5 %	49.2 %
Solvency (cost)				
Farm debt to asset ratio	41 %	55 %	37 %	31 %
Farm equity to asset ratio	59 %	45 %	63 %	69 %
Farm debt to equity ratio	0.69	1.21	0.59	0.44
Profitability (cost)				
Rate of return on farm assets	2.3 %	-4.0 %	1.8 %	5.8 %
Rate of return on farm equity	0.7 %	-14.0 %	0.0 %	6.5 %
Operating profit margin	6.5 %	-12.4 %	5.8 %	16.1 %
Net farm income	71,050	-89,252	36,668	292,358
EBITDA	175,264	58,111	101,122	465,842
Repayment Capacity				
Capital debt repayment capacity	104,722	-26,093	51,558	363,590
Capital debt repayment margin	19,438	-120,743	-2,596	229,067
Replacement margin	-11,914	-156,797	-20,142	161,888
Term debt coverage ratio	1.23	-0.28	0.95	2.70
Replacement coverage ratio	0.90	-0.20	0.72	1.80
Efficiency				
Asset turnover rate (cost)	35.8 %	32.4 %	31.3 %	35.8 %
Operating expense ratio	75.9 %	91.5 %	74.0 %	67.6 %
Depreciation expense ratio	9.5 %	12.6 %	9.8 %	9.5 %
Interest expense ratio	5.3 %	8.4 %	5.8 %	3.5 %
Net farm income ratio	9.3 %	-12.5 %	10.5 %	19.5 %

Crop Production and Marketing Summary
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	127	25	26	26
Acreage Summary				
Total acres owned	739	581	636	1,324
Total crop acres	2,185	2,238	1,205	3,887
Crop acres owned	465	482	405	710
Crop acres cash rented	1,588	1,577	775	2,967
Crop acres share rented	132	179	26	209
Total pasture acres	331	202	356	302
Percent crop acres owned	21 %	22 %	34 %	18 %
Mach invest/crop acre cost	313	347	338	350
Average Price Received (Cash Sales Only)				
Wheat, Spring per bushel	4.85	4.63	4.81	5.06
Soybeans per bushel	8.02	7.80	7.95	8.20
Canola per cwt	14.98	13.63	13.97	15.72
Barley per bushel	4.16	3.56	4.19	4.26
Corn per bushel	3.23	3.05	3.15	3.36
Beans, Pinto per cwt	23.30	-	-	-
Peas, Field per bushel	6.20	-	-	-
Sunflowers per cwt	17.79	-	-	-
Flax per bushel	9.99	-	-	-
Wheat, Durum per bushel	5.14	-	-	-
Average Yield Per Acre				
Wheat, Spring (bushel)	56.42	50.07	51.53	60.17
Soybeans (bushel)	28.91	27.69	23.37	30.96
Canola (cwt)	19.04	18.32	19.14	19.54
Barley (bushel)	78.57	69.89	60.35	82.03
Corn (bushel)	118.76	-	115.50	114.39
Hay, Small Grain (ton)	2.16	-	2.07	2.30
Hay, Mixed Alfalfa/Grass (ton)	1.10	-	-	0.784
Flax (bushel)	22.08	-	-	20.66
Hay, Grass (ton)	1.43	-	-	-
Peas, Field (bushel)	46.03	-	-	46.47
Sunflowers (cwt)	13.92	-	-	13.68
Beans, Pinto (cwt)	16.41	-	-	-
Hay, Alfalfa (ton)	1.72	-	-	1.67
Corn Silage (ton)	14.13	-	-	-
Beans, Black Turtle (cwt)	16.61	-	-	16.61
Hay, Summer Annual Grass (ton)	2.07	-	-	-
Beans, Navy (cwt)	19.09	-	-	-
Wheat, Durum (bushel)	53.73	-	-	53.73

Household and Personal Expenses
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	63	9	16	8
Average family size	2.8	2.9	2.7	2.9
Family Living Expenses				
Food and meals expense	8,412	7,945	6,913	10,989
Medical care	3,948	5,362	2,889	2,817
Health insurance	8,291	12,932	6,694	11,243
Cash donations	2,183	1,973	1,900	7,358
Household supplies	6,262	6,641	6,256	8,195
Clothing	2,051	1,874	2,009	2,213
Personal care	5,837	6,112	6,842	5,586
Child / Dependent care	817	821	1,550	-
Alimony and child support	107	-	422	-
Gifts	1,635	2,691	1,109	2,267
Education	737	816	459	684
Recreation	5,120	4,193	4,175	7,920
Utilities (household share)	4,229	4,139	3,649	5,849
Personal vehicle operating exp	3,382	3,807	2,806	2,749
Household real estate taxes	461	174	858	1,062
Dwelling rent	95	-	-	-
Household repairs	2,400	788	2,981	2,882
Personal interest	1,948	2,970	2,431	248
Disability / Long term care ins	102	-	-	807
Life insurance payments	2,712	3,929	2,463	4,541
Personal property insurance	789	827	809	1,107
Miscellaneous	6,012	9,519	7,254	5,050
Total cash family living expense	67,530	77,511	64,470	83,567
Family living from the farm	34	-	31	107
Total family living	67,564	77,511	64,501	83,674
Other Nonfarm Expenditures				
Income taxes	15,743	8,333	20,120	48,392
Furnishing & appliance purchases	67	-	-	-
Nonfarm vehicle purchases	3,338	6,012	1,847	5,779
Nonfarm real estate purchases	-4,409	-	4,283	-
Other nonfarm capital purchases	1,098	-	-507	52
Nonfarm savings & investments	-491	621	2,147	16,013
Total other nonfarm expenditures	15,345	14,966	27,889	70,236
Total cash family living investment & nonfarm capital purch	82,876	92,477	92,358	153,803

Operator and Labor Information
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	127	25	26	26
Operator Information				
Average number of operators	1.1	1.1	1.0	1.5
Average age of operators	44.9	48.5	43.0	46.0
Average number of years farming	20.4	25.3	18.3	21.1
Results Per Operator				
Working capital	207,256	7,166	126,341	484,224
Total assets (cost)	2,170,029	2,234,106	1,487,347	3,356,694
Total liabilities	815,502	1,131,256	525,486	945,220
Net worth (cost)	1,354,527	1,102,851	961,861	2,411,474
Gross farm income	650,547	630,736	388,397	984,449
Total farm expense	589,771	709,321	347,643	792,869
Net farm income from operations	60,777	-78,585	40,755	191,580
Net nonfarm income	34,866	30,623	29,641	43,856
Family living & tax withdrawals	77,637	76,482	64,367	95,204
Total acres owned	660.9	537.5	635.8	906.0
Total crop acres	1,953.9	2,072.2	1,205.2	2,659.7
Crop acres owned	415.5	446.7	404.5	486.1
Crop acres cash rented	1,420.2	1,460.1	774.7	2,030.4
Crop acres share rented	118.1	165.3	26.0	143.2
Total pasture acres	295.8	187.3	356.4	206.6
Labor Analysis				
Number of farms	127	25	26	26
Total unpaid labor hours	2,255	2,100	2,037	2,988
Total hired labor hours	781	1,145	432	1,403
Total labor hours per farm	3,036	3,245	2,468	4,391
Unpaid hours per operator	2,017	1,944	2,037	2,045

Nonfarm Summary
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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	127	25	26	26
Nonfarm Income				
Personal wages & salary	22,894	25,574	19,330	19,909
Net nonfarm business income	4,949	2,273	4,285	14,494
Personal rental income	2,690	1,238	1,396	9,939
Personal interest income	426	187	40	1,625
Personal cash dividends	12	38	25	-
Tax refunds	1,434	2,201	409	1,631
Other nonfarm income	6,579	1,562	4,156	16,498
Total nonfarm income	38,984	33,073	29,641	64,097
Gifts and inheritances	13,240	4,491	932	51,067

Financial Summary
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Gross Farm Income)

	<u>Avg. Of All Farms</u>	<u>Less than 100,000</u>	<u>100,001 - 250,000</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	127	12	19	20	50	22
Income Statement						
Gross cash farm income	717,325	55,855	191,240	384,546	694,507	1,499,176
Total cash farm expense	578,514	50,062	164,970	337,885	568,543	1,158,697
Net cash farm income	138,811	5,792	26,271	46,662	125,963	340,479
Inventory change	-1,984	1,338	-484	34,155	3,895	-23,651
Depreciation	-68,871	-4,336	-14,673	-27,079	-71,896	-154,766
Net farm income from operations	67,955	2,794	11,113	53,737	57,962	162,062
Gain or loss on capital sales	3,095	-	98	4,930	421	11,814
Average net farm income	71,050	2,794	11,211	58,668	58,383	173,876
Median net farm income	36,436	6,676	1,765	66,480	42,155	200,286
Profitability (cost)						
Rate of return on assets	2.3 %	-2.4 %	-0.9 %	3.4 %	1.9 %	3.3 %
Rate of return on equity	0.7 %	-12.0 %	-6.7 %	1.9 %	-0.1 %	2.4 %
Operating profit margin	6.5 %	-10.0 %	-2.8 %	7.9 %	5.6 %	8.8 %
Asset turnover rate	35.8 %	24.5 %	31.0 %	43.3 %	33.3 %	36.9 %
Liquidity & Repayment (end of year)						
Current assets	622,450	58,947	151,896	253,739	629,213	1,228,168
Current liabilities	390,715	48,052	88,838	159,384	402,818	720,727
Current ratio	1.59	1.23	1.71	1.59	1.56	1.70
Working capital	231,735	10,895	63,057	94,354	226,395	507,441
Change in working capital	-22,678	3,790	-10,226	19,244	-27,234	-50,669
Working capital to gross inc	31.9 %	18.2 %	33.2 %	22.9 %	31.4 %	34.3 %
Term debt coverage ratio	1.23	0.81	0.44	1.21	0.96	1.85
Replacement coverage ratio	0.90	0.77	0.38	0.97	0.71	1.24
Term debt to EBITDA	2.35	6.25	4.84	3.01	2.65	1.67
Solvency (end of year at cost)						
Number of farms	127	12	19	20	50	22
Total assets	2,426,332	296,422	714,179	1,187,499	2,538,086	4,919,744
Total liabilities	911,821	169,718	342,203	562,458	932,195	1,642,087
Net worth	1,514,511	126,704	371,976	625,041	1,605,891	3,277,657
Net worth change	44,332	11,636	6,499	37,097	8,329	180,608
Farm debt to asset ratio	41 %	59 %	52 %	52 %	39 %	37 %
Total debt to asset ratio	38 %	57 %	48 %	47 %	37 %	33 %
Change in earned net worth %	3 %	10 %	2 %	6 %	1 %	6 %
Nonfarm Information						
Net nonfarm income	38,984	33,589	29,324	33,061	34,619	62,684
Farms reporting living expenses	63	7	9	12	30	5
Total family living expense	67,564	34,251	50,656	65,093	76,853	94,837
Crop Acres						
Total crop acres	2,185	261	741	1,433	2,185	4,154
Total crop acres owned	465	75	191	306	601	618
Total crop acres cash rented	1,588	186	507	1,001	1,430	3,347
Total crop acres share rented	132	-	43	125	154	189
Machinery value per crop acre	313	128	175	223	334	341

Financial Summary
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Age of Operator)

