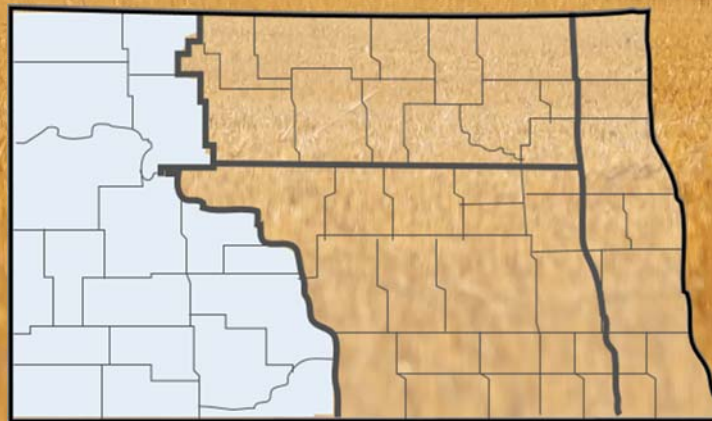


2020 ANNUAL REPORT

Western North Dakota

North Dakota Farm and Ranch Business
Management Education



www.ndfarmmanagement.com



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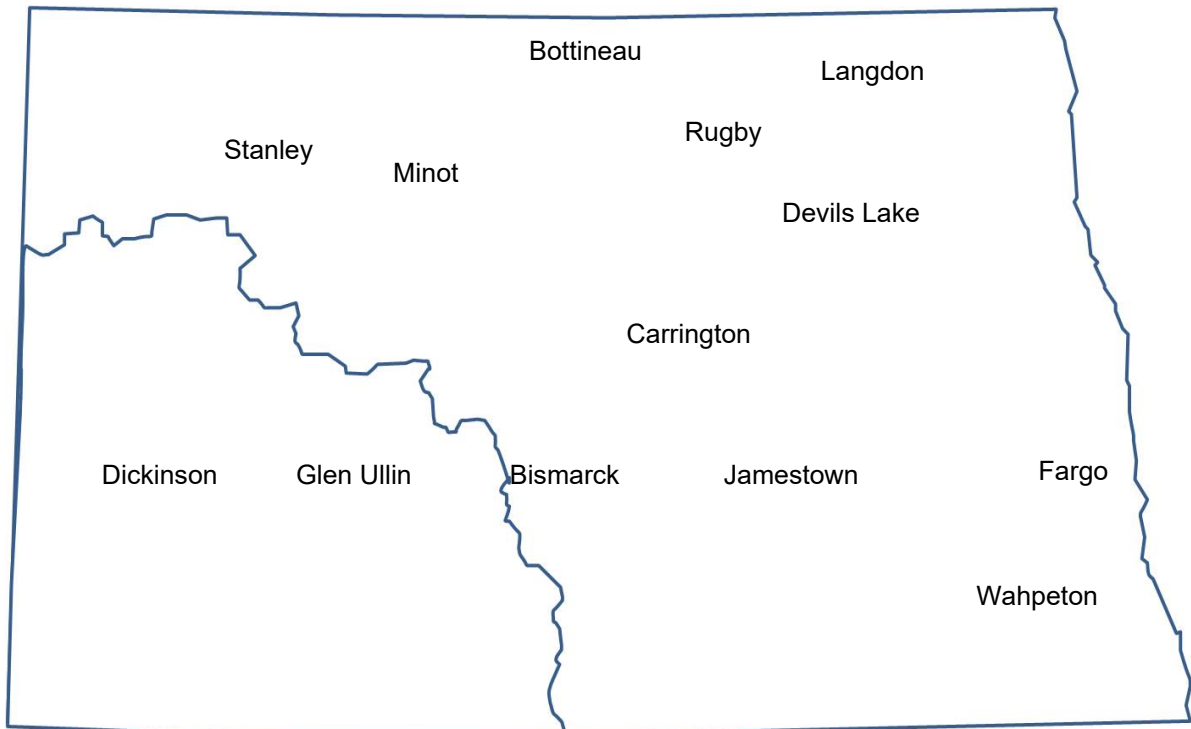
NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION

REGION 4 – WESTERN NORTH DAKOTA 2020 ANNUAL REPORT

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

<u>School</u>	<u>Instructor</u>
Bismarck State College	Kyle Olson
Bismarck State College – Dickinson	Jeff Dragseth
Dakota College at Bottineau – Minot.....	Lynsey Aberle
Dakota College at Bottineau – Stanley	Rodney Armstrong
Glen Ullin Public School.....	Ron Egli

This report was made possible by the farm families who cooperated with their farm management instructors in getting the records for 2020 closed out on a timely basis. The farm management instructors cited above generated the Finpack year-end farm analyses. Bryon Parman, NDSU Extension Service, databased the Finpack analyses of farms and generated the comparative tables for this report.



2020 Western North Dakota Report North Dakota Farm Business Management Education

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INTRODUCTION

This report summarizes the individual farm records of the specific region or the whole state as identified on the acknowledgement page. The current financial status of farm operators and net returns from each crop and livestock enterprise is reported. In addition to the average of all farms, the averages for the high, middle, and low-income groups are also presented. All participating farm/ranch families are provided a copy of the regional averages report. They can compare their own Finan business analysis to the regional and/or state averages report and study the areas that may need management improvement. A review of the comparative information may reveal how certain aspects of the business or enterprises excel and help answer why they are profitable.

The regional and state averages reports are divided into three major sections; farm operators' reports, crop reports and livestock reports. Explanatory notes precede each section. The first section contains 15 tables with whole farm financial and operator information. The last three tables of this section are financial summaries in which farms are categorized by gross revenue, age of operator and farm type, respectively. The second section provides performance information on crop enterprises. The third section provides performance results on livestock enterprises. Lastly, figures 1 through 10 provide trend information for various measures of finance and/or production.

The 2020 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 32nd 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 4 - Western North Dakota, 2020
(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	40	8	8	8
Cash Farm Income				
Barley	14,528	-	58,218	-
Corn	46,305	28,708	26,615	74,798
Hay, Mixed	2,725	10,086	2,282	-
Lentils	16,616	-	-	63,735
Oats	209	648	-	-
Peas, Field	6,823	-	-	29,144
Safflower	41	-	-	203
Soybeans	58,904	20,424	37,724	168,699
Sunflowers	65,762	12,900	55,774	126,756
Wheat, Durum	30,142	-	-	102,282
Wheat, Spring	127,171	28,393	98,929	344,342
Wheat, Winter	2,152	-	-	10,758
Miscellaneous crop income	11,204	1,028	37,109	1,285
Beef Bulls	3,123	10,700	-	-
Beef Cow-Calf, Beef Calves	60,733	49,691	62,521	30,653
Beef Replacement Heifers	1,279	3,750	-	-
Beef Backgrounding	11,510	-	21,807	7,520
Beef Finishing	2,264	-	-	-
Dairy, Milk	116,587	-	95,730	487,202
Dairy, Dairy Calves	1,972	-	3,820	6,043
Other Livestock	22,049	-	-	110,243
Cull breeding livestock	21,598	14,429	23,914	29,935
Misc. livestock income	1,178	1,032	4,762	-
LDP payments	653	-	3,266	-
Crop government payments	31,985	7,337	32,997	71,772
Other government payments	94,798	33,006	64,269	242,823
Conservation govt payment	4,189	712	6,617	-
Custom work income	32,781	581	1,198	148,703
Patronage dividends, cash	3,706	1,273	6,303	6,064
Crop insurance income	45,343	22,220	19,990	75,235
Property insurance income	2,437	8,855	31	-
Sale of resale items	96	-	482	-
Livestock insurance inc	4,353	782	-	20,492
Renewable energy income	1,480	-	7,400	-
Farm rental income	1,587	2,196	1,807	1,145
Other farm income	12,409	5,444	21,078	17,112
Gross Cash Farm Income	860,689	264,193	694,642	2,176,943

Farm Income Statement (continued)
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Cash Farm Expense				
Seed and plants	55,739	14,416	43,176	128,989
Fertilizer	81,519	27,375	58,478	174,610
Crop chemicals	62,088	10,074	44,345	168,677
Crop insurance	24,773	6,755	20,739	56,856
Drying expense	408	-	2,038	-
Storage	1,147	-	2,947	1,918
Irrigation energy	56	-	-	281
Crop miscellaneous	1,652	1,560	2,059	4,432
Crop consultants	1,404	128	6,515	64
Feeder livestock purchase	1,753	38	-	919
Purchased feed	77,641	17,864	43,319	286,272
Breeding fees	2,694	2,687	3,720	5,716
Veterinary	9,176	5,755	6,947	21,793
Supplies	8,360	443	1,015	34,692
Livestock leases	25	125	-	-
Govt program expense	245	-	595	632
Livestock consultants	675	-	-	3,377
Interest	35,132	19,754	40,829	53,379
Fuel & oil	27,018	11,233	22,037	65,465
Repairs	66,464	32,156	49,336	164,856
Custom hire	35,575	3,618	42,920	84,277
Hired labor	48,994	2,865	26,602	193,692
Land rent	72,647	30,187	59,397	160,602
Machinery leases	6,638	492	309	30,129
Building leases	310	-	-	363
Real estate taxes	4,987	2,433	5,078	7,494
Farm insurance	13,494	5,327	11,464	30,355
Utilities	12,844	6,308	15,382	30,891
Marketing	5,671	807	5,095	19,776
Dues & professional fees	3,397	1,398	3,799	5,974
Purchase of resale items	24	121	-	-
Miscellaneous	14,184	11,290	12,813	20,527
Office & administrative	550	-	-	2,748
Total cash expense	677,283	215,208	530,953	1,759,753
Net cash farm income	183,406	48,985	163,689	417,190
Inventory Changes				
Prepays and supplies	20,776	1,635	7,440	65,863
Accounts receivable	77,638	3,966	-3,165	336,877
Hedging accounts	957	1,942	-2,986	5,794
Other current assets	-3,580	473	276	3,212
Crops and feed	14,393	-39,805	-46,154	147,776
Market livestock	15,955	-4,112	14,298	6,671
Breeding livestock	-6,518	327	-7,933	6,166
Other assets	1,950	-	8,075	5,356
Accounts payable	5,268	-10,065	8,955	33,725
Accrued interest	1,102	2,600	-4,512	4,058
Total inventory change	127,941	-43,039	-25,706	615,498
Net operating profit	311,347	5,946	137,983	1,032,688
Depreciation				
Machinery and equipment	-40,225	-9,605	-30,299	-75,619
Titled vehicles	-11,820	-8,625	-6,580	-24,318
Buildings and improvements	-8,454	-2,467	-6,168	-25,821
Total depreciation	-60,499	-20,698	-43,047	-125,758
Net farm income from operations	250,847	-14,752	94,937	906,930
Gain or loss on capital sales	186	2,722	1,741	-5,144
Net farm income	251,033	-12,030	96,678	901,786