	<u>Avg. Of All Farms</u>	<u>Less Than 31</u>	<u>31 - 40</u>	<u>41 - 50</u>	<u>51 - 60</u>	<u>Over 60</u>
Number of farms	127	23	25	25	27	27
Income Statement						
Gross cash farm income	717,325	257,223	583,998	993,393	733,205	961,214
Total cash farm expense	578,514	217,329	472,746	849,033	566,398	745,760
Net cash farm income	138,811	39,895	111,252	144,360	166,808	215,454
Inventory change	-1,984	28,267	14,889	31,858	-45,768	-30,930
Depreciation	-68,871	-14,699	-69,621	-81,643	-75,344	-96,024
Net farm income from operations	67,955	53,462	56,520	94,574	45,697	88,500
Gain or loss on capital sales	3,095	-181	7,698	498	7,012	110
Average net farm income	71,050	53,281	64,218	95,073	52,708	88,610
Median net farm income	36,436	26,536	48,464	26,768	17,997	77,516
Profitability (cost)						
Rate of return on assets	2.3 %	6.4 %	2.2 %	3.1 %	1.6 %	1.8 %
Rate of return on equity	0.7 %	9.0 %	0.4 %	1.5 %	-1.1 %	0.7 %
Operating profit margin	6.5 %	10.1 %	5.7 %	7.6 %	4.8 %	6.2 %
Asset turnover rate	35.8 %	63.2 %	39.1 %	40.7 %	32.7 %	29.4 %
Liquidity & Repayment (end of year)						
Current assets	622,450	186,079	418,394	886,312	537,880	1,023,366
Current liabilities	390,715	130,640	292,707	538,739	355,052	601,613
Current ratio	1.59	1.42	1.43	1.65	1.51	1.70
Working capital	231,735	55,439	125,687	347,573	182,828	421,753
Change in working capital	-22,678	-247	-18,834	-12,191	-45,494	-32,239
Working capital to gross inc	31.9 %	19.2 %	20.9 %	33.3 %	25.9 %	44.5 %
Term debt coverage ratio	1.23	1.73	1.48	1.50	0.74	1.19
Replacement coverage ratio	0.90	1.64	1.15	1.04	0.61	0.75
Term debt to EBITDA	2.35	1.78	2.41	2.75	3.00	1.63
Solvency (end of year at cost)						
Number of farms	127	23	25	25	27	27
Total assets	2,426,332	560,837	1,840,131	3,248,556	2,470,469	3,752,778
Total liabilities	911,821	318,400	867,643	1,294,381	994,814	1,021,018
Net worth	1,514,511	242,438	972,488	1,954,176	1,475,655	2,731,760
Net worth change	44,332	45,504	39,124	119,348	3,987	19,040
Farm debt to asset ratio	41 %	55 %	48 %	45 %	44 %	30 %
Total debt to asset ratio	38 %	57 %	47 %	40 %	40 %	27 %
Change in earned net worth %	3 %	23 %	4 %	7 %	0 %	1 %
Nonfarm Information						
Net nonfarm income	38,984	32,407	29,382	67,232	21,412	44,893
Farms reporting living expenses	63	10	14	9	14	16
Total family living expense	67,564	50,327	61,891	88,679	59,804	78,216
Crop Acres						
Total crop acres	2,185	854	1,876	2,940	2,317	2,772
Total crop acres owned	465	40	259	472	566	909
Total crop acres cash rented	1,588	744	1,303	2,411	1,715	1,681
Total crop acres share rented	132	71	313	57	36	182
Machinery value per crop acre	313	158	311	262	342	381

Financial Summary
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Farm Type)

	<u>Avg. Of All Farms</u>	<u>Crop</u>	<u>Beef</u>	<u>Crop and Beef</u>	<u>Other</u>
Number of farms	127	88	8	11	20
Income Statement					
Gross cash farm income	717,325	852,505	113,266	365,432	557,695
Total cash farm expense	578,514	676,399	86,777	327,258	482,705
Net cash farm income	138,811	176,106	26,489	38,174	74,991
Inventory change	-1,984	3,040	9,402	25,668	-43,855
Depreciation	-68,871	-84,723	-10,734	-28,230	-44,729
Net farm income from operations	67,955	94,422	25,157	35,613	-13,593
Gain or loss on capital sales	3,095	3,077	-	9,900	670
Average net farm income	71,050	97,499	25,157	45,513	-12,923
Median net farm income	36,436	67,043	8,373	18,801	-15,012
Profitability (cost)					
Rate of return on assets	2.3 %	2.8 %	2.7 %	2.0 %	-1.9 %
Rate of return on equity	0.7 %	1.7 %	0.9 %	-0.4 %	-12.4 %
Operating profit margin	6.5 %	7.9 %	16.5 %	7.4 %	-4.4 %
Asset turnover rate	35.8 %	35.9 %	16.2 %	27.6 %	44.3 %
Liquidity & Repayment (end of year)					
Current assets	622,450	768,027	131,174	348,099	329,312
Current liabilities	390,715	454,000	72,567	294,932	292,203
Current ratio	1.59	1.69	1.81	1.18	1.13
Working capital	231,735	314,027	58,607	53,167	37,109
Change in working capital	-22,678	-25,998	-696	10,177	-34,936
Working capital to gross inc	31.9 %	36.2 %	47.4 %	13.5 %	7.0 %
Term debt coverage ratio	1.23	1.42	0.97	0.70	0.32
Replacement coverage ratio	0.90	1.01	0.89	0.64	0.23
Term debt to EBITDA	2.35	1.97	5.27	3.84	5.78
Solvency (end of year at cost)					
Number of farms	127	88	8	11	20
Total assets	2,426,332	2,929,249	752,962	1,533,926	1,373,664
Total liabilities	911,821	1,017,090	343,815	733,910	773,689
Net worth	1,514,511	1,912,159	409,147	800,016	599,975
Net worth change	44,332	65,869	26,862	20,610	-30,400
Farm debt to asset ratio	41 %	38 %	49 %	49 %	60 %
Total debt to asset ratio	38 %	35 %	46 %	48 %	56 %
Change in earned net worth %	3 %	4 %	7 %	3 %	-5 %
Nonfarm Information					
Net nonfarm income	38,984	42,498	26,028	31,190	32,990
Farms reporting living expenses	63	45	5	4	9
Total family living expense	67,564	72,523	36,702	-	54,439
Crop Acres					
Total crop acres	2,185	2,602	476	1,274	1,531
Total crop acres owned	465	497	224	556	367
Total crop acres cash rented	1,588	1,925	252	643	1,159
Total crop acres share rented	132	180	-	75	5
Machinery value per crop acre	313	326	167	258	260

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.

Market Facilitation Payments, a 2019 USDA FSA program for commodities directly impacted by retaliatory tariffs, are included under "Other crop income per acre." "Government payments" are Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC) payments.

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 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Barley on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	11
Acres	186.62
Yield per acre (bu.)	69.34
Operators share of yield %	100.00
Value per bu.	4.13
Total product return per acre	286.30
Crop insurance per acre	13.16
Other crop income per acre	23.62
Gross return per acre	323.08
Direct Expenses	
Seed and plants	16.33
Fertilizer	46.87
Crop chemicals	29.99
Crop insurance	13.66
Fuel & oil	13.32
Repairs	21.81
Custom hire	6.99
Operating interest	6.37
Miscellaneous	2.25
Total direct expenses per acre	157.60
Return over direct exp per acre	165.48
Overhead Expenses	
Custom hire	2.22
Hired labor	10.95
Machinery leases	1.79
Building leases	1.63
RE & pers. property taxes	8.81
Farm insurance	5.23
Utilities	3.38
Dues & professional fees	0.70
Interest	13.61
Mach & bldg depreciation	28.87
Miscellaneous	2.63
Total overhead expenses per acre	79.83
Total dir & ovhd expenses per acre	237.43
Net return per acre	85.65
Government payments	15.71
Net return with govt pmts	101.36
Labor & management charge	22.99
Net return over lbr & mgt	78.37
Cost of Production	
Total direct expense per bu.	2.27
Total dir & ovhd exp per bu.	3.42
Less govt & other income	2.67
With labor & management	3.00
Net value per unit	4.13
Machinery cost per acre	75.50
Est. labor hours per acre	1.37

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Barley on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	21
Acres	241.33
Yield per acre (bu.)	77.59
Operators share of yield %	100.00
Value per bu.	3.98
Total product return per acre	308.57
Crop insurance per acre	8.88
Other crop income per acre	29.20
Gross return per acre	346.65
Direct Expenses	
Seed and plants	15.97
Fertilizer	46.55
Crop chemicals	30.46
Crop insurance	12.35
Fuel & oil	11.78
Repairs	27.63
Custom hire	1.54
Land rent	53.37
Operating interest	6.42
Miscellaneous	1.76
Total direct expenses per acre	207.83
Return over direct exp per acre	138.82
Overhead Expenses	
Custom hire	0.24
Hired labor	8.72
Machinery leases	2.43
Building leases	0.76
Farm insurance	4.38
Utilities	3.23
Dues & professional fees	1.07
Interest	4.95
Mach & bldg depreciation	25.43
Miscellaneous	4.12
Total overhead expenses per acre	55.32
Total dir & ovhd expenses per acre	263.15
Net return per acre	83.50
Government payments	13.32
Net return with govt pmts	96.82
Labor & management charge	26.81
Net return over lbr & mgt	70.01
Cost of Production	
Total direct expense per bu.	2.68
Total dir & ovhd exp per bu.	3.39
Less govt & other income	2.73
With labor & management	3.07
Net value per unit	3.98
Machinery cost per acre	72.56
Est. labor hours per acre	1.41

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Canola on Owned Land

	Avg. Of All Farms
Number of farms	21
Acres	231.02
Yield per acre (cwt.)	18.34
Operators share of yield %	100.00
Value per cwt.	14.76
Total product return per acre	270.64
Crop insurance per acre	17.22
Other crop income per acre	27.77
Gross return per acre	315.63
Direct Expenses	
Seed and plants	53.76
Fertilizer	66.03
Crop chemicals	29.01
Crop insurance	13.43
Fuel & oil	12.54
Repairs	23.94
Custom hire	4.44
Operating interest	6.17
Miscellaneous	0.65
Total direct expenses per acre	209.97
Return over direct exp per acre	105.65
Overhead Expenses	
Custom hire	0.62
Hired labor	8.23
Machinery leases	1.16
Building leases	0.70
RE & pers. property taxes	9.58
Farm insurance	5.26
Utilities	3.73
Dues & professional fees	1.33
Interest	15.94
Mach & bldg depreciation	26.55
Miscellaneous	2.49
Total overhead expenses per acre	75.59
Total dir & ovhd expenses per acre	285.56
Net return per acre	30.07
Government payments	17.26
Net return with govt pmts	47.32
Labor & management charge	26.36
Net return over lbr & mgt	20.96
Cost of Production	
Total direct expense per cwt.	11.45
Total dir & ovhd exp per cwt.	15.57
Less govt & other income	12.18
With labor & management	13.61
Net value per unit	14.76
Machinery cost per acre	69.72
Est. labor hours per acre	1.37