Inventory Changes
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Net cash farm income	183,406	48,985	163,689	417,190
Crops and Feed				
Ending inventory	384,332	40,151	237,769	967,805
Beginning inventory	369,938	79,956	283,922	820,029
Inventory change	14,393	-39,805	-46,154	147,776
Market Livestock				
Ending inventory	89,111	33,187	116,049	104,838
Beginning inventory	73,156	37,299	101,751	98,167
Inventory change	15,955	-4,112	14,298	6,671
Accts Receivable				
Ending inventory	108,755	11,516	18,354	434,514
Beginning inventory	31,117	7,550	21,519	97,637
Inventory change	77,638	3,966	-3,165	336,877
Prepaid Expenses and Supplies				
Ending inventory	49,750	3,614	20,937	157,211
Beginning inventory	28,975	1,979	13,497	91,347
Inventory change	20,776	1,635	7,440	65,863
Hedging Activities				
Ending inventory	2,619	1,942	1,197	7,475
Withdrawals	2,646	563	8,750	1,250
Beginning inventory	970	-	3,148	806
Deposits	3,338	563	9,785	2,125
Gain or loss	957	1,942	-2,986	5,794
Other Current Assets				
Ending inventory	3,456	844	4,533	11,793
Beginning inventory	7,036	371	4,257	8,582
Inventory change	-3,580	473	276	3,212
Breeding Livestock				
Ending inventory	210,932	119,274	199,224	318,689
Capital sales	409	-	-	-
Beginning inventory	199,297	113,528	203,164	290,568
Capital purchases	18,562	5,419	3,993	21,955
Depreciation, capital adjust	-6,518	327	-7,933	6,166
Other Capital Assets				
Ending inventory	58,526	2,784	72,060	145,135
Capital sales	-	-	-	-
Beginning inventory	53,129	2,784	63,437	123,089
Capital purchases	3,447	-	548	16,689
Depreciation, capital adjust	1,950	-	8,075	5,356
Accounts Payable				
Beginning inventory	21,224	8,564	17,640	73,909
Ending inventory	15,957	18,629	8,686	40,185
Inventory change	5,268	-10,065	8,955	33,725
Accrued Interest				
Beginning inventory	13,126	11,399	13,252	16,179
Ending inventory	12,024	8,799	17,764	12,120
Inventory change	1,102	2,600	-4,512	4,058
Total inventory change	127,941	-43,039	-25,706	615,498
Net operating profit	311,347	5,946	137,983	1,032,688

Depreciation
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Net operating profit	311,347	5,946	137,983	1,032,688
Machinery and Equipment				
Ending inventory	452,749	126,780	379,824	1,004,491
Capital sales	18,883	3,004	3,078	81,521
Beginning inventory	433,736	104,254	360,956	993,802
Capital purchases	78,122	35,135	52,245	167,830
Depreciation, capital adjust.	-40,225	-9,605	-30,299	-75,619
Titled Vehicles				
Ending inventory	85,297	42,752	51,550	190,042
Capital sales	3,661	5,826	181	12,046
Beginning inventory	80,024	48,108	48,162	171,959
Capital purchases	20,754	9,095	10,149	54,447
Depreciation, capital adjust.	-11,820	-8,625	-6,580	-24,318
Buildings and Improvements				
Ending inventory	191,766	48,179	151,324	552,293
Capital sales	7	35	-	-
Beginning inventory	192,511	49,381	142,030	557,896
Capital purchases	7,716	1,300	15,461	20,218
Depreciation, capital adjust.	-8,454	-2,467	-6,168	-25,821
Total depreciation, capital adj.	-60,499	-20,698	-43,047	-125,758
Net farm income from operations	250,847	-14,752	94,937	906,930
Gain or loss on capital sales	186	2,722	1,741	-5,144
Net farm income	251,033	-12,030	96,678	901,786

Profitability Measures
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Profitability (assets valued at cost)				
Net farm income from operations	250,847	-14,752	94,937	906,930
Rate of return on assets	10.1 %	-4.0 %	4.7 %	18.3 %
Rate of return on equity	13.3 %	-17.5 %	3.9 %	25.0 %
Operating profit margin	24.5 %	-14.0 %	13.9 %	33.9 %
Asset turnover rate	41.3 %	28.6 %	33.5 %	54.1 %
Farm interest expense	34,030	17,154	45,341	49,321
Value of operator lbr and mgmt.	67,977	31,505	55,169	143,319
Return on farm assets	216,901	-29,103	85,108	812,932
Average farm assets	2,143,593	729,113	1,828,659	4,434,627
Return on farm equity	182,870	-46,257	39,768	763,611
Average farm equity	1,374,550	264,931	1,012,136	3,050,377
Value of farm production	885,820	208,489	613,459	2,398,392

Liquidity & Repayment Capacity Measures
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Liquidity				
Current ratio	2.48	2.19	1.55	3.54
Working capital	398,329	68,898	145,825	1,215,005
Working capital to gross inc	41.3 %	30.4 %	22.2 %	45.2 %
Current assets	667,175	126,650	409,286	1,692,688
Current liabilities	268,846	57,753	263,461	477,683
Gross revenues (accrual)	965,239	226,511	656,777	2,685,582
Repayment capacity				
Net farm income from operations	250,847	-14,752	94,937	906,930
Depreciation	60,499	20,698	43,047	125,758
Personal income	48,207	71,575	46,594	45,278
Family living/owner withdrawals	-54,711	-48,858	-57,277	-73,355
Cash discrepancy	-411	-1,714	-294	1,127
Payments on personal debt	-6,915	-3,090	-4,936	-17,282
Income taxes paid	-11,328	-54	-3,838	-33,661
Interest on term debt	25,505	16,278	31,093	42,437
Capital debt repayment capacity	311,693	40,083	149,325	997,231
Scheduled term debt payments	-90,450	-43,598	-79,433	-199,368
Capital debt repayment margin	221,243	-3,515	69,892	797,863
Cash replacement allowance	-35,579	-8,821	-24,649	-88,313
Replacement margin	185,664	-12,336	45,243	709,550
Term debt coverage ratio	3.45	0.92	1.88	5.00
Replacement coverage ratio	2.47	0.76	1.43	3.47

Balance Sheet at Cost Values
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Assets				
Current Farm Assets				
Cash and checking balance	29,152	35,396	10,447	9,052
Prepaid expenses & supplies	49,750	3,614	20,937	157,211
Growing crops	3,456	844	4,533	11,793
Accounts receivable	108,755	11,516	18,354	434,514
Hedging accounts	2,619	1,942	1,197	7,475
Crops held for sale or feed	384,332	40,151	237,769	967,805
Crops under government loan	-	-	-	-
Market livestock held for sale	89,111	33,187	116,049	104,838
Other current assets	-	-	-	-
Total current farm assets	667,175	126,650	409,286	1,692,688
Intermediate Farm Assets				
Breeding livestock	210,932	119,274	199,224	318,689
Machinery and equipment	452,749	126,780	379,824	1,004,491
Titled vehicles	85,297	42,752	51,550	190,042
Other intermediate assets	971	1,324	2,099	318
Total intermediate farm assets	749,949	290,130	632,698	1,513,541
Long Term Farm Assets				
Farm land	570,683	259,641	567,406	864,377
Buildings and improvements	191,766	48,179	151,324	552,293
Other long-term assets	57,556	1,460	69,961	144,816
Total long-term farm assets	820,005	309,280	788,690	1,561,485
Total Farm Assets	2,237,128	726,060	1,830,675	4,767,714
Total Nonfarm Assets	373,261	255,249	298,063	816,384
Total Assets	2,610,389	981,309	2,128,738	5,584,098
Liabilities				
Current Farm Liabilities				
Accrued interest	12,024	8,799	17,764	12,120
Accounts payable	15,957	18,629	8,686	40,185
Current notes	181,448	8,393	182,268	294,772
Government crop loans	-	-	-	-
Principal due on term debt	59,418	21,932	54,743	130,606
Total current farm liabilities	268,846	57,753	263,461	477,683
Total intermediate farm liabs	165,562	135,900	188,352	205,776
Total long term farm liabilities	319,691	264,186	335,715	639,023
Total farm liabilities	754,099	457,838	787,529	1,322,482
Total nonfarm liabilities	50,719	19,128	21,025	136,201
Total liabilities	804,818	476,966	808,554	1,458,683
Net worth (farm and nonfarm)	1,805,571	504,343	1,320,184	4,125,415
Net worth change	246,147	11,939	96,931	878,494
Percent net worth change	16 %	2 %	8 %	27 %
Ratio Analysis				
Current farm liabilities / assets	40 %	46 %	64 %	28 %
Intermediate farm liab. / assets	22 %	47 %	30 %	14 %
Long term farm liab. / assets	39 %	85 %	43 %	41 %
Total debt to asset ratio	31 %	49 %	38 %	26 %

Statement Of Cash Flows
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Beginning cash (farm & nonfarm)	42,559	54,541	37,467	38,581
Cash Provided By Operating Activities				
Gross cash farm income	860,689	264,193	694,642	2,176,943
Total cash farm expense	-677,283	-215,208	-530,953	-1,759,753
Net cash from hedging transactions	-692	-	-1,035	-875
Cash provided by operating	182,714	48,985	162,654	416,315
Cash Provided By Investing Activities				
Sale of breeding livestock	462	-	-	-
Sale of machinery & equipment	19,196	4,531	4,850	78,235
Sale of titled vehicles	3,475	6,986	150	10,188
Sale of farm land	-	-	-	-
Sale of farm buildings	14	69	-	-
Sale of other farm assets	-	-	-	-
Sale of nonfarm assets	2,642	316	-	9,093
Purchase of breeding livestock	-18,562	-5,419	-3,993	-21,955
Purchase of machinery & equip.	-78,122	-35,135	-52,245	-167,830
Purchase of titled vehicles	-20,754	-9,095	-10,149	-54,447
Purchase of farm land	-13,825	-	-	-34,750
Purchase of farm buildings	-7,716	-1,300	-15,461	-20,218
Purchase of other farm assets	-3,447	-	-548	-16,689
Purchase of nonfarm assets	-6,616	-1,913	-1,113	-17,619
Cash provided by investing	-123,255	-40,960	-78,510	-235,992
Cash Provided By Financing Activities				
Money borrowed	488,440	266,490	673,046	567,206
Principal payments	-520,333	-288,471	-737,062	-679,445
Personal income	48,207	71,575	46,594	45,278
Family living/owner withdrawals	-54,705	-48,827	-57,277	-73,355
Income and social security tax	-9,753	-54	-3,838	-33,661
Capital contributions	1,048	-	-	3,074
Capital distributions	-	-	-	-
Dividends paid	-6	-31	-	-
Cash gifts and inheritances	1,761	273	2,280	-
Gifts given	-875	-	-	-
Other cash flows	-	-	-	-
Cash provided by financing	-46,217	955	-76,257	-170,904
Net change in cash balance	13,242	8,980	7,887	9,419
Ending cash (farm & nonfarm)	55,390	61,806	45,060	49,127
Discrepancy	411	1,714	294	-1,127

Financial Standards Measures
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Liquidity				
Current ratio	2.48	2.19	1.55	3.54
Working capital	398,329	68,898	145,825	1,215,005
Working capital to gross inc	41.3 %	30.4 %	22.2 %	45.2 %
Solvency (market)				
Farm debt to asset ratio	25 %	37 %	26 %	23 %
Farm equity to asset ratio	75 %	63 %	74 %	77 %
Farm debt to equity ratio	0.34	0.59	0.36	0.30
Profitability (cost)				
Rate of return on farm assets	10.1 %	-4.0 %	4.7 %	18.3 %
Rate of return on farm equity	13.3 %	-17.5 %	3.9 %	25.0 %
Operating profit margin	24.5 %	-14.0 %	13.9 %	33.9 %
Net farm income	251,033	-12,030	96,678	901,786
EBITDA	345,377	23,099	183,324	1,082,009
Repayment Capacity				
Capital debt repayment capacity	311,693	40,083	149,325	997,231
Capital debt repayment margin	221,243	-3,515	69,892	797,863
Replacement margin	185,664	-12,336	45,243	709,550
Term debt coverage ratio	3.45	0.92	1.88	5.00
Replacement coverage ratio	2.47	0.76	1.43	3.47
Efficiency				
Asset turnover rate (cost)	41.3 %	28.6 %	33.5 %	54.1 %
Operating expense ratio	64.2 %	89.8 %	72.1 %	59.7 %
Depreciation expense ratio	6.3 %	9.1 %	6.6 %	4.7 %
Interest expense ratio	3.5 %	7.6 %	6.9 %	1.8 %
Net farm income ratio	26.0 %	-6.5 %	14.5 %	33.8 %

Crop Production and Marketing Summary
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Acreage Summary				
Total acres owned	1,187	710	1,377	1,357
Total crop acres	1,997	819	1,654	4,011
Crop acres owned	596	220	416	992
Crop acres cash rented	1,304	557	1,057	2,965
Crop acres share rented	97	42	182	55
Total pasture acres	1,235	953	1,447	1,003
Percent crop acres owned	30 %	27 %	25 %	25 %
Mach invest/crop acre cost	251	166	254	270
Mach invest/crop acre market	341	225	341	370
Average Price Received (Cash Sales Only)				
Wheat, Spring per bushel	4.38	4.58	-	4.30
Corn per bushel	3.04	-	-	-
Sunflowers per cwt	18.91	-	-	-
Soybeans per bushel	8.97	-	-	-
Average Yield Per Acre				
Wheat, Spring (bushel)	43.42	-	52.50	41.15
Soybeans (bushel)	25.07	-	-	30.50
Wheat, Durum (bushel)	50.56	-	-	54.88
Corn (bushel)	71.31	-	-	-
Sunflowers (cwt)	19.00	-	-	21.65
Hay, Mixed Alfalfa/Grass (ton)	1.21	-	0.834	-
Hay, Small Grain (ton)	2.49	-	-	-
Hay, Alfalfa (ton)	1.47	-	-	-
Hay, Grass (ton)	1.09	-	0.652	-
Canola (cwt)	18.61	-	19.84	-
Lentils (cwt)	20.63	-	-	20.63
Peas, Field (bushel)	35.84	-	-	35.84

Household and Personal Expenses
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>
Number of farms	9
Average family size	2.7
Family Living Expenses	
Food and meals expense	9,232
Medical care	5,362
Health insurance	9,296
Cash donations	1,624
Household supplies	5,281
Clothing	1,503
Personal care	1,837
Child / Dependent care	168
Alimony and child support	-
Gifts	1,044
Education	219
Recreation	2,465
Utilities (household share)	3,803
Personal vehicle operating exp	1,825
Household real estate taxes	-
Dwelling rent	667
Household repairs	775
Personal interest	1,473
Disability / Long term care ins	310
Life insurance payments	3,305
Personal property insurance	362
Miscellaneous	10,534
Total cash family living expense	61,057
Family living from the farm	1,106
Total family living	62,163
Other Nonfarm Expenditures	
Income taxes	2,486
Furnishing & appliance purchases	764
Nonfarm vehicle purchases	7,401
Nonfarm real estate purchases	-
Other nonfarm capital purchases	1,209
Nonfarm savings & investments	1,581
Total other nonfarm expenditures	13,441
Total cash family living investment & nonfarm capital purch	74,498

Operator and Labor Information
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Operator Information				
Average number of operators	1.1	1.0	1.0	1.3
Average age of operators	49.9	45.8	49.8	53.3
Average number of years farming	24.1	19.1	22.3	30.7
Results Per Operator				
Working capital	370,538	68,898	145,825	972,004
Total assets (market)	3,254,259	1,485,627	3,304,858	5,410,037
Total liabilities	769,770	476,966	808,554	1,202,898
Net worth (market)	2,484,489	1,008,662	2,496,304	4,207,139
Net worth excl deferred liabs	2,505,591	1,008,662	2,496,304	4,243,090
Gross farm income	897,896	226,511	656,777	2,148,466
Total farm expense	664,550	241,263	561,841	1,422,922
Net farm income from operations	233,346	-14,752	94,937	725,544
Net nonfarm income	44,844	71,575	46,594	36,222
Family living & tax withdrawals	61,814	50,626	61,409	84,712
Total acres owned	1,104.1	710.3	1,377.1	1,085.5
Total crop acres	1,858.1	818.7	1,654.2	3,208.7
Crop acres owned	554.8	219.7	415.8	793.4
Crop acres cash rented	1,213.0	556.6	1,056.8	2,371.6
Crop acres share rented	90.4	42.4	181.6	43.7
Total pasture acres	1,149.1	953.2	1,447.1	802.7
Labor Analysis				
Number of farms	40	8	8	8
Total unpaid labor hours	2,309	2,225	2,300	2,369
Total hired labor hours	1,556	115	1,283	5,689
Total labor hours per farm	3,865	2,340	3,583	8,058
Unpaid hours per operator	2,148	2,225	2,300	1,895
Value of farm production / hour	229.18	89.11	171.19	297.64
Net farm income / unpaid hour	108.65	-6.63	41.28	382.87
Average hourly hired labor wage	24.39	17.00	20.67	26.54

Nonfarm Summary
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	8	8	8
Nonfarm Income				
Personal wages & salary	22,503	40,510	16,900	10,054
Net nonfarm business income	3,595	19	15,373	-
Personal rental income	374	750	650	-
Personal interest income	77	28	203	96
Personal cash dividends	378	-	-	33
Tax refunds	2,251	7,397	954	908
Other nonfarm income	19,030	22,871	12,514	34,187
Total nonfarm income	48,207	71,575	46,594	45,278
Gifts and inheritances	1,761	273	2,280	-

Financial Summary
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Gross Farm Income)