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Canola on Cash Rent

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	38	7	7	8
Acres	462.31	231.86	335.87	728.87
Yield per acre (cwt.)	18.62	16.16	20.03	21.91
Operators share of yield %	100.00	100.00	100.00	100.00
Value per cwt.	14.93	14.29	14.63	15.20
Total product return per acre	277.91	230.84	292.95	333.10
Hedging gains/losses per acre	0.00	-	-	-
Crop insurance per acre	23.23	27.61	3.21	19.99
Other crop income per acre	27.86	30.89	24.62	25.37
Gross return per acre	329.00	289.35	320.78	378.46
Direct Expenses				
Seed and plants	54.61	66.53	56.10	49.08
Fertilizer	64.94	86.77	67.53	58.51
Crop chemicals	32.19	31.90	27.66	34.06
Crop insurance	14.43	21.66	11.40	15.55
Fuel & oil	11.69	9.10	13.84	12.24
Repairs	25.03	36.25	28.03	25.18
Custom hire	3.14	9.08	5.26	2.51
Land rent	49.39	47.72	50.71	48.66
Operating interest	6.23	13.23	7.23	4.60
Miscellaneous	2.20	2.81	0.95	1.99
Total direct expenses per acre	263.86	325.04	268.70	252.38
Return over direct exp per acre	65.14	-35.69	52.08	126.07
Overhead Expenses				
Custom hire	0.61	0.13	0.53	0.53
Hired labor	7.19	7.30	12.91	7.80
Machinery leases	4.52	6.41	0.93	5.34
Building leases	0.65	0.44	1.13	0.19
Farm insurance	4.00	4.87	4.77	3.78
Utilities	3.16	2.68	2.59	3.81
Dues & professional fees	0.97	1.13	2.72	0.84
Interest	2.76	3.25	2.51	2.54
Mach & bldg depreciation	26.33	35.88	18.34	28.12
Miscellaneous	2.63	2.67	2.38	3.12
Total overhead expenses per acre	52.82	64.75	48.81	56.07
Total dir & ovhd expenses per acre	316.68	389.80	317.51	308.46
Net return per acre	12.32	-100.44	3.27	70.00
Government payments	14.95	19.32	15.41	14.02
Net return with govt pmts	27.27	-81.12	18.68	84.03
Labor & management charge	26.21	22.59	21.51	26.83
Net return over lbr & mgt	1.06	-103.71	-2.83	57.19
Cost of Production				
Total direct expense per cwt.	14.17	20.11	13.41	11.52
Total dir & ovhd exp per cwt.	17.01	24.12	15.85	14.08
Less govt & other income	13.46	19.31	13.69	11.37
With labor & management	14.87	20.70	14.77	12.59
Net value per unit	14.93	14.29	14.63	15.20
Machinery cost per acre	72.93	98.25	68.12	74.84
Est. labor hours per acre	1.27	1.20	1.48	1.24

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Corn on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	13
Acres	168.83
Yield per acre (bu.)	117.73
Operators share of yield %	100.00
Value per bu.	3.13
Other product return per acre	0.91
Total product return per acre	369.67
Hedging gains/losses per acre	18.11
Other crop income per acre	28.98
Gross return per acre	416.77
Direct Expenses	
Seed and plants	85.31
Fertilizer	77.21
Crop chemicals	26.48
Crop insurance	12.77
Drying expense	1.97
Fuel & oil	20.50
Repairs	33.33
Custom hire	0.57
Operating interest	10.30
Miscellaneous	0.04
Total direct expenses per acre	268.50
Return over direct exp per acre	148.27
Overhead Expenses	
Custom hire	0.37
Hired labor	27.76
Machinery leases	4.24
Building leases	1.03
RE & pers. property taxes	10.13
Farm insurance	7.08
Utilities	5.33
Dues & professional fees	1.99
Interest	23.39
Mach & bldg depreciation	48.92
Miscellaneous	2.10
Total overhead expenses per acre	132.33
Total dir & ovhd expenses per acre	400.84
Net return per acre	15.93
Government payments	17.45
Net return with govt pmts	33.39
Labor & management charge	38.10
Net return over lbr & mgt	-4.71
Cost of Production	
Total direct expense per bu.	2.28
Total dir & ovhd exp per bu.	3.40
Less govt & other income	2.85
With labor & management	3.17
Net value per unit	3.29
Machinery cost per acre	108.77
Est. labor hours per acre	2.39

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Corn on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	19
Acres	353.60
Yield per acre (bu.)	111.06
Operators share of yield %	100.00
Value per bu.	3.18
Other product return per acre	0.30
Total product return per acre	353.39
Hedging gains/losses per acre	0.63
Crop insurance per acre	18.31
Other crop income per acre	36.01
Gross return per acre	408.33
Direct Expenses	
Seed and plants	83.49
Fertilizer	79.10
Crop chemicals	32.28
Crop insurance	17.16
Drying expense	8.29
Fuel & oil	19.93
Repairs	43.01
Custom hire	0.69
Land rent	63.17
Operating interest	11.83
Miscellaneous	1.50
Total direct expenses per acre	360.46
Return over direct exp per acre	47.88
Overhead Expenses	
Custom hire	0.72
Hired labor	15.95
Machinery leases	9.49
Building leases	1.23
Farm insurance	5.86
Utilities	5.76
Dues & professional fees	2.99
Interest	4.28
Mach & bldg depreciation	43.99
Miscellaneous	3.38
Total overhead expenses per acre	93.66
Total dir & ovhd expenses per acre	454.12
Net return per acre	-45.78
Government payments	10.18
Net return with govt pmts	-35.60
Labor & management charge	37.50
Net return over lbr & mgt	-73.10
Cost of Production	
Total direct expense per bu.	3.25
Total dir & ovhd exp per bu.	4.09
Less govt & other income	3.50
With labor & management	3.84
Net value per unit	3.18
Machinery cost per acre	119.06
Est. labor hours per acre	2.01

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Corn Silage on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	5
Acres	101.88
Yield per acre (ton)	11.84
Operators share of yield %	100.00
Value per ton	30.07
Other product return per acre	28.27
Total product return per acre	384.31
Crop insurance per acre	9.61
Other crop income per acre	22.01
Gross return per acre	415.93
Direct Expenses	
Seed and plants	74.27
Fertilizer	45.01
Crop chemicals	14.59
Crop insurance	15.95
Fuel & oil	17.87
Repairs	42.57
Custom hire	48.71
Operating interest	9.40
Miscellaneous	0.05
Total direct expenses per acre	268.42
Return over direct exp per acre	147.51
Overhead Expenses	
Custom hire	1.48
Hired labor	4.46
Machinery leases	0.80
RE & pers. property taxes	5.08
Farm insurance	3.01
Utilities	3.15
Dues & professional fees	1.30
Interest	16.87
Mach & bldg depreciation	34.36
Miscellaneous	0.84
Total overhead expenses per acre	71.35
Total dir & ovhd expenses per acre	339.77
Net return per acre	76.17
Government payments	3.27
Net return with govt pmts	79.43
Labor & management charge	27.71
Net return over lbr & mgt	51.72
Cost of Production	
Total direct expense per ton	22.67
Total dir & ovhd exp per ton	28.70
Less govt & other income	23.36
With labor & management	25.70
Net value per unit	30.07
Machinery cost per acre	147.30
Est. labor hours per acre	3.34

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Flax on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	264.98
Yield per acre (bu.)	19.34
Operators share of yield %	100.00
Value per bu.	9.53
Total product return per acre	184.18
Crop insurance per acre	46.98
Other crop income per acre	14.58
Gross return per acre	245.75
Direct Expenses	
Seed and plants	14.06
Fertilizer	33.44
Crop chemicals	23.46
Crop insurance	14.73
Fuel & oil	11.16
Repairs	20.23
Custom hire	2.26
Land rent	48.31
Operating interest	3.38
Miscellaneous	0.04
Total direct expenses per acre	171.07
Return over direct exp per acre	74.67
Overhead Expenses	
Custom hire	0.14
Hired labor	10.55
Machinery leases	0.66
Building leases	0.30
Farm insurance	3.49
Utilities	2.85
Dues & professional fees	1.69
Interest	2.08
Mach & bldg depreciation	26.36
Miscellaneous	4.03
Total overhead expenses per acre	52.16
Total dir & ovhd expenses per acre	223.23
Net return per acre	22.52
Government payments	15.41
Net return with govt pmts	37.93
Labor & management charge	23.75
Net return over lbr & mgt	14.18
Cost of Production	
Total direct expense per bu.	8.85
Total dir & ovhd exp per bu.	11.55
Less govt & other income	7.56
With labor & management	8.79
Net value per unit	9.53
Machinery cost per acre	60.92
Est. labor hours per acre	1.26

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Hay, Alfalfa on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	101.12
Yield per acre (ton)	1.65
Operators share of yield %	100.00
Value per ton	66.25
Total product return per acre	109.28
Other crop income per acre	7.69
Gross return per acre	116.97
Direct Expenses	
Fuel & oil	8.50
Repairs	11.73
Operating interest	6.64
Total direct expenses per acre	26.88
Return over direct exp per acre	90.08
Overhead Expenses	
Custom hire	0.31
Hired labor	2.07
Building leases	0.05
RE & pers. property taxes	3.98
Farm insurance	4.13
Utilities	3.73
Dues & professional fees	1.32
Interest	8.26
Mach & bldg depreciation	11.53
Miscellaneous	1.14
Total overhead expenses per acre	36.53
Total dir & ovhd expenses per acre	63.41
Net return per acre	53.55
Government payments	0.30
Net return with govt pmts	53.85
Labor & management charge	15.10
Net return over lbr & mgt	38.75
Cost of Production	
Total direct expense per ton	16.30
Total dir & ovhd exp per ton	38.45
Less govt & other income	33.61
With labor & management	42.76
Net value per unit	66.25
Machinery cost per acre	35.26
Est. labor hours per acre	1.51

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Hay, Grass on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	143.67
Yield per acre (ton)	1.38
Operators share of yield %	100.00
Value per ton	43.62
Total product return per acre	60.00
Gross return per acre	60.00
Direct Expenses	
Fuel & oil	5.11
Repairs	8.23
Operating interest	0.78
Total direct expenses per acre	14.12
Return over direct exp per acre	45.88
Overhead Expenses	
Hired labor	1.10
Machinery leases	0.06
RE & pers. property taxes	2.37
Farm insurance	1.25
Utilities	1.41
Dues & professional fees	0.73
Interest	7.25
Mach & bldg depreciation	7.84
Miscellaneous	1.79
Total overhead expenses per acre	23.80
Total dir & ovhd expenses per acre	37.92
Net return per acre	22.08
Government payments	-
Net return with govt pmts	22.08
Labor & management charge	13.92
Net return over lbr & mgt	8.16
Cost of Production	
Total direct expense per ton	10.26
Total dir & ovhd exp per ton	27.56
Less govt & other income	27.56
With labor & management	37.68
Net value per unit	43.62
Machinery cost per acre	22.01
Est. labor hours per acre	1.09

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Hay, Grass on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	115.00
Yield per acre (ton)	1.49
Operators share of yield %	100.00
Value per ton	43.55
Total product return per acre	65.05
Gross return per acre	65.05
Direct Expenses	
Fuel & oil	5.29
Repairs	10.98
Land rent	16.34
Operating interest	1.16
Total direct expenses per acre	33.76
Return over direct exp per acre	31.29
Overhead Expenses	
Hired labor	0.66
Building leases	0.03
Farm insurance	1.11
Utilities	1.39
Dues & professional fees	1.19
Interest	0.59
Mach & bldg depreciation	7.59
Miscellaneous	1.46
Total overhead expenses per acre	14.02
Total dir & ovhd expenses per acre	47.78
Net return per acre	17.27
Government payments	-
Net return with govt pmts	17.27
Labor & management charge	16.34
Net return over lbr & mgt	0.93
Cost of Production	
Total direct expense per ton	22.60
Total dir & ovhd exp per ton	31.99
Less govt & other income	31.99
With labor & management	42.93
Net value per unit	43.55
Machinery cost per acre	24.73
Est. labor hours per acre	1.16