	<u>Avg. Of All Farms</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>	<u>Over 2,000,000</u>
Number of farms	40	6	12	9	6	5
Income Statement						
Gross cash farm income	860,689	180,204	369,873	774,004	1,209,599	2,901,103
Total cash farm expense	677,283	133,777	282,251	635,299	843,589	2,398,554
Net cash farm income	183,406	46,427	87,622	138,705	366,010	502,550
Inventory change	127,941	2,722	-36,737	152,051	166,719	636,933
Depreciation	-60,499	-12,939	-25,090	-90,277	-87,345	-138,119
Net farm income from operations	250,847	36,210	25,795	200,478	445,384	1,001,364
Gain or loss on capital sales	186	410	1,581	1,644	16,643	-25,730
Average net farm income	251,033	36,620	27,376	202,122	462,026	975,634
Median net farm income	105,634	41,111	27,984	176,637	392,158	356,712
Profitability (cost)						
Rate of return on assets	10.1 %	2.6 %	0.5 %	7.5 %	11.0 %	22.5 %
Rate of return on equity	13.3 %	1.3 %	-1.2 %	8.6 %	15.0 %	34.0 %
Operating profit margin	24.5 %	10.7 %	2.3 %	19.3 %	33.3 %	29.4 %
Asset turnover rate	41.3 %	23.9 %	20.9 %	38.6 %	33.1 %	76.6 %
Profitability (market)						
Rate of return on assets	8.4 %	2.7 %	0.9 %	6.3 %	9.3 %	21.1 %
Rate of return on equity	9.9 %	2.2 %	0.0 %	6.8 %	11.2 %	29.3 %
Operating profit margin	28.3 %	22.2 %	6.0 %	23.8 %	36.9 %	32.5 %
Asset turnover rate	29.8 %	12.1 %	14.4 %	26.3 %	25.2 %	64.9 %
Liquidity & Repayment (end of year)						
Current assets	667,175	143,595	222,812	865,191	1,097,313	1,737,850
Current liabilities	268,846	31,291	117,258	366,026	381,627	705,334
Current ratio	2.48	4.59	1.90	2.36	2.88	2.46
Working capital	398,329	112,303	105,554	499,165	715,686	1,032,516
Change in working capital	161,457	46,868	12,929	117,237	278,394	650,795
Working capital to gross inc	41.3 %	62.1 %	32.3 %	54.5 %	54.2 %	29.9 %
Term debt coverage ratio	3.45	2.16	1.70	3.17	3.39	4.63
Replacement coverage ratio	2.47	1.46	1.18	2.03	2.18	4.07
Term debt to EBITDA	1.41	3.39	4.08	1.41	1.67	0.67
Solvency (end of year at cost)						
Number of farms	40	6	12	9	6	5
Total assets	2,610,389	777,976	1,837,875	2,807,737	4,534,198	4,852,180
Total liabilities	804,818	278,424	447,867	903,312	1,480,924	1,488,428
Net worth	1,805,571	499,553	1,390,008	1,904,425	3,053,274	3,363,752
Net worth change	246,147	33,276	42,640	175,558	440,285	974,617
Farm debt to asset ratio	34 %	38 %	29 %	35 %	34 %	33 %
Total debt to asset ratio	31 %	36 %	24 %	32 %	33 %	31 %
Change in earned net worth %	16 %	7 %	3 %	10 %	17 %	41 %
Solvency (end of year at market)						
Number of farms	40	6	12	9	6	5
Total assets	3,498,328	1,448,136	2,566,612	3,965,642	5,842,832	5,609,251
Total liabilities	827,503	278,424	447,867	1,004,134	1,480,924	1,488,428
Net worth	2,670,825	1,169,712	2,118,746	2,961,508	4,361,908	4,120,822
Total net worth change	294,688	51,968	71,606	236,154	516,618	1,067,573
Farm debt to asset ratio	25 %	19 %	20 %	27 %	26 %	28 %
Total debt to asset ratio	24 %	19 %	17 %	25 %	25 %	27 %
Change in total net worth %	12 %	5 %	3 %	9 %	13 %	35 %
Nonfarm Information						
Net nonfarm income	48,207	45,803	62,992	33,530	67,805	23,893
Farms reporting living expenses	9	2	3	-	2	1
Total family living expense	62,163	-	-	-	-	-
Total living, invest, cap. purch	74,498	-	-	-	-	-
Crop Acres						
Total crop acres	1,997	313	1,029	2,713	3,299	4,101
Total crop acres owned	596	203	355	838	1,584	153
Total crop acres cash rented	1,304	110	515	1,749	1,600	3,949
Total crop acres share rented	97	-	159	126	115	-
Machinery value per crop acre	341	449	302	345	438	264

Financial Summary
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Age of Operator)

	<u>Avg. Of All Farms</u>	<u>31 - 40</u>	<u>51 - 60</u>	<u>Over 60</u>
Number of farms	40	10	10	14
Income Statement				
Gross cash farm income	860,689	878,862	792,949	1,125,054
Total cash farm expense	677,283	638,296	604,318	934,434
Net cash farm income	183,406	240,566	188,632	190,620
Inventory change	127,941	262,193	49,767	150,605
Depreciation	-60,499	-40,817	-66,197	-85,871
Net farm income from operations	250,847	461,943	172,202	255,354
Gain or loss on capital sales	186	-1,524	-10,195	8,326
Average net farm income	251,033	460,419	162,007	263,680
Median net farm income	105,634	152,178	112,204	127,883
Profitability (cost)				
Rate of return on assets	10.1 %	26.2 %	5.6 %	7.7 %
Rate of return on equity	13.3 %	43.7 %	5.9 %	9.6 %
Operating profit margin	24.5 %	37.4 %	19.2 %	20.1 %
Asset turnover rate	41.3 %	70.1 %	29.3 %	38.6 %
Profitability (market)				
Rate of return on assets	8.4 %	23.6 %	5.2 %	6.8 %
Rate of return on equity	9.9 %	35.8 %	5.3 %	7.7 %
Operating profit margin	28.3 %	38.8 %	23.7 %	25.5 %
Asset turnover rate	29.8 %	60.9 %	22.0 %	26.5 %
Liquidity & Repayment (end of year)				
Current assets	667,175	818,427	627,767	770,777
Current liabilities	268,846	292,124	244,398	322,326
Current ratio	2.48	2.80	2.57	2.39
Working capital	398,329	526,303	383,369	448,451
Change in working capital	161,457	299,332	126,140	131,324
Working capital to gross inc	41.3 %	45.5 %	48.9 %	36.4 %
Term debt coverage ratio	3.45	6.86	2.95	2.56
Replacement coverage ratio	2.47	5.60	2.26	1.69
Term debt to EBITDA	1.41	0.79	1.52	1.62
Solvency (end of year at cost)				
Number of farms	40	10	10	14
Total assets	2,610,389	1,990,937	3,051,474	3,399,266
Total liabilities	804,818	736,417	673,194	998,795
Net worth	1,805,571	1,254,520	2,378,280	2,400,470
Net worth change	246,147	488,640	172,644	219,827
Farm debt to asset ratio	34 %	38 %	25 %	32 %
Total debt to asset ratio	31 %	37 %	22 %	29 %
Change in earned net worth %	16 %	64 %	8 %	10 %
Solvency (end of year at market)				
Number of farms	40	10	10	14
Total assets	3,498,328	2,273,936	4,020,375	4,727,985
Total liabilities	827,503	736,417	673,194	1,063,609
Net worth	2,670,825	1,537,519	3,347,181	3,664,376
Total net worth change	294,688	516,366	231,929	293,646
Farm debt to asset ratio	25 %	34 %	19 %	24 %
Total debt to asset ratio	24 %	32 %	17 %	22 %
Change in total net worth %	12 %	51 %	7 %	9 %
Nonfarm Information				
Net nonfarm income	48,207	47,475	59,148	46,711
Farms reporting living expenses	9	3	2	3
Total family living expense	62,163	-	-	-
Total living, invest, cap. purch	74,498	-	-	-
Crop Acres				
Total crop acres	1,997	1,756	2,050	2,512
Total crop acres owned	596	156	702	997
Total crop acres cash rented	1,304	1,541	1,208	1,449
Total crop acres share rented	97	59	141	66
Machinery value per crop acre	341	198	325	433

Financial Summary
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	40	17	5	6	10
Income Statement					
Gross cash farm income	860,689	1,118,889	254,992	503,570	505,421
Total cash farm expense	677,283	892,805	172,521	379,195	344,803
Net cash farm income	183,406	226,085	82,471	124,374	160,619
Inventory change	127,941	137,937	-17,381	-3,059	253,892
Depreciation	-60,499	-89,908	-10,451	-43,301	-26,562
Net farm income from operations	250,847	274,113	54,638	78,015	387,948
Gain or loss on capital sales	186	11	-139	1,133	-1,153
Average net farm income	251,033	274,124	54,500	79,148	386,795
Median net farm income	105,634	272,217	20,154	33,839	52,544
Profitability (cost)					
Rate of return on assets	10.1 %	8.7 %	3.4 %	4.0 %	21.2 %
Rate of return on equity	13.3 %	11.3 %	4.1 %	2.7 %	28.2 %
Operating profit margin	24.5 %	19.4 %	9.3 %	17.3 %	50.7 %
Asset turnover rate	41.3 %	45.0 %	37.2 %	22.9 %	41.8 %
Profitability (market)					
Rate of return on assets	8.4 %	8.0 %	5.4 %	2.2 %	13.3 %
Rate of return on equity	9.9 %	9.5 %	6.7 %	0.7 %	15.3 %
Operating profit margin	28.3 %	24.3 %	18.5 %	13.2 %	51.5 %
Asset turnover rate	29.8 %	32.9 %	29.4 %	16.7 %	25.8 %
Liquidity & Repayment (end of year)					
Current assets	667,175	918,332	197,961	448,731	609,612
Current liabilities	268,846	399,014	65,355	284,919	97,470
Current ratio	2.48	2.30	3.03	1.57	6.25
Working capital	398,329	519,318	132,606	163,812	512,142
Change in working capital	161,457	168,263	3,091	79,463	299,138
Working capital to gross inc	41.3 %	43.2 %	47.9 %	33.1 %	68.2 %
Term debt coverage ratio	3.45	3.09	2.64	2.55	8.98
Replacement coverage ratio	2.47	2.07	2.50	1.96	5.41
Term debt to EBITDA	1.41	1.37	2.13	2.72	0.88
Solvency (end of year at cost)					
Number of farms	40	17	5	6	10
Total assets	2,610,389	3,252,347	792,228	2,352,954	2,143,237
Total liabilities	804,818	1,022,725	265,001	865,775	476,773
Net worth	1,805,571	2,229,622	527,227	1,487,179	1,666,464
Net worth change	246,147	243,422	66,754	91,363	401,702
Farm debt to asset ratio	34 %	35 %	33 %	39 %	26 %
Total debt to asset ratio	31 %	31 %	33 %	37 %	22 %
Change in earned net worth %	16 %	12 %	14 %	7 %	32 %
Solvency (end of year at market)					
Number of farms	40	17	5	6	10
Total assets	3,498,328	4,304,439	998,704	3,118,543	3,237,723
Total liabilities	827,503	1,076,102	265,001	865,775	476,773
Net worth	2,670,825	3,228,337	733,703	2,252,768	2,760,950
Total net worth change	294,688	317,995	110,389	71,421	427,720
Farm debt to asset ratio	25 %	27 %	26 %	28 %	16 %
Total debt to asset ratio	24 %	25 %	27 %	28 %	15 %
Change in total net worth %	12 %	11 %	18 %	3 %	18 %
Nonfarm Information					
Net nonfarm income	48,207	53,063	28,106	52,942	44,012
Farms reporting living expenses	9	3	1	1	4
Total family living expense	62,163	-	-	-	-
Total living, invest, cap. purch	74,498	-	-	-	-
Crop Acres					
Total crop acres	1,997	3,556	438	1,515	630
Total crop acres owned	596	944	126	634	300
Total crop acres cash rented	1,304	2,512	312	737	197
Total crop acres share rented	97	100	-	144	133
Machinery value per crop acre	341	313	296	277	434