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Hay, Mixed Alfalfa/Grass on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	8
Acres	172.38
Yield per acre (ton)	1.27
Operators share of yield %	100.00
Value per ton	48.21
Total product return per acre	61.47
Other crop income per acre	1.41
Gross return per acre	62.88
Direct Expenses	
Fuel & oil	6.12
Repairs	6.99
Land rent	16.58
Operating interest	3.35
Total direct expenses per acre	33.04
Return over direct exp per acre	29.83
Overhead Expenses	
Hired labor	6.54
Building leases	0.02
Farm insurance	1.36
Utilities	2.33
Dues & professional fees	0.70
Interest	4.08
Mach & bldg depreciation	7.41
Miscellaneous	0.10
Total overhead expenses per acre	22.54
Total dir & ovhd expenses per acre	55.58
Net return per acre	7.29
Government payments	0.17
Net return with govt pmts	7.46
Labor & management charge	13.03
Net return over lbr & mgt	-5.57
Cost of Production	
Total direct expense per ton	25.92
Total dir & ovhd exp per ton	43.60
Less govt & other income	42.36
With labor & management	52.58
Net value per unit	48.21
Machinery cost per acre	24.22
Est. labor hours per acre	0.91

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Hay, Small Grain on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	12
Acres	105.84
Yield per acre (ton)	1.98
Operators share of yield %	100.00
Value per ton	54.12
Total product return per acre	107.21
Crop insurance per acre	1.31
Other crop income per acre	24.03
Gross return per acre	132.54
Direct Expenses	
Seed and plants	10.69
Fertilizer	25.13
Crop chemicals	4.91
Crop insurance	0.60
Fuel & oil	9.89
Repairs	15.25
Custom hire	3.54
Operating interest	3.39
Total direct expenses per acre	73.40
Return over direct exp per acre	59.13
Overhead Expenses	
Custom hire	1.23
Hired labor	4.73
Machinery leases	0.67
Building leases	0.40
RE & pers. property taxes	4.66
Farm insurance	4.28
Utilities	2.55
Dues & professional fees	1.72
Interest	13.71
Mach & bldg depreciation	10.95
Miscellaneous	2.10
Total overhead expenses per acre	47.02
Total dir & ovhd expenses per acre	120.43
Net return per acre	12.11
Government payments	7.26
Net return with govt pmts	19.37
Labor & management charge	15.88
Net return over lbr & mgt	3.49
Cost of Production	
Total direct expense per ton	37.06
Total dir & ovhd exp per ton	60.79
Less govt & other income	44.34
With labor & management	52.36
Net value per unit	54.12
Machinery cost per acre	44.48
Est. labor hours per acre	1.38

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Hay, Small Grain on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	7
Acres	115.29
Yield per acre (ton)	2.28
Operators share of yield %	100.00
Value per ton	50.15
Other product return per acre	4.22
Total product return per acre	118.37
Other crop income per acre	12.36
Gross return per acre	130.73
Direct Expenses	
Seed and plants	19.17
Fertilizer	28.91
Crop chemicals	8.14
Fuel & oil	7.10
Repairs	12.20
Land rent	30.45
Operating interest	4.26
Total direct expenses per acre	110.24
Return over direct exp per acre	20.49
Overhead Expenses	
Hired labor	3.92
Farm insurance	2.56
Utilities	3.27
Dues & professional fees	0.77
Interest	4.05
Mach & bldg depreciation	12.30
Miscellaneous	1.83
Total overhead expenses per acre	28.71
Total dir & ovhd expenses per acre	138.94
Net return per acre	-8.21
Government payments	3.17
Net return with govt pmts	-5.04
Labor & management charge	13.22
Net return over lbr & mgt	-18.26
Cost of Production	
Total direct expense per ton	48.43
Total dir & ovhd exp per ton	61.04
Less govt & other income	52.36
With labor & management	58.17
Net value per unit	50.15
Machinery cost per acre	35.73
Est. labor hours per acre	1.21

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Pasture on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	13
Acres	761.31
Yield per acre (aum)	0.88
Operators share of yield %	100.00
Value per aum	16.00
Total product return per acre	14.10
Crop insurance per acre	0.11
Gross return per acre	14.22
 Direct Expenses	
Crop insurance	0.07
Fuel & oil	0.32
Repairs	0.55
Miscellaneous	0.88
Total direct expenses per acre	1.81
Return over direct exp per acre	12.40
 Overhead Expenses	
RE & pers. property taxes	2.28
Interest	4.64
Mach & bldg depreciation	0.50
Miscellaneous	0.51
Total overhead expenses per acre	7.93
Total dir & ovhd expenses per acre	9.74
Net return per acre	4.47

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Pasture on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	21
Acres	833.71
Yield per acre (aum)	0.80
Operators share of yield %	100.00
Value per aum	18.37
Total product return per acre	14.76
Crop insurance per acre	0.06
Gross return per acre	14.81
Direct Expenses	
Crop insurance	0.39
Repairs	0.64
Land rent	16.38
Miscellaneous	0.92
Total direct expenses per acre	18.33
Return over direct exp per acre	-3.51
Overhead Expenses	
Mach & bldg depreciation	0.51
Miscellaneous	0.75
Total overhead expenses per acre	1.26
Total dir & ovhd expenses per acre	19.59
Net return per acre	-4.77

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Peas, Field on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	8
Acres	359.08
Yield per acre (bu.)	45.07
Operators share of yield %	100.00
Value per bu.	5.80
Total product return per acre	261.56
Crop insurance per acre	5.22
Other crop income per acre	24.76
Gross return per acre	291.54
Direct Expenses	
Seed and plants	30.09
Fertilizer	5.18
Crop chemicals	40.64
Crop insurance	14.13
Fuel & oil	9.93
Repairs	19.62
Custom hire	4.65
Land rent	52.70
Machinery leases	0.57
Operating interest	5.35
Miscellaneous	6.59
Total direct expenses per acre	189.45
Return over direct exp per acre	102.08
Overhead Expenses	
Custom hire	0.94
Hired labor	6.25
Machinery leases	2.39
Building leases	1.73
Farm insurance	3.33
Utilities	1.79
Dues & professional fees	1.03
Interest	4.49
Mach & bldg depreciation	21.22
Miscellaneous	2.39
Total overhead expenses per acre	45.56
Total dir & ovhd expenses per acre	235.01
Net return per acre	56.53
Government payments	13.62
Net return with govt pmts	70.15
Labor & management charge	21.22
Net return over lbr & mgt	48.92
Cost of Production	
Total direct expense per bu.	4.20
Total dir & ovhd exp per bu.	5.21
Less govt & other income	4.25
With labor & management	4.72
Net value per unit	5.80
Machinery cost per acre	60.91
Est. labor hours per acre	0.86

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Soybeans on Owned Land

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	33	6	6	7
Acres	233.88	271.03	237.91	203.63
Yield per acre (bu.)	28.44	21.45	30.51	38.22
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	8.04	8.08	8.04	7.97
Total product return per acre	228.62	173.28	245.16	304.72
Hedging gains/losses per acre	0.26	-	1.40	-
Crop insurance per acre	24.10	38.13	7.44	30.32
Other crop income per acre	34.59	37.57	28.89	24.33
Gross return per acre	287.57	248.97	282.88	359.37
Direct Expenses				
Seed and plants	65.92	64.97	75.00	65.48
Fertilizer	11.14	11.81	6.14	14.94
Crop chemicals	24.53	28.88	26.93	20.29
Crop insurance	13.20	15.81	13.01	13.92
Fuel & oil	12.38	15.11	13.28	7.85
Repairs	22.09	26.60	26.17	15.46
Custom hire	2.50	5.06	-	4.98
Machinery leases	0.25	-	1.05	0.32
Operating interest	7.25	8.09	9.92	1.79
Miscellaneous	1.21	1.00	1.86	1.38
Total direct expenses per acre	160.47	177.34	173.36	146.41
Return over direct exp per acre	127.10	71.64	109.52	212.96
Overhead Expenses				
Custom hire	0.72	0.25	1.44	1.80
Hired labor	6.33	7.09	12.36	4.94
Machinery leases	1.45	0.98	0.02	1.26
Building leases	0.66	0.31	1.40	1.08
RE & pers. property taxes	7.94	8.13	8.93	7.99
Farm insurance	4.89	7.58	3.81	4.34
Utilities	3.50	3.00	3.81	2.94
Dues & professional fees	0.71	0.98	0.62	0.45
Interest	21.89	36.91	14.98	16.55
Mach & bldg depreciation	30.65	34.87	21.34	20.36
Miscellaneous	3.43	3.83	2.34	2.63
Total overhead expenses per acre	82.16	103.93	71.05	64.35
Total dir & ovhd expenses per acre	242.63	281.26	244.42	210.76
Net return per acre	44.94	-32.29	38.46	148.61
Government payments	10.32	9.53	15.47	8.48
Net return with govt pmts	55.25	-22.76	53.93	157.09
Labor & management charge	25.24	25.00	21.61	26.69
Net return over lbr & mgt	30.01	-47.75	32.32	130.40
Cost of Production				
Total direct expense per bu.	5.64	8.27	5.68	3.83
Total dir & ovhd exp per bu.	8.53	13.11	8.01	5.51
Less govt & other income	6.10	9.14	6.27	3.86
With labor & management	6.98	10.30	6.98	4.56
Net value per unit	8.05	8.08	8.08	7.97
Machinery cost per acre	71.17	85.46	67.37	52.70
Est. labor hours per acre	1.37	1.30	1.26	1.78

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Soybeans on Cash Rent

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	56	11	11	12
Acres	624.06	505.10	832.86	471.13
Yield per acre (bu.)	27.51	22.31	23.96	34.68
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	7.97	8.10	7.93	7.85
Other product return per acre	0.17	-	-	-
Total product return per acre	219.42	180.72	190.05	272.09
Hedging gains/losses per acre	0.87	-	-	1.23
Crop insurance per acre	38.52	59.68	64.69	32.64
Other crop income per acre	33.73	35.60	34.00	26.34
Gross return per acre	292.53	276.00	288.73	332.30
Direct Expenses				
Seed and plants	67.77	77.73	69.54	66.43
Fertilizer	9.84	14.53	10.00	14.00
Crop chemicals	27.28	37.57	25.19	19.69
Crop insurance	13.66	18.88	12.86	12.69
Drying expense	0.19	0.61	-	-
Fuel & oil	11.41	11.90	11.57	10.68
Repairs	23.40	32.19	20.89	20.94
Custom hire	2.74	7.41	1.50	1.88
Land rent	54.04	58.93	54.14	50.81
Machinery leases	0.23	0.51	-	0.17
Operating interest	6.44	12.61	5.78	2.74
Miscellaneous	2.87	3.28	2.83	3.06
Total direct expenses per acre	219.87	276.15	214.32	203.08
Return over direct exp per acre	72.66	-0.15	74.42	129.22
Overhead Expenses				
Custom hire	1.22	0.05	0.30	0.63
Hired labor	6.69	7.75	8.52	4.43
Machinery leases	3.95	0.51	8.53	0.39
Building leases	0.62	0.43	0.32	0.41
Farm insurance	4.09	5.46	3.71	3.69
Utilities	3.54	5.25	3.28	2.84
Dues & professional fees	1.40	1.38	0.89	1.32
Interest	3.59	7.22	2.74	2.40
Mach & bldg depreciation	26.76	31.79	24.75	25.10
Miscellaneous	2.85	3.03	1.35	2.28
Total overhead expenses per acre	54.71	62.88	54.39	43.47
Total dir & ovhd expenses per acre	274.58	339.02	268.71	246.55
Net return per acre	17.95	-63.02	20.03	85.75
Government payments	11.63	10.61	9.29	14.91
Net return with govt pmts	29.59	-52.42	29.32	100.66
Labor & management charge	23.13	23.93	21.57	22.57
Net return over lbr & mgt	6.45	-76.35	7.75	78.09
Cost of Production				
Total direct expense per bu.	7.99	12.38	8.94	5.86
Total dir & ovhd exp per bu.	9.98	15.20	11.21	7.11
Less govt & other income	6.89	10.45	6.71	4.94
With labor & management	7.74	11.52	7.61	5.59
Net value per unit	8.00	8.10	7.93	7.88
Machinery cost per acre	71.57	88.49	69.32	60.60
Est. labor hours per acre	1.09	1.21	0.83	1.17