EXPLANATORY NOTES FOR CROPS TABLES

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

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

Coronavirus Food Assistance Program 2, a 2020 USDA FSA program that provides producers with financial assistance that gives them the ability to absorb some of the increased marketing costs associated with the COVID-19 pandemic, are included under "Other crop income per acre." "Government payments" are ARC and PLC payments as well as Coronavirus Food Assistance Program 1.

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

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

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

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

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Corn on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	8
Acres	156.70
Yield per acre (bu.)	77.68
Operators share of yield %	100.00
Value per bu.	3.72
Total product return per acre	288.69
Crop insurance per acre	19.74
Other crop income per acre	23.80
Gross return per acre	332.23
Direct Expenses	
Seed and plants	78.77
Fertilizer	82.17
Crop chemicals	27.84
Crop insurance	18.94
Storage	0.11
Fuel & oil	9.63
Repairs	35.97
Custom hire	5.92
Hired labor	0.86
Operating interest	8.18
Miscellaneous	0.64
Total direct expenses per acre	269.04
Return over direct exp per acre	63.18
Overhead Expenses	
Custom hire	7.07
Hired labor	7.99
Machinery leases	0.33
Building leases	0.15
RE & pers. property taxes	4.78
Farm insurance	7.06
Utilities	3.66
Dues & professional fees	0.30
Interest	26.30
Mach & bldg depreciation	38.15
Miscellaneous	11.84
Total overhead expenses per acre	107.62
Total dir & ovhd expenses per acre	376.66
Net return per acre	-44.43
Government payments	11.48
Net return with govt pmts	-32.95
Labor & management charge	36.02
Net return over lbr & mgt	-68.98
Cost of Production	
Total direct expense per bu.	3.46
Total dir & ovhd exp per bu.	4.85
Less govt & other income	4.14
With labor & management	4.60
Net value per unit	3.72
Machinery cost per acre	95.70
Est. labor hours per acre	1.60

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Corn on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	8
Acres	480.18
Yield per acre (bu.)	69.23
Operators share of yield %	100.00
Value per bu.	3.67
Total product return per acre	253.90
Crop insurance per acre	34.97
Other crop income per acre	29.16
Gross return per acre	318.02
Direct Expenses	
Seed and plants	69.87
Fertilizer	66.09
Crop chemicals	21.34
Crop insurance	11.27
Storage	0.33
Fuel & oil	11.87
Repairs	39.62
Custom hire	6.23
Hired labor	0.68
Land rent	42.95
Machinery leases	1.56
Operating interest	11.21
Miscellaneous	0.53
Total direct expenses per acre	283.55
Return over direct exp per acre	34.47
Overhead Expenses	
Custom hire	8.11
Hired labor	14.21
Building leases	0.28
Farm insurance	5.11
Utilities	3.27
Dues & professional fees	0.37
Interest	4.38
Mach & bldg depreciation	25.57
Miscellaneous	3.83
Total overhead expenses per acre	65.13
Total dir & ovhd expenses per acre	348.68
Net return per acre	-30.66
Government payments	13.53
Net return with govt pmts	-17.13
Labor & management charge	33.28
Net return over lbr & mgt	-50.40
Cost of Production	
Total direct expense per bu.	4.10
Total dir & ovhd exp per bu.	5.04
Less govt & other income	3.91
With labor & management	4.40
Net value per unit	3.67
Machinery cost per acre	95.04
Est. labor hours per acre	1.47

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Hay, Mixed Alfalfa/Grass on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	7
Acres	136.42
Yield per acre (ton)	0.79
Operators share of yield %	100.00
Value per ton	58.44
Total product return per acre	46.20
Crop insurance per acre	12.38
Other crop income per acre	2.06
Gross return per acre	60.64
Direct Expenses	
Seed and plants	0.19
Cover crop expense	0.60
Crop insurance	1.47
Fuel & oil	5.93
Repairs	15.16
Custom hire	0.62
Operating interest	1.70
Miscellaneous	0.16
Total direct expenses per acre	25.83
Return over direct exp per acre	34.81
Overhead Expenses	
Custom hire	0.20
Hired labor	1.29
Building leases	0.07
RE & pers. property taxes	5.31
Farm insurance	1.58
Utilities	1.44
Dues & professional fees	0.58
Interest	10.76
Mach & bldg depreciation	17.12
Miscellaneous	5.57
Total overhead expenses per acre	43.92
Total dir & ovhd expenses per acre	69.75
Net return per acre	-9.11
Government payments	0.95
Net return with govt pmts	-8.16
Labor & management charge	23.49
Net return over lbr & mgt	-31.65
Cost of Production	
Total direct expense per ton	32.68
Total dir & ovhd exp per ton	88.25
Less govt & other income	68.76
With labor & management	98.49
Net value per unit	58.44
Machinery cost per acre	39.55
Est. labor hours per acre	1.09

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Hay, Small Grain on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	81.92
Yield per acre (ton)	2.71
Operators share of yield %	100.00
Value per ton	64.79
Total product return per acre	175.43
Other crop income per acre	9.71
Gross return per acre	185.14
Direct Expenses	
Seed and plants	17.28
Fertilizer	31.84
Crop chemicals	8.24
Crop insurance	2.37
Fuel & oil	5.87
Repairs	21.68
Custom hire	3.65
Hired labor	0.72
Operating interest	4.67
Miscellaneous	0.04
Total direct expenses per acre	96.35
Return over direct exp per acre	88.79
Overhead Expenses	
Custom hire	1.10
Hired labor	6.06
RE & pers. property taxes	4.64
Farm insurance	5.47
Utilities	2.27
Dues & professional fees	0.55
Interest	11.79
Mach & bldg depreciation	14.14
Miscellaneous	5.49
Total overhead expenses per acre	51.50
Total dir & ovhd expenses per acre	147.86
Net return per acre	37.29
Government payments	8.24
Net return with govt pmts	45.52
Labor & management charge	15.84
Net return over lbr & mgt	29.69
Cost of Production	
Total direct expense per ton	35.58
Total dir & ovhd exp per ton	54.60
Less govt & other income	47.98
With labor & management	53.82
Net value per unit	64.79
Machinery cost per acre	46.51
Est. labor hours per acre	1.06

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Pasture on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	9
Acres	1,481.06
Yield per acre (aum)	0.59
Operators share of yield %	100.00
Value per aum	18.14
Total product return per acre	10.67
Crop insurance per acre	0.03
Gross return per acre	10.70
 Direct Expenses	
Crop insurance	0.07
Repairs	0.82
Miscellaneous	0.39
Total direct expenses per acre	1.28
Return over direct exp per acre	9.42
 Overhead Expenses	
RE & pers. property taxes	2.17
Interest	5.22
Mach & bldg depreciation	0.55
Miscellaneous	0.70
Total overhead expenses per acre	8.64
Total dir & ovhd expenses per acre	9.92
Net return per acre	0.78
 Government payments	
Net return with govt pmts	-
Labor & management charge	0.78
Net return over lbr & mgt	0.74
 Cost of Production	
Total direct expense per aum	-
Total dir & ovhd exp per aum	2.18
Less govt & other income	16.86
With labor & management	16.80
Net value per unit	18.07
Machinery cost per acre	18.14
Est. labor hours per acre	1.68
	0.05

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Pasture on Cash Rent

	Avg. Of All Farms
Number of farms	9
Acres	1,659.11
Yield per acre (aum)	0.65
Operators share of yield %	100.00
Value per aum	20.70
Total product return per acre	13.36
Crop insurance per acre	0.17
Gross return per acre	13.53
Direct Expenses	
Crop insurance	0.24
Repairs	0.79
Land rent	16.01
Miscellaneous	0.44
Total direct expenses per acre	17.48
Return over direct exp per acre	-3.95
Overhead Expenses	
Mach & bldg depreciation	0.60
Miscellaneous	0.69
Total overhead expenses per acre	1.29
Total dir & ovhd expenses per acre	18.77
Net return per acre	-5.23
Government payments	-
Net return with govt pmts	-5.23
Labor & management charge	0.94
Net return over lbr & mgt	-6.17
Cost of Production	
Total direct expense per aum	27.09
Total dir & ovhd exp per aum	29.08
Less govt & other income	28.81
With labor & management	30.26
Net value per unit	20.70
Machinery cost per acre	1.79
Est. labor hours per acre	0.06

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Soybeans on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	9
Acres	908.89
Yield per acre (bu.)	25.14
Operators share of yield %	100.00
Value per bu.	9.95
Total product return per acre	250.07
Crop insurance per acre	41.61
Other crop income per acre	19.42
Gross return per acre	311.10
Direct Expenses	
Seed and plants	51.21
Fertilizer	14.47
Crop chemicals	30.45
Crop insurance	15.18
Storage	0.44
Fuel & oil	7.33
Repairs	25.91
Custom hire	12.91
Hired labor	0.78
Land rent	45.50
Machinery leases	3.07
Operating interest	4.70
Miscellaneous	0.55
Total direct expenses per acre	212.48
Return over direct exp per acre	98.61
Overhead Expenses	
Custom hire	2.93
Hired labor	9.56
Farm insurance	4.09
Utilities	3.44
Dues & professional fees	0.99
Interest	3.63
Mach & bldg depreciation	25.20
Miscellaneous	3.60
Total overhead expenses per acre	53.45
Total dir & ovhd expenses per acre	265.94
Net return per acre	45.16
Government payments	20.44
Net return with govt pmts	65.60
Labor & management charge	23.08
Net return over lbr & mgt	42.52
Cost of Production	
Total direct expense per bu.	8.45
Total dir & ovhd exp per bu.	10.58
Less govt & other income	7.34
With labor & management	8.26
Net value per unit	9.95
Machinery cost per acre	78.99
Est. labor hours per acre	1.25

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Sunflowers on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	11
Acres	684.81
Yield per acre (cwt.)	19.41
Operators share of yield %	100.00
Value per cwt.	19.61
Other product return per acre	1.90
Total product return per acre	382.60
Crop insurance per acre	1.94
Other crop income per acre	24.94
Gross return per acre	409.48
Direct Expenses	
Seed and plants	35.18
Fertilizer	35.19
Crop chemicals	34.83
Crop insurance	11.87
Storage	0.70
Fuel & oil	8.89
Repairs	20.60
Custom hire	12.22
Hired labor	0.91
Land rent	44.08
Machinery leases	3.26
Operating interest	4.51
Miscellaneous	0.74
Total direct expenses per acre	213.00
Return over direct exp per acre	196.49
Overhead Expenses	
Custom hire	5.39
Hired labor	9.92
Building leases	0.27
Farm insurance	4.12
Utilities	3.45
Dues & professional fees	0.37
Interest	2.40
Mach & bldg depreciation	24.23
Miscellaneous	5.19
Total overhead expenses per acre	55.35
Total dir & ovhd expenses per acre	268.34
Net return per acre	141.14
Government payments	13.41
Net return with govt pmts	154.55
Labor & management charge	21.74
Net return over lbr & mgt	132.81
Cost of Production	
Total direct expense per cwt.	10.97
Total dir & ovhd exp per cwt.	13.82
Less govt & other income	11.65
With labor & management	12.77
Net value per unit	19.61
Machinery cost per acre	74.65
Est. labor hours per acre	1.21

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Wheat, Spring on Owned Land

	Avg. Of All Farms
Number of farms	12
Acres	798.96
Yield per acre (bu.)	38.95
Operators share of yield %	100.00
Value per bu.	5.09
Total product return per acre	198.27
Hedging gains/losses per acre	0.52
Crop insurance per acre	25.46
Other crop income per acre	30.59
Gross return per acre	254.83
Direct Expenses	
Seed and plants	12.82
Fertilizer	45.89
Crop chemicals	28.46
Crop insurance	14.03
Storage	0.81
Fuel & oil	7.51
Repairs	16.87
Custom hire	4.51
Hired labor	0.13
Operating interest	3.25
Miscellaneous	0.52
Total direct expenses per acre	134.80
Return over direct exp per acre	120.03
Overhead Expenses	
Custom hire	1.58
Hired labor	7.28
RE & pers. property taxes	4.57
Farm insurance	4.94
Utilities	2.50
Dues & professional fees	0.40
Interest	15.48
Mach & bldg depreciation	32.24
Miscellaneous	5.66
Total overhead expenses per acre	74.65
Total dir & ovhd expenses per acre	209.45
Net return per acre	45.38
Government payments	19.30
Net return with govt pmts	64.68
Labor & management charge	21.35
Net return over lbr & mgt	43.33
Cost of Production	
Total direct expense per bu.	3.46
Total dir & ovhd exp per bu.	5.38
Less govt & other income	3.43
With labor & management	3.98
Net value per unit	5.10
Machinery cost per acre	61.33
Est. labor hours per acre	0.96

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Wheat, Spring on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	13
Acres	1,122.67
Yield per acre (bu.)	44.03
Operators share of yield %	100.00
Value per bu.	5.03
Total product return per acre	221.40
Hedging gains/losses per acre	0.69
Crop insurance per acre	12.76
Other crop income per acre	23.92
Gross return per acre	258.77
Direct Expenses	
Seed and plants	15.07
Fertilizer	44.05
Crop chemicals	29.56
Crop insurance	12.49
Storage	1.58
Fuel & oil	7.79
Repairs	18.29
Custom hire	11.07
Hired labor	0.68
Land rent	43.13
Machinery leases	1.48
Operating interest	4.20
Miscellaneous	0.53
Total direct expenses per acre	189.92
Return over direct exp per acre	68.84
Overhead Expenses	
Custom hire	3.82
Hired labor	6.92
Building leases	0.15
Farm insurance	4.24
Utilities	2.88
Dues & professional fees	0.38
Interest	2.52
Mach & bldg depreciation	21.89
Miscellaneous	3.93
Total overhead expenses per acre	46.71
Total dir & ovhd expenses per acre	236.63
Net return per acre	22.14
Government payments	14.09
Net return with govt pmts	36.22
Labor & management charge	19.94
Net return over lbr & mgt	16.28
Cost of Production	
Total direct expense per bu.	4.31
Total dir & ovhd exp per bu.	5.37
Less govt & other income	4.21
With labor & management	4.66
Net value per unit	5.04
Machinery cost per acre	64.44
Est. labor hours per acre	0.89

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Wheat, Spring on Share Rent

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	242.81
Yield per acre (bu.)	46.21
Operators share of yield %	72.76
Value per bu.	5.18
Total product return per acre	174.30
Crop insurance per acre	1.62
Other crop income per acre	29.18
Gross return per acre	205.10
Direct Expenses	
Seed and plants	12.82
Fertilizer	60.50
Crop chemicals	26.74
Crop insurance	9.57
Storage	2.05
Fuel & oil	7.38
Repairs	13.15
Custom hire	17.53
Operating interest	2.08
Miscellaneous	0.32
Total direct expenses per acre	152.14
Return over direct exp per acre	52.97
Overhead Expenses	
Hired labor	5.14
Building leases	0.44
Farm insurance	2.65
Utilities	1.56
Dues & professional fees	0.81
Interest	1.82
Mach & bldg depreciation	19.93
Miscellaneous	1.91
Total overhead expenses per acre	34.26
Total dir & ovhd expenses per acre	186.39
Net return per acre	18.71
Government payments	21.23
Net return with govt pmts	39.94
Labor & management charge	17.36
Net return over lbr & mgt	22.58
Cost of Production	
Total direct expense per bu.	4.52
Total dir & ovhd exp per bu.	5.54
Less govt & other income	4.00
With labor & management	4.51
Net value per unit	5.18
Machinery cost per acre	58.22
Est. labor hours per acre	0.91

EXPLANATORY NOTES FOR LIVESTOCK TABLES

The "Livestock Enterprise Analysis" table shows the average physical production, gross returns, direct costs, overhead costs, and net return per unit. All costs are actual costs; no opportunity costs are included. The "Net Return" to the enterprise is the "Gross Margin" minus the direct and overhead costs. "Net Return" represents the return to the operators and family's unpaid labor, management, and equity. It represents the return to all of the resources, which are owned by the farm family and hence, not purchased or paid a wage. The last section of each livestock table contains both economic and technical efficiency measures, which are particularly useful to individual managers in assessing their performance as compared to their peers.

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

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

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

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

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

Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Beef Cow-Calf -- Average Per Cwt. Produced

	<u>Avg. Of All Farms</u>	
Number of farms	11	
	Quantity	Value
Beef Calves sold (lb)	29.46	40.27
Transferred out (lb)	64.26	87.05
Cull sales (lb)	3.32	28.03
Government payments		16.94
Other income		5.18
Purchased (lb)	-3.98	-28.43
Transferred in (lb)	-5.45	-28.66
Inventory change (lb)	12.38	19.79
Gross margin		140.16
Direct Expenses		
Protein Vit Minerals (lb.)	3,171.65	7.55
Corn Silage (lb.)	611.23	9.17
Hay, Alfalfa (lb.)	58.78	2.56
Hay, Grass (lb.)	979.84	29.19
Pasture (aum)	1.44	28.60
Other feed stuffs (lb)	5,324.20	4.28
Veterinary		6.05
Fuel & oil		3.36
Repairs		7.92
Custom hire		1.79
Hired labor		2.13
Marketing		1.71
Operating interest		1.87
Miscellaneous		2.77
Total direct expenses		108.96
Return over direct expense		31.20
Overhead Expenses		
Farm insurance		2.45
Utilities		1.56
Interest		4.58
Mach & bldg depreciation		7.32
Miscellaneous		3.83
Total overhead expenses		19.74
Total dir & ovhd expenses		128.70
Net return		11.46
Labor & management charge		13.45
Net return over lbr & mgt		-1.99
Cost of Production Per Cwt. Produced		
Total direct expense per unit		108.96
Total dir & ovhd expense per unit		128.70
With other revenue adjustments		124.80
With labor and management		138.25
Est. labor hours per unit		1.04
Other Information		
Number of cows		157.0
Pregnancy percentage		96.2
Pregnancy loss percentage		2.8
Culling percentage		16.4
Calving percentage		93.5
Weaning percentage		89.5
Calves sold per cow		0.86
Calf death loss percent		3.7
Cow death loss percent		3.1
Cows per FTE		470.0
Average weaning weight		528
Lb. weaned/exposed female		472
Feed cost per cow		464.43
Avg wgt/ Beef Calves sold		663
Avg price / cwt.		136.67

Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

Beef Cow-Calf -- Average Per Cow

	<u>Avg. Of All Farms</u>	
Number of farms	11	
	Quantity	Value
Beef Calves sold (lb)	168.2	229.90
Transferred out (lb)	366.9	496.95
Cull sales (lb)	19.0	160.01
Government payments		96.72
Other income		29.57
Purchased (lb)	-22.7	-162.32
Transferred in (lb)	-31.1	-163.62
Inventory change (lb)	70.7	112.97
Gross margin		800.18
Direct Expenses		
Protein Vit Minerals (lb.)	18,107.4	43.11
Aftermath Grazing (aum)	0.5	11.69
Corn Silage (lb.)	3,489.6	52.34
Hay, Alfalfa (lb.)	335.6	14.61
Hay, Grass (lb.)	5,594.0	166.62
Pasture (aum)	8.2	163.30
Other feed stuffs (lb)	30,396.1	12.74
Veterinary		34.56
Fuel & oil		19.21
Repairs		45.24
Custom hire		10.22
Hired labor		12.18
Marketing		9.74
Operating interest		10.65
Miscellaneous		15.84
Total direct expenses		622.05
Return over direct expense		178.13
Overhead Expenses		
Farm insurance		14.00
Interest		26.14
Mach & bldg depreciation		41.78
Miscellaneous		30.79
Total overhead expenses		112.72
Total dir & ovhd expenses		734.77
Net return		65.41
Labor & management charge		76.80
Net return over lbr & mgt		-11.39
Cost of Production Per Cwt. Produced		
Total direct expense per unit		108.96
Total dir & ovhd expense per unit		128.70
With other revenue adjustments		124.80
With labor and management		138.25
Est. labor hours per unit		5.96
Other Information		
Number of cows		157.0
Pregnancy percentage		96.2
Pregnancy loss percentage		2.8
Culling percentage		16.4
Calving percentage		93.5
Weaning percentage		89.5
Calves sold per cow		0.86
Calf death loss percent		3.7
Cow death loss percent		3.1
Cows per FTE		470.0
Average weaning weight		528
Lb. weaned/exposed female		472
Feed cost per cow		464.43
Avg wgt/ Beef Calves sold		663
Avg price / cwt.		136.67

Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(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	7	
	Quantity	Value
Beef Calves sold (lb)	29.75	39.14
Transferred out (lb)	61.38	77.88
Cull sales (lb)	-	29.60
Government payments		17.80
Other income		7.57
Purchased (lb)	-4.84	-32.37
Transferred in (lb)	-3.51	-20.55
Inventory change (lb)	17.23	26.75
Gross margin		145.81
Direct Expenses		
Protein Vit Minerals (lb.)	65.99	8.02
Aftermath Grazing (aum)	0.11	2.71
Corn Silage (lb.)	893.61	13.40
Hay, Grass (lb.)	1,065.87	27.99
Pasture (aum)	1.48	32.76
Other feed stuffs (lb)	79.98	2.82
Veterinary		6.57
Supplies		0.88
Fuel & oil		3.81
Repairs		7.67
Custom hire		2.62
Hired labor		3.12
Marketing		2.04
Operating interest		2.36
Miscellaneous		1.45
Total direct expenses		118.21
Return over direct expense		27.60
Overhead Expenses		
Farm insurance		2.56
Interest		6.17
Mach & bldg depreciation		8.76
Miscellaneous		4.54
Total overhead expenses		22.02
Total dir & ovhd expenses		140.23
Net return		5.58
Labor & management charge		11.57
Net return over lbr & mgt		-5.99
Cost of Production Per Cwt. Produced		
Total direct expense per unit		118.21
Total dir & ovhd expense per unit		140.23
With other revenue adjustments		124.42
With labor and management		135.99
Est. labor hours per unit		0.94
Other Information		
Number of cows		162.3
Pregnancy percentage		96.1
Pregnancy loss percentage		3.4
Culling percentage		16.6
Calving percentage		92.8
Weaning percentage		89.3
Calves sold per cow		0.83
Calf death loss percent		3.7
Cow death loss percent		2.6
Cows per FTE		504.1
Average weaning weight		521
Lb. weaned/exposed female		465
Feed cost per cow		520.65
Avg wgt/ Beef Calves sold		718
Avg price / cwt.		131.58

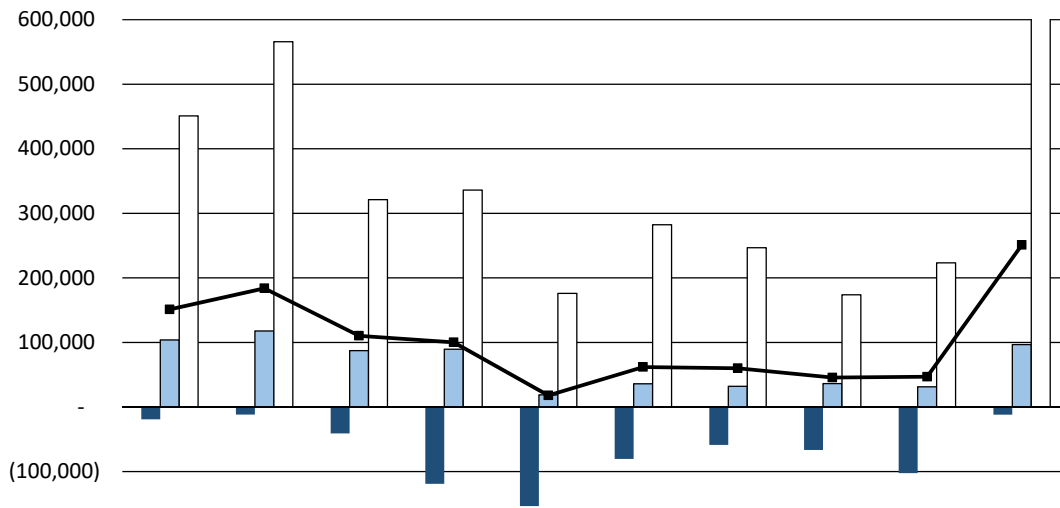
Livestock Enterprise Analysis
North Dakota Farm Business Management Education Program
Region 4 - Western North Dakota, 2020
(Farms Sorted By Net Return)

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

	<u>Avg. Of All Farms</u>	
Number of farms	7	
	Quantity	Value
Beef Calves sold (lb)	176.6	232.37
Transferred out (lb)	364.4	462.36
Cull sales (lb)	-	175.70
Government payments		105.65
Other income		44.95
Purchased (lb)	-28.8	-192.20
Transferred in (lb)	-20.9	-121.98
Inventory change (lb)	102.3	158.78
Gross margin		865.63
Direct Expenses		
Protein Vit Minerals (lb.)	391.8	47.62
Aftermath Grazing (aum)	0.6	16.08
Corn Silage (lb.)	5,305.0	79.58
Hay, Grass (lb.)	6,327.7	166.16
Pasture (aum)	8.8	194.49
Other feed stuffs (lb)	474.8	16.72
Veterinary		38.99
Supplies		5.20
Fuel & oil		22.59
Repairs		45.54
Custom hire		15.54
Hired labor		18.51
Utilities		8.59
Marketing		12.13
Operating interest		14.01
Miscellaneous		-
Total direct expenses		701.77
Return over direct expense		163.87
Overhead Expenses		
Interest		36.60
Mach & bldg depreciation		52.02
Miscellaneous		42.12
Total overhead expenses		130.74
Total dir & ovhd expenses		832.51
Net return		33.12
Labor & management charge		68.69
Net return over lbr & mgt		-35.56
Cost of Production Per Cwt. Produced		
Total direct expense per unit		118.21
Total dir & ovhd expense per unit		140.23
With other revenue adjustments		124.42
With labor and management		135.99
Est. labor hours per unit		5.55
Other Information		
Number of cows		162.3
Pregnancy percentage		96.1
Pregnancy loss percentage		3.4
Culling percentage		16.6
Calving percentage		92.8
Weaning percentage		89.3
Calves sold per cow		0.83
Calf death loss percent		3.7
Cow death loss percent		2.6
Cows per FTE		504.1
Average weaning weight		521
Lb. weaned/exposed female		465
Feed cost per cow		520.65
Avg wgt/ Beef Calves sold		718
Avg price / cwt.		131.58

Figure 1. Net Farm Income (Accrual) Per Farm

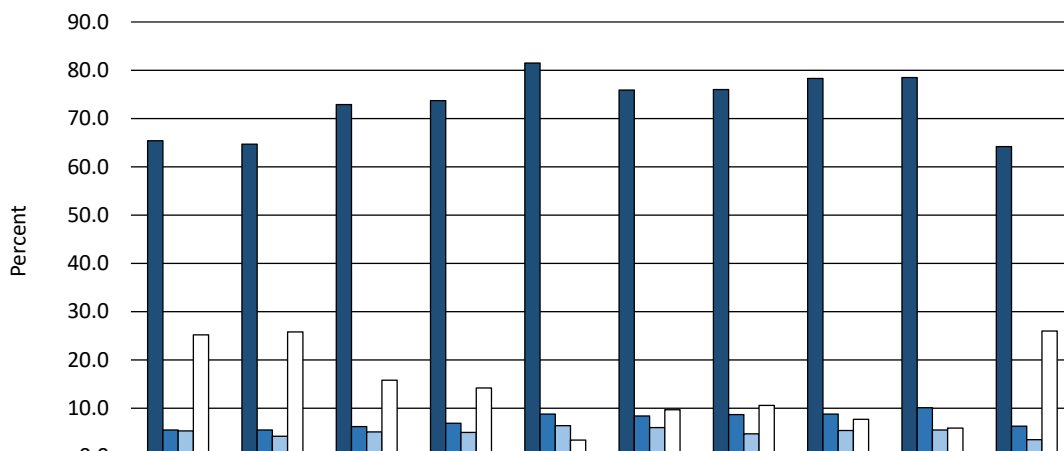
N.D. Farm Business Management Education Program – West Region