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Soybeans on Share Rent

	<u>Avg. Of All Farms</u>
Number of farms	10
Acres	332.11
Yield per acre (bu.)	33.87
Operators share of yield %	73.04
Value per bu.	7.78
Total product return per acre	192.41
Hedging gains/losses per acre	0.84
Crop insurance per acre	11.90
Other crop income per acre	28.36
Gross return per acre	233.51
Direct Expenses	
Seed and plants	58.75
Fertilizer	8.47
Crop chemicals	27.61
Crop insurance	11.17
Fuel & oil	12.10
Repairs	19.27
Custom hire	3.24
Operating interest	3.34
Miscellaneous	1.33
Total direct expenses per acre	145.28
Return over direct exp per acre	88.23
Overhead Expenses	
Hired labor	3.29
Machinery leases	1.05
Building leases	1.05
Farm insurance	4.16
Utilities	4.28
Dues & professional fees	0.62
Interest	2.81
Mach & bldg depreciation	43.36
Miscellaneous	4.26
Total overhead expenses per acre	64.88
Total dir & ovhd expenses per acre	210.16
Net return per acre	23.35
Government payments	13.76
Net return with govt pmts	37.12
Labor & management charge	21.77
Net return over lbr & mgt	15.35
Cost of Production	
Total direct expense per bu.	5.87
Total dir & ovhd exp per bu.	8.50
Less govt & other income	6.28
With labor & management	7.16
Net value per unit	7.81
Machinery cost per acre	79.90
Est. labor hours per acre	0.77

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Sunflowers on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	7
Acres	179.07
Yield per acre (cwt.)	14.16
Operators share of yield %	100.00
Value per cwt.	17.94
Total product return per acre	254.11
Crop insurance per acre	24.80
Other crop income per acre	33.65
Gross return per acre	312.56
Direct Expenses	
Seed and plants	37.92
Fertilizer	42.56
Crop chemicals	25.75
Crop insurance	11.66
Fuel & oil	13.77
Repairs	25.05
Custom hire	14.09
Land rent	61.89
Operating interest	6.04
Miscellaneous	0.31
Total direct expenses per acre	239.06
Return over direct exp per acre	73.51
Overhead Expenses	
Custom hire	0.98
Hired labor	8.58
Machinery leases	1.68
Building leases	0.31
Farm insurance	4.58
Utilities	6.00
Dues & professional fees	1.74
Interest	2.35
Mach & bldg depreciation	26.74
Miscellaneous	6.29
Total overhead expenses per acre	59.25
Total dir & ovhd expenses per acre	298.31
Net return per acre	14.26
Government payments	11.04
Net return with govt pmts	25.30
Labor & management charge	26.89
Net return over lbr & mgt	-1.59
Cost of Production	
Total direct expense per cwt.	16.88
Total dir & ovhd exp per cwt.	21.06
Less govt & other income	16.15
With labor & management	18.05
Net value per unit	17.94
Machinery cost per acre	82.40
Est. labor hours per acre	1.60

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Wheat, Spring on Owned Land

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	44	8	9	9
Acres	307.49	293.26	338.13	342.13
Yield per acre (bu.)	54.18	43.44	49.03	63.85
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	4.86	4.64	4.88	5.04
Other product return per acre	0.46	0.79	-	1.41
Total product return per acre	263.76	202.32	239.13	323.04
Hedging gains/losses per acre	1.93	9.01	-	1.62
Crop insurance per acre	19.39	43.23	31.60	5.56
Other crop income per acre	30.67	25.53	34.56	33.11
Gross return per acre	315.76	280.09	305.29	363.32
Direct Expenses				
Seed and plants	16.72	17.82	16.74	13.95
Fertilizer	58.79	75.09	55.26	51.06
Crop chemicals	30.41	30.20	30.06	29.40
Crop insurance	14.92	16.68	19.21	12.30
Drying expense	0.45	1.58	-	0.07
Fuel & oil	11.47	11.23	9.62	11.32
Repairs	22.55	38.94	18.19	15.84
Custom hire	3.66	8.39	1.26	0.92
Operating interest	5.51	10.21	5.64	2.50
Miscellaneous	1.82	1.44	-	-
Total direct expenses per acre	166.31	211.58	155.99	137.35
Return over direct exp per acre	149.45	68.51	149.31	225.97
Overhead Expenses				
Custom hire	0.78	0.87	0.08	0.29
Hired labor	8.08	11.82	3.53	2.66
Machinery leases	0.79	-	0.38	0.84
Building leases	0.60	0.19	0.14	0.86
RE & pers. property taxes	9.11	11.66	8.36	7.31
Farm insurance	5.88	5.22	5.64	4.57
Utilities	4.19	3.59	3.66	5.00
Dues & professional fees	1.24	1.70	0.11	1.17
Interest	18.54	22.52	21.64	23.02
Mach & bldg depreciation	36.18	35.09	48.17	34.51
Miscellaneous	3.73	4.93	4.64	3.37
Total overhead expenses per acre	89.11	97.60	96.36	83.60
Total dir & ovhd expenses per acre	255.42	309.18	252.34	220.95
Net return per acre	60.34	-29.09	52.95	142.36
Government payments	14.98	19.48	11.52	16.48
Net return with govt pmts	75.31	-9.61	64.47	158.84
Labor & management charge	23.90	23.08	24.67	22.92
Net return over lbr & mgt	51.42	-32.69	39.80	135.93
Cost of Production				
Total direct expense per bu.	3.07	4.87	3.18	2.15
Total dir & ovhd exp per bu.	4.71	7.12	5.15	3.46
Less govt & other income	3.47	4.86	3.56	2.55
With labor & management	3.91	5.39	4.07	2.91
Net value per unit	4.90	4.85	4.88	5.06
Machinery cost per acre	76.06	94.79	77.21	64.00
Est. labor hours per acre	1.20	1.07	1.20	0.98

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Wheat, Spring on Cash Rent

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	62	12	13	13
Acres	732.75	839.10	622.04	736.08
Yield per acre (bu.)	51.80	32.79	57.95	58.41
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	4.88	4.42	4.80	5.23
Other product return per acre	0.11	0.49	-	-
Total product return per acre	252.68	145.55	278.12	305.42
Hedging gains/losses per acre	1.75	1.48	-	1.21
Crop insurance per acre	33.64	81.40	5.59	29.02
Other crop income per acre	30.53	33.59	28.11	35.51
Gross return per acre	318.60	262.02	311.82	371.17
Direct Expenses				
Seed and plants	18.14	19.03	15.04	18.85
Fertilizer	62.08	68.82	59.34	61.23
Crop chemicals	32.92	35.26	33.89	28.89
Crop insurance	15.24	18.61	14.45	12.31
Drying expense	0.53	1.43	-	0.39
Fuel & oil	10.72	10.85	12.54	10.06
Repairs	24.22	33.76	23.23	19.90
Custom hire	5.33	5.53	6.00	3.62
Land rent	52.97	53.70	53.27	52.26
Operating interest	6.52	11.80	5.25	4.98
Miscellaneous	2.47	3.19	0.03	2.65
Total direct expenses per acre	231.16	261.98	223.05	215.13
Return over direct exp per acre	87.43	0.05	88.77	156.04
Overhead Expenses				
Custom hire	0.62	1.55	0.29	0.02
Hired labor	6.05	7.45	7.45	5.07
Machinery leases	4.17	4.06	5.43	3.30
Building leases	0.71	0.56	0.36	1.97
Farm insurance	3.93	4.43	3.92	3.40
Utilities	3.27	3.48	2.67	3.53
Dues & professional fees	1.22	1.08	0.74	1.76
Interest	3.70	4.49	2.11	4.91
Mach & bldg depreciation	25.73	29.12	23.03	19.43
Miscellaneous	2.36	2.30	2.10	3.07
Total overhead expenses per acre	51.78	58.53	48.08	46.46
Total dir & ovhd expenses per acre	282.94	320.51	271.12	261.59
Net return per acre	35.65	-58.48	40.69	109.58
Government payments	13.02	14.79	13.80	12.41
Net return with govt pmts	48.67	-43.69	54.49	121.99
Labor & management charge	23.82	22.28	25.18	22.96
Net return over lbr & mgt	24.86	-65.97	29.31	99.02
Cost of Production				
Total direct expense per bu.	4.46	7.99	3.85	3.68
Total dir & ovhd exp per bu.	5.46	9.78	4.68	4.48
Less govt & other income	3.94	5.76	3.86	3.14
With labor & management	4.40	6.44	4.29	3.53
Net value per unit	4.91	4.47	4.80	5.25
Machinery cost per acre	72.87	88.53	72.07	59.06
Est. labor hours per acre	1.08	1.00	1.27	1.12

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Wheat, Spring on Share Rent

	<u>Avg. Of All Farms</u>
Number of farms	14
Acres	346.22
Yield per acre (bu.)	58.93
Operators share of yield %	70.71
Value per bu.	4.85
Total product return per acre	202.19
Hedging gains/losses per acre	1.75
Crop insurance per acre	14.24
Other crop income per acre	28.37
Gross return per acre	246.55
Direct Expenses	
Seed and plants	15.88
Fertilizer	52.93
Crop chemicals	33.91
Crop insurance	12.63
Drying expense	0.24
Fuel & oil	11.51
Repairs	22.75
Custom hire	4.14
Marketing	0.11
Operating interest	4.15
Miscellaneous	0.41
Total direct expenses per acre	158.66
Return over direct exp per acre	87.89
Overhead Expenses	
Custom hire	0.38
Hired labor	5.60
Machinery leases	2.79
Building leases	0.75
Farm insurance	4.19
Utilities	3.57
Dues & professional fees	0.58
Interest	2.50
Mach & bldg depreciation	34.19
Miscellaneous	4.21
Total overhead expenses per acre	58.76
Total dir & ovhd expenses per acre	217.42
Net return per acre	29.13
Government payments	11.64
Net return with govt pmts	40.77
Labor & management charge	22.28
Net return over lbr & mgt	18.50
Cost of Production	
Total direct expense per bu.	3.81
Total dir & ovhd exp per bu.	5.22
Less govt & other income	3.87
With labor & management	4.41
Net value per unit	4.89
Machinery cost per acre	76.11
Est. labor hours per acre	0.90

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 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Beef Cow-Calf -- Average Per Cwt. Produced

	<u>Avg. Of</u>	
	<u>All Farms</u>	
Number of farms	9	
	Quantity	Value
Beef Calves sold (lb)	18.72	29.97
Transferred out (lb)	81.28	122.31
Cull sales		20.16
Government payments		5.35
Other income		0.36
Purchased		-18.50
Transferred in		-39.83
Inventory change		14.07
Gross margin		133.88
Direct Expenses		
Cake (lb.)	19.08	1.19
Protein Vit Minerals (lb.)	15.61	5.14
Corn Silage (lb.)	678.42	10.08
Hay, Alfalfa (lb.)	100.48	3.67
Hay, Grass (lb.)	898.54	17.19
Pasture (aum)	1.01	16.34
Straw (lb.)	85.49	0.93
Other feed stuffs (lb)	35.26	4.05
Veterinary		5.18
Supplies		4.28
Fuel & oil		4.89
Repairs		12.17
Operating interest		2.32
Total direct expenses		87.45
Return over direct expense		46.43
Overhead Expenses		
Farm insurance		2.00
Utilities		2.15
Dues & professional fees		0.91
Interest		1.94
Mach & bldg depreciation		6.81
Miscellaneous		2.12
Total overhead expenses		15.94
Total dir & ovhd expenses		103.39
Net return		30.49
Labor & management charge		10.65
Net return over lbr & mgt		19.84
Cost of Production Per Cwt. Produced		
Total direct expense per unit		87.45
Total dir & ovhd expense per unit		103.39
With other revenue adjustments		122.14
With labor and management		132.80
Est. labor hours per unit		1.00
Other Information		
Number of cows		251.9
Pregnancy percentage		94.8
Pregnancy loss percentage		2.2
Culling percentage		14.0
Calving percentage		92.6
Weaning percentage		88.8
Calves sold per cow		0.92
Calf death loss percent		3.7
Cow death loss percent		1.2
Average weaning weight		548
Lb. weaned/exposed female		487
Feed cost per cow		299.62
Avg wgt/ Beef Calves sold		530
Avg price / cwt.		160.12

Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
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(Farms Sorted By Net Return)

Beef Cow-Calf -- Average Per Cow

	<u>Avg. Of</u>	
	<u>All Farms</u>	
Number of farms	9	
	Quantity	Value
Beef Calves sold (lb)	95.7	153.23
Transferred out (lb)	415.6	625.36
Cull sales		103.10
Government payments		27.31
Other income		1.85
Purchased		-94.59
Transferred in		-203.68
Inventory change		71.96
Gross margin		684.55
Direct Expenses		
Cake (lb.)	97.6	6.10
Protein Vit Minerals (lb.)	79.8	26.30
Corn Silage (lb.)	3,468.8	51.56
Hay, Alfalfa (lb.)	513.7	18.79
Hay, Grass (lb.)	4,594.3	87.87
Pasture (aum)	5.1	83.53
Straw (lb.)	437.1	4.75
Other feed stuffs (lb)	180.3	20.72
Veterinary		26.50
Supplies		21.87
Fuel & oil		25.02
Repairs		62.24
Operating interest		11.87
Total direct expenses		447.13
Return over direct expense		237.42
Overhead Expenses		
Farm insurance		10.25
Utilities		10.99
Dues & professional fees		4.67
Interest		9.91
Mach & bldg depreciation		34.83
Miscellaneous		10.86
Total overhead expenses		81.50
Total dir & ovhd expenses		528.63
Net return		155.92
Labor & management charge		54.48
Net return over lbr & mgt		101.44
Cost of Production Per Cwt. Produced		
Total direct expense per unit		87.45
Total dir & ovhd expense per unit		103.39
With other revenue adjustments		122.14
With labor and management		132.80
Est. labor hours per unit		5.11
Other Information		
Number of cows		251.9
Pregnancy percentage		94.8
Pregnancy loss percentage		2.2
Culling percentage		14.0
Calving percentage		92.6
Weaning percentage		88.8
Calves sold per cow		0.92
Calf death loss percent		3.7
Cow death loss percent		1.2
Average weaning weight		548
Lb. weaned/exposed female		487
Feed cost per cow		299.62
Avg wgt/ Beef Calves sold		530
Avg price / cwt.		160.12

Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(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		10
	Quantity	Value
Beef Calves sold (lb)	79.47	108.59
Cull sales		20.43
Other income		0.30
Purchased		-50.63
Transferred in		-9.08
Inventory change		56.63
Gross margin		126.24
Direct Expenses		
Protein Vit Minerals (lb.)	7.16	2.89
Corn (bu.)	0.17	0.73
Hay, Grass (lb.)	1,005.45	25.11
Oats (bu.)	0.16	0.37
Pasture (aum)	1.04	16.06
Screenings, Heavy (lb.)	22.73	2.81
Hay (lb.)	182.29	5.83
Other feed stuffs (lb)	241.51	6.94
Veterinary		4.55
Supplies		7.97
Fuel & oil		6.63
Repairs		8.80
Custom hire		2.45
Operating interest		5.33
Total direct expenses		96.49
Return over direct expense		29.76
Overhead Expenses		
Hired labor		3.65
Utilities		2.81
Interest		8.42
Mach & bldg depreciation		8.90
Miscellaneous		5.84
Total overhead expenses		29.60
Total dir & ovhd expenses		126.09
Net return		0.15
Labor & management charge		17.26
Net return over lbr & mgt		-17.11
Cost of Production Per Cwt. Produced		
Total direct expense per unit		96.49
Total dir & ovhd expense per unit		126.09
With other revenue adjustments		138.92
With labor and management		156.17
Est. labor hours per unit		1.32
Other Information		
Number of cows		100.8
Pregnancy percentage		94.7
Pregnancy loss percentage		1.1
Culling percentage		13.0
Calving percentage		93.6
Weaning percentage		88.7
Calves sold per cow		0.66
Calf death loss percent		6.0
Cow death loss percent		2.4
Average weaning weight		569
Lb. weaned/exposed female		504
Feed cost per cow		329.29
Avg wgt/ Beef Calves sold		652
Avg price / cwt.		136.65

Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

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

	<u>Avg. Of All Farms</u>	
Number of farms		10
	Quantity	Value
Beef Calves sold (lb)	430.7	588.59
Cull sales		110.75
Other income		1.62
Purchased		-274.41
Transferred in		-49.21
Inventory change		306.93
Gross margin		684.28
Direct Expenses		
Protein Vit Minerals (lb.)	38.8	15.68
Corn (bu.)	0.9	3.98
Hay, Grass (lb.)	5,449.9	136.13
Oats (bu.)	0.9	1.99
Pasture (aum)	5.6	87.07
Straw (lb.)	781.0	9.17
Screenings, Heavy (lb.)	123.2	15.25
Hay (lb.)	988.1	31.59
Other feed stuffs (lb)	528.1	28.42
Veterinary		24.64
Supplies		56.52
Fuel & oil		35.93
Repairs		47.71
Operating interest		28.90
Total direct expenses		522.99
Return over direct expense		161.29
Overhead Expenses		
Hired labor		19.77
Utilities		15.21
Interest		45.63
Mach & bldg depreciation		48.22
Miscellaneous		31.64
Total overhead expenses		160.47
Total dir & ovhd expenses		683.46
Net return		0.82
Labor & management charge		93.55
Net return over lbr & mgt		-92.73
Cost of Production Per Cwt. Produced		
Total direct expense per unit		96.49
Total dir & ovhd expense per unit		126.09
With other revenue adjustments		138.92
With labor and management		156.17
Est. labor hours per unit		7.18
Other Information		
Number of cows		100.8
Pregnancy percentage		94.7
Pregnancy loss percentage		1.1
Culling percentage		13.0
Calving percentage		93.6
Weaning percentage		88.7
Calves sold per cow		0.66
Calf death loss percent		6.0
Cow death loss percent		2.4
Average weaning weight		569
Lb. weaned/exposed female		504
Feed cost per cow		329.29
Avg wgt/ Beef Calves sold		652
Avg price / cwt.		136.65

Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Beef Backgrounding -- Average Per Cwt. Produced

	<u>Avg. Of</u>	
	<u>All Farms</u>	
Number of farms	8	
	Quantity	Value
Backgnd Beef sold (lb)	323.77	502.30
Transferred out (lb)	131.30	163.55
Other income		0.42
Transferred in (lb)	-251.94	-380.06
Inventory change (lb)	-103.12	-157.99
Gross margin		128.24
Direct Expenses		
Protein Vit Minerals (lb.)	8.98	3.03
Creep / Starter (lb.)	36.10	3.75
Complete Ration (lb.)	10.17	0.40
Barley (bu.)	0.40	1.20
Corn (bu.)	5.65	17.01
Corn Silage (lb.)	570.83	10.30
Hay, Alfalfa (lb.)	211.51	7.84
Hay, Grass (lb.)	441.98	8.49
DDGS, wet (lb.)	11.02	2.19
Other feed stuffs (lb)	43.31	3.32
Veterinary		3.48
Supplies		1.03
Fuel & oil		0.85
Repairs		2.85
Total direct expenses		65.74
Return over direct expense		62.49
Overhead Expenses		
Farm insurance		0.42
Utilities		0.61
Dues & professional fees		0.21
Mach & bldg depreciation		1.48
Miscellaneous		1.01
Total overhead expenses		3.73
Total dir & ovhd expenses		69.48
Net return		58.76
Labor & management charge		2.88
Net return over lbr & mgt		55.88
Cost of Production Per Cwt. Produced		
Total direct expense per unit		132.59
Total dir & ovhd expense per unit		133.41
With other revenue adjustments		133.41
With labor and management		134.04
Est. labor hours per unit		0.23
Other Information		
No. purchased or trans in		143
Number sold or trans out		200
Percentage death loss		0.1
Avg. daily gain (lb.)		2.04
Lb. of conc / lb. of gain		4.42
Lb. of feed / lb. of gain		13.02
Feed cost per cwt. of gain		57.53
Feed cost per head		79.46
Avg wgt / Backgnd Beef sold		637
Avg sales price / cwt.		155.14

Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 2 - North Central North Dakota, 2019
(Farms Sorted By Net Return)

Beef Backgrounding -- Average Per Head

	<u>Avg. Of</u>	
	<u>All Farms</u>	
Number of farms	8	
	Quantity	Value
Backgnd Beef sold (lb)	447.2	693.78
Transferred out (lb)	181.3	225.90
Other income		0.59
Transferred in (lb)	-348.0	-524.94
Inventory change (lb)	-142.4	-218.21
Gross margin		177.12
Direct Expenses		
Protein Vit Minerals (lb.)	12.4	4.18
Creep / Starter (lb.)	49.9	5.17
Complete Ration (lb.)	14.0	0.55
Barley (bu.)	0.6	1.66
Corn (bu.)	7.8	23.50
Corn Silage (lb.)	788.4	14.23
Hay, Alfalfa (lb.)	292.1	10.82
Hay, Grass (lb.)	610.5	11.73
DDGS, dry (lb.)	37.0	2.91
DDGS, wet (lb.)	15.2	3.03
Other feed stuffs (lb)	22.8	1.68
Veterinary		4.81
Supplies		1.42
Fuel & oil		1.17
Repairs		3.93
Total direct expenses		90.80
Return over direct expense		86.32
Overhead Expenses		
Dues & professional fees		0.29
Interest		0.67
Mach & bldg depreciation		2.05
Miscellaneous		2.15
Total overhead expenses		5.16
Total dir & ovhd expenses		95.96
Net return		81.16
Labor & management charge		3.98
Net return over lbr & mgt		77.18
Cost of Production Per Cwt. Produced		
Total direct expense per unit		132.59
Total dir & ovhd expense per unit		133.41
With other revenue adjustments		133.41
With labor and management		134.04
Est. labor hours per unit		0.32
Other Information		
No. purchased or trans in		143
Number sold or trans out		200
Percentage death loss		0.1
Avg. daily gain (lb.)		2.04
Lb. of conc / lb. of gain		4.42
Lb. of feed / lb. of gain		13.02
Feed cost per cwt. of gain		57.53
Feed cost per head		79.46
Avg wgt / Backgnd Beef sold		637
Avg sales price / cwt.		155.14