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ 20% Low Profit	(19,132)	(11,839)	(41,038)	(119,185)	(153,690)	(80,547)	(58,778)	(66,606)	(102,573)	-12,030
■ Middle 60% Profit	103,851	117,677	87,315	89,422	18,780	35,876	32,102	36,217	31,200	96,678
□ 20% High Profit	450,998	565,893	321,189	335,974	175,995	282,325	246,804	173,784	223,305	901,786
— Average of All	151,100	183,863	110,311	100,155	17,838	61,881	60,043	45,544	46,789	251,033

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

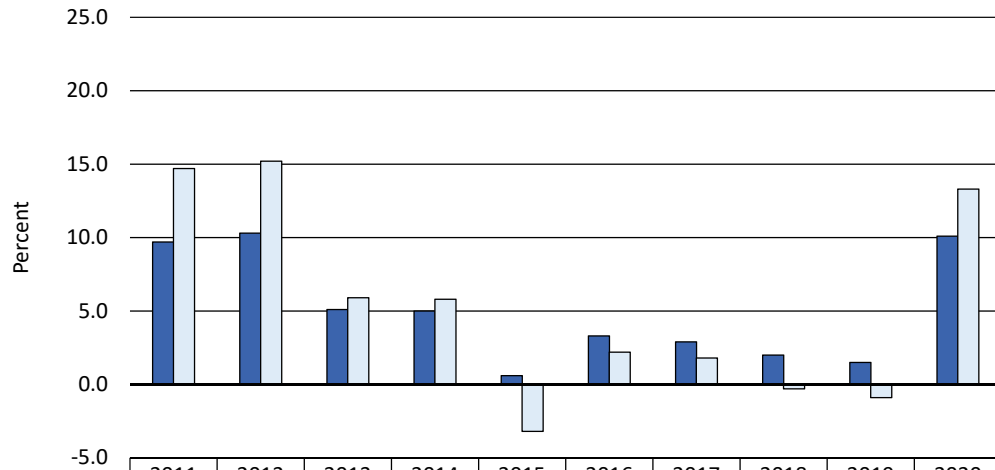
N.D. Farm Business Management Education Program – West Region



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
■ Operating Exp. %	65.4	64.7	72.9	73.7	81.5	75.9	76	78.3	78.5	64.2
■ Depreciation %	5.5	5.5	6.2	6.9	8.8	8.4	8.7	8.8	10.1	6.3
■ Interest Exp. %	5.3	4.2	5.1	5	6.4	6	4.7	5.4	5.5	3.5
□ Net Farm Inc. %	25.2	25.8	15.8	14.2	3.4	9.7	10.6	7.7	5.9	26

Figure 3. Profitability Measures Per Farm

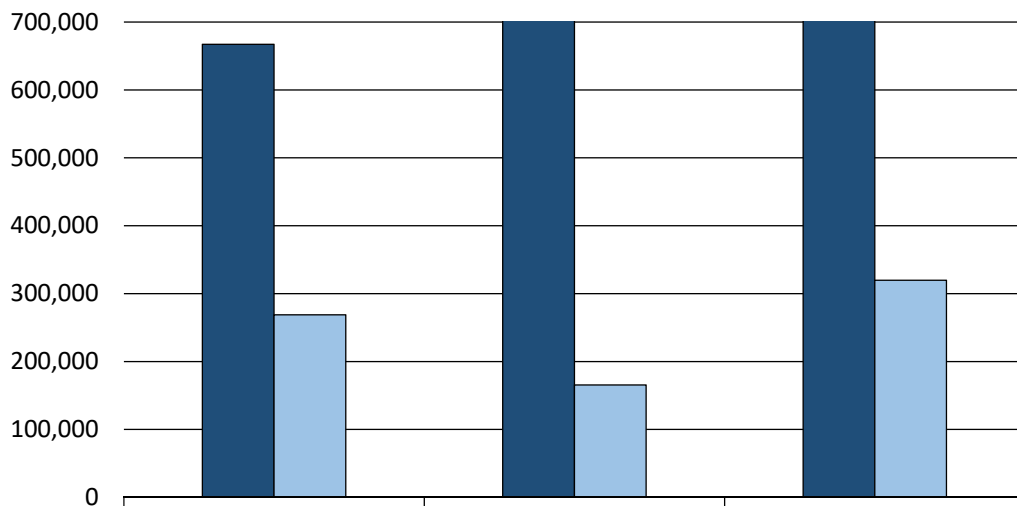
N.D. Farm Business Management Education Program – West Region



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Rate of Return on Assets	9.7	10.3	5.1	5.0	0.6	3.3	2.9	2.0	1.5	10.1
Rate of Return on Equity	14.7	15.2	5.9	5.8	-3.2	2.2	1.8	-0.3	-0.9	13.3

Figure 4. Assets and Liabilities Per Farm, 2020

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



	Current	Intermediate	Longterm
Farm Assets	667,175	749,949	820,005
Farm Liabilities	268,846	165,562	319,691

Figure 5. Spring Wheat Costs Per Acre

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

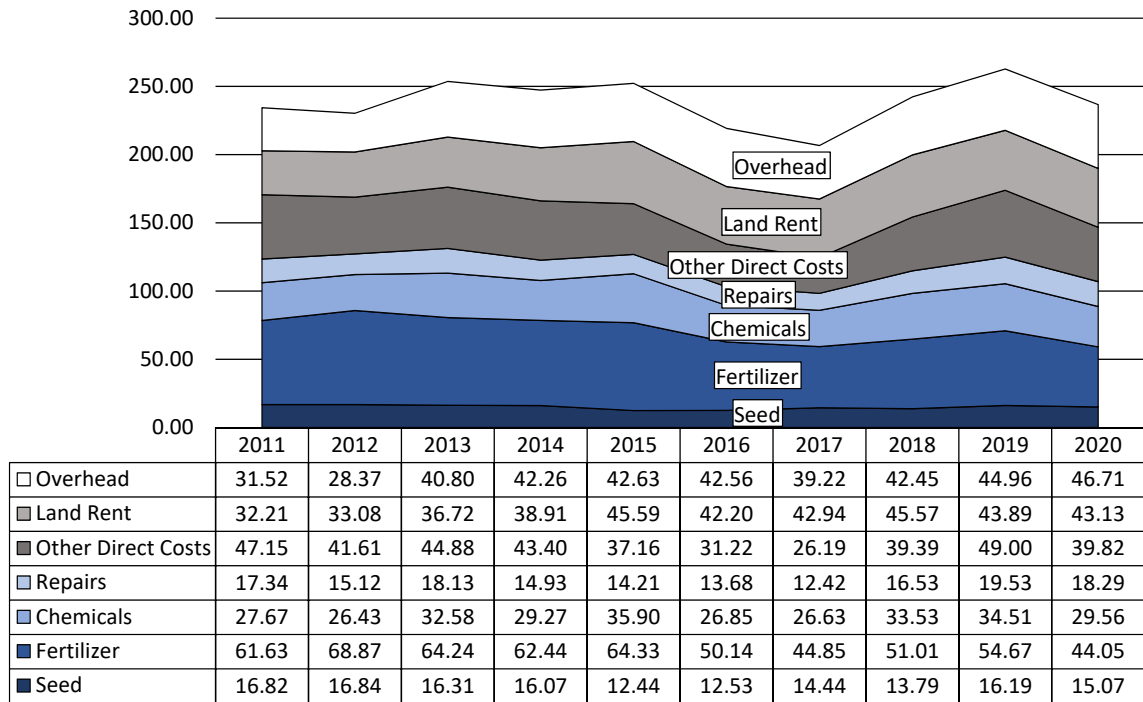
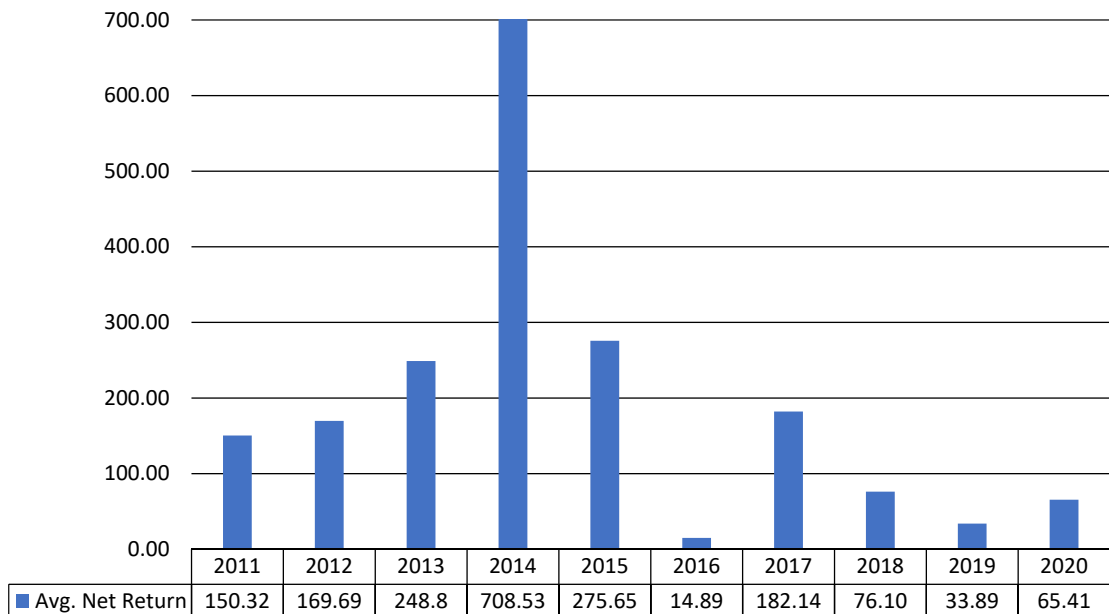


Figure 6. Average Net Return Per Beef Cow

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