Figure 1. Gross Cash Income Per Farm

N.D. Farm Business Management Education Program – North Central Region

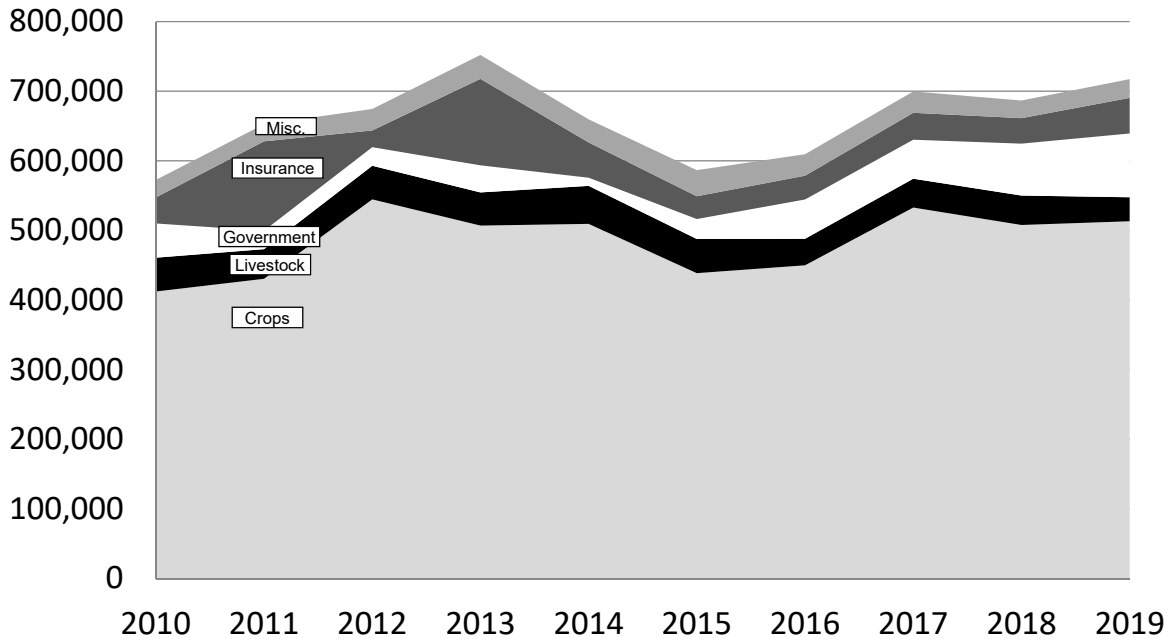


Figure 2. Net Farm Income (Accrual) Per Farm

N.D. Farm Business Management Education Program – North Central Region

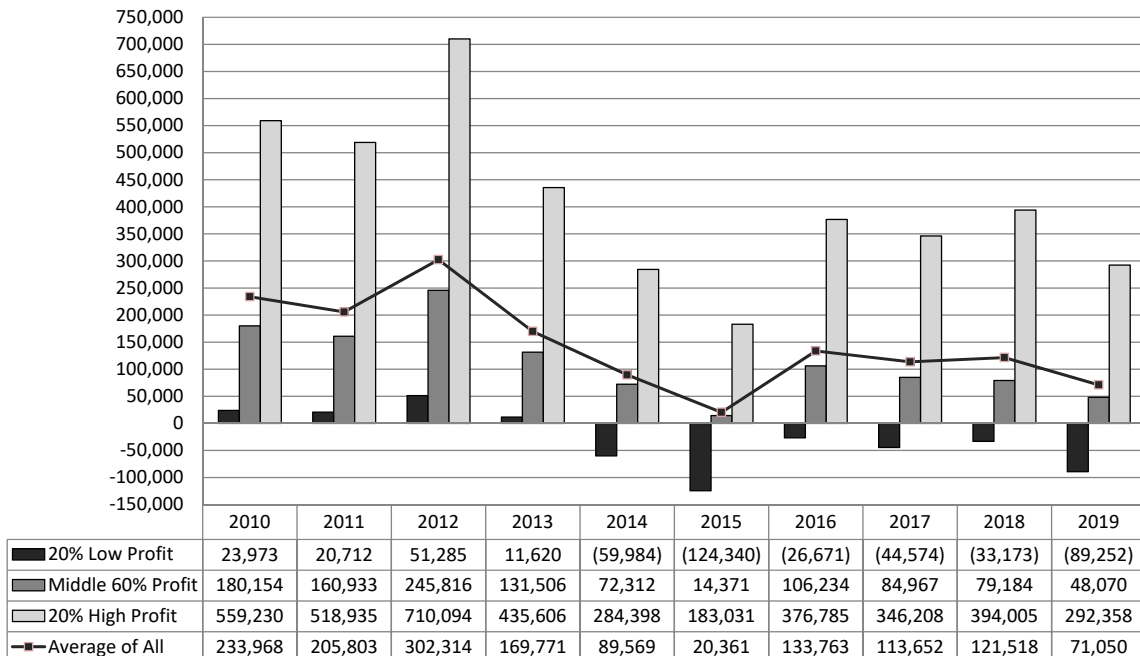


Figure 3. Financial Efficiency Measures (As Percent of Gross Revenue)

N.D. Farm Business Management Education Program – North Central Region

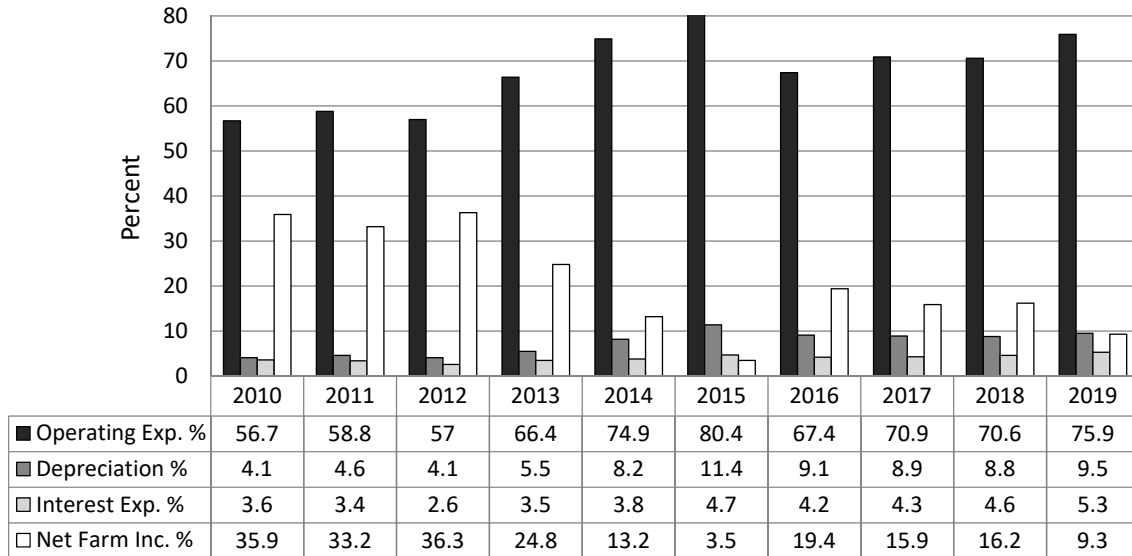


Figure 4. Profitability Measures Per Farm

N.D. Farm Business Management Education Program – North Central Region

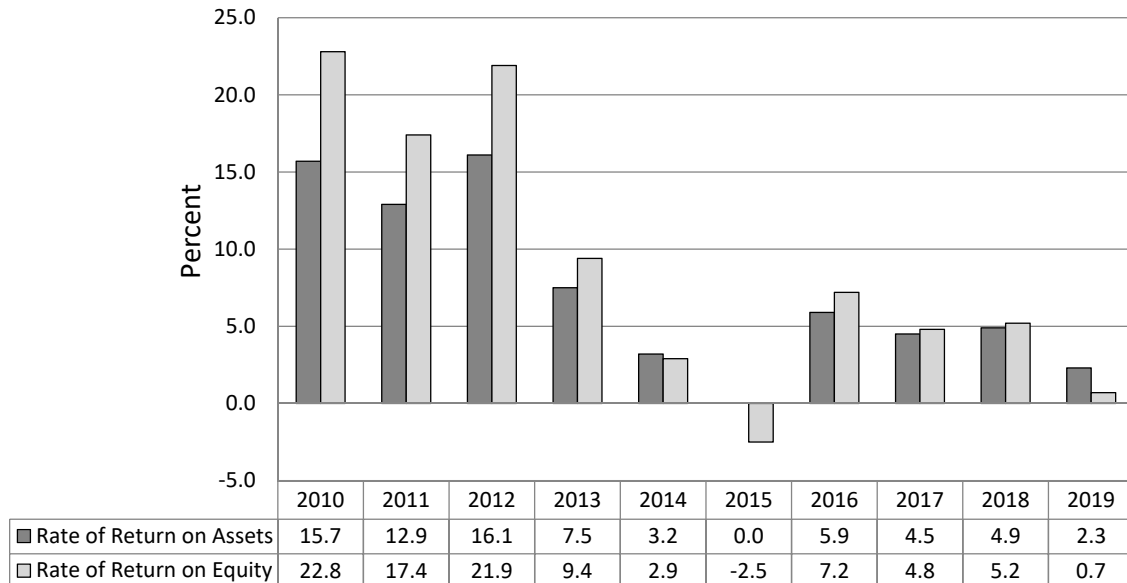


Figure 5. Assets and Liabilities Per Farm, 2019

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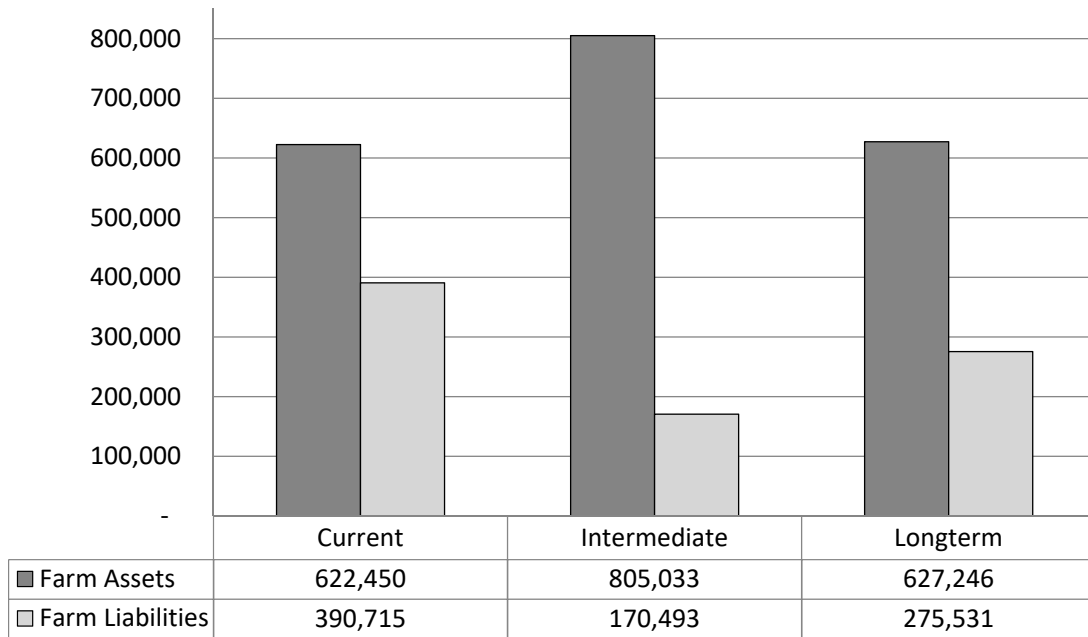


Figure 6. Total Farm Assets and Liabilities

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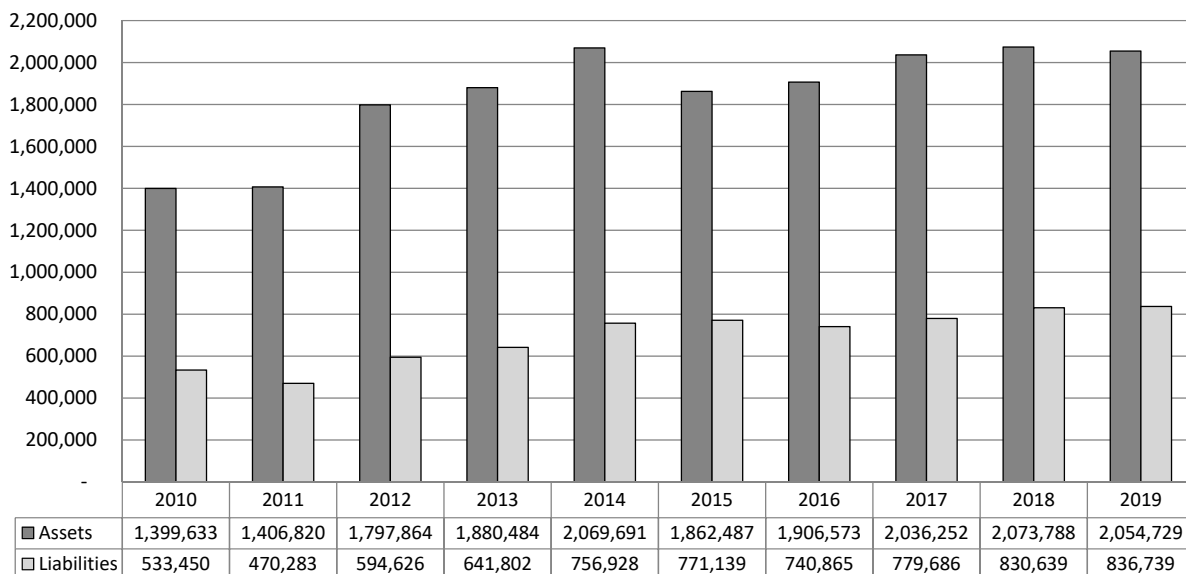


Figure 7. Household and Personal Expenses

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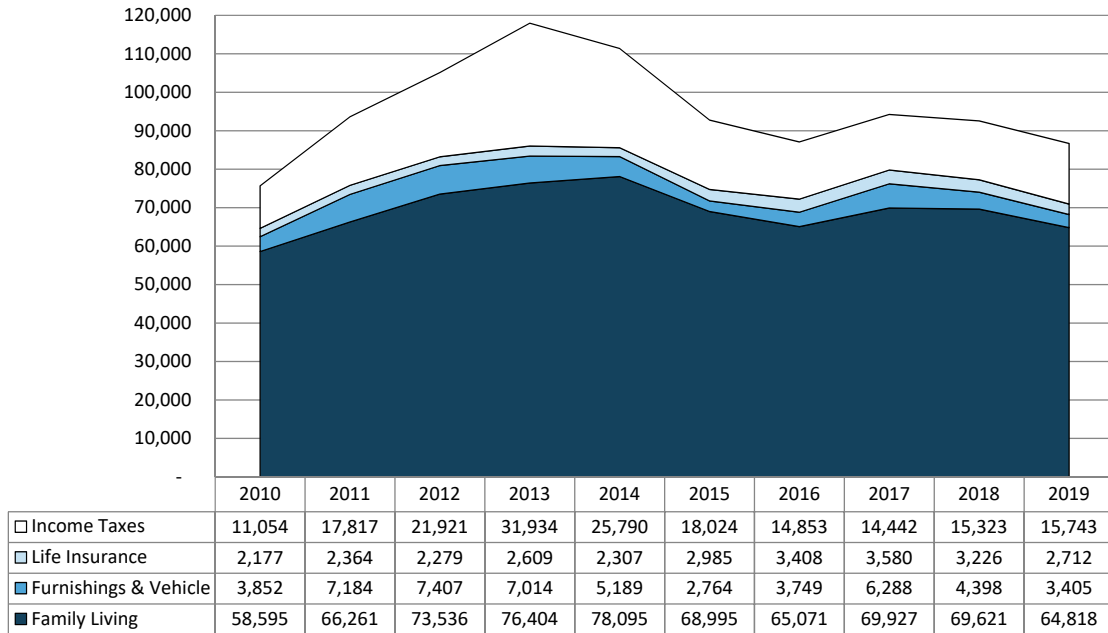


Figure 8. Crop Acreage Per Farm

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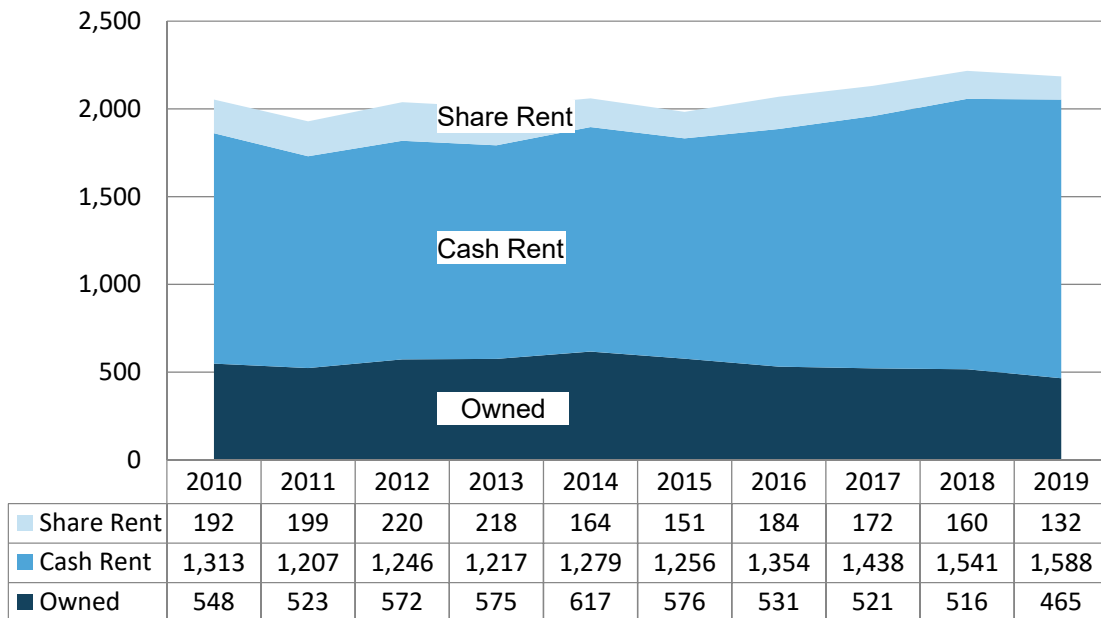


Figure 9. Spring Wheat Costs Per Acre

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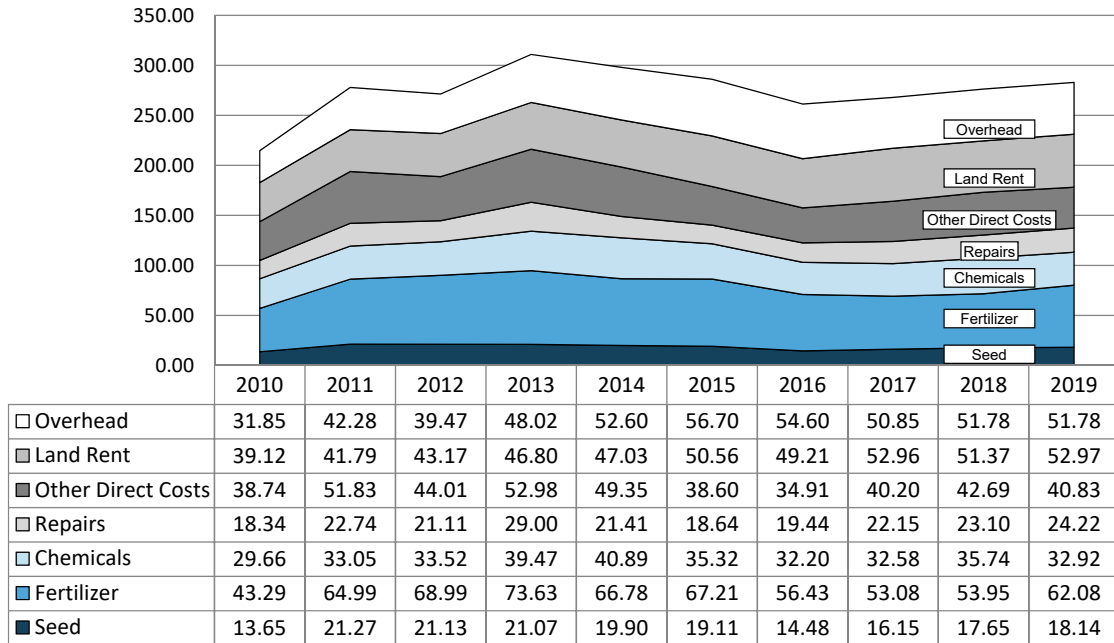
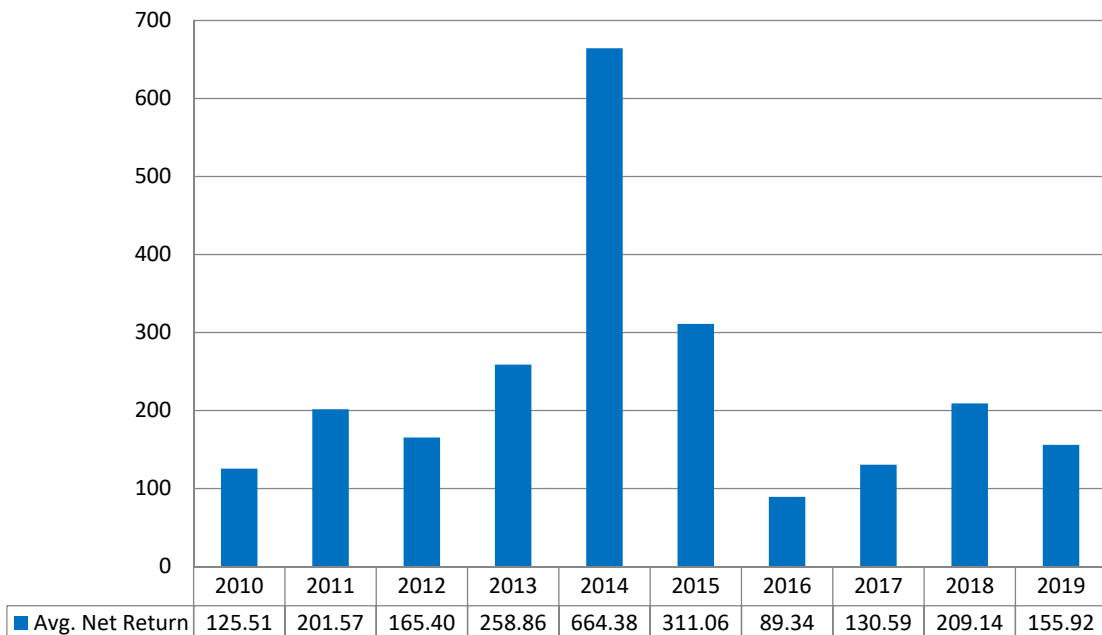


Figure 10. Average Net Return Per Beef Cow

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