

# 2018

# FARM

# ANALYSIS

# REPORT OF

# MOORHEAD

43<sup>rd</sup> Edition

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**NORTHLAND**  
COMMUNITY & TECHNICAL COLLEGE

**Farm Business Management Program**

**[www.NorthlandFBM-Moorhead.com](http://www.NorthlandFBM-Moorhead.com)**

March 19, 2019

## INTRODUCTION

This is the 43<sup>rd</sup> edition of this report published by the Northland College-Moorhead MN. Farm Business Management Department. The original numbers for this report came from pages of the account book and/or from computerized records kept by each farm family enrolled in the farm management education program provided by Northland Community and Technical College, Thief River Falls, MN. After a closeout procedure to check the accuracy of the records, the analysis is generated for each individual enrollee.

We use the FINPACK and RANKEM software system developed by the Center for Farm Financial Management, University of Minnesota Extension, to do our year-end analysis. This is an excellent farm financial computer package because it incorporates the year-end analysis with a farmers beginning and ending Balance Sheet and with projected Cash Flow.

Our Farm Analysis Report of Moorhead is divided into two sections. The white section is devoted to the financial averages of our enrollee's. The color section is the overall average for each crop produced.

Use your imagination and figure out ways to use the tables. There are many factors that can affect a farm operations' profitability. So look and compare your numbers to the averages and see where you could fine-tune your farming operation.

Information about our Farm Business Management program and other financial reports can be found at our website: **[www.NorthlandFBM-Moorhead.com](http://www.NorthlandFBM-Moorhead.com)**

Have a Successful and Prosperous year!

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## ***Financial Guideline Measures***

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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.

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## ***Financial Guideline Measures***

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**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.

**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.

**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.

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# Financial Standards Measures

Moorhead Farm Business Management Program - Northland College

	<u>5-yr Average</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
<b>Number of Farms</b>	68.8	76	74	68	64	62
<b>Liquidity</b>						
Current Ratio	1.68	1.47	1.51	1.82	1.88	1.72
Working Capital	332,905	288,430	272,718	353,663	407,578	342,136
Working Cap/Gross Revenue	31.0%	24.0%	24.1%	33.3%	38.1%	35.3%
<b>Solvency (market)</b>						
Farm Debt to Asset	42%	45%	41%	42%	41%	39%
Farm Equity to Asset	58%	55%	59%	58%	59%	61%
Farm Debt to Equity	0.71	0.80	0.69	0.72	0.71	0.65
<b>Profitability (cost)</b>						
Rate of Return on Assets	2.6%	3.6%	2.6%	4.6%	2.6%	-0.5%
Rate of Return on Equity	1.6%	3.1%	1.5%	5.1%	1.5%	-3.2%
Operating Profit Margin	6.5%	9.0%	6.4%	11.6%	7.0%	-1.5%
Net Farm Income	107,862	144,499	108,593	158,418	105,808	21,990
EBIDTA	234,624	275,977	233,153	281,090	240,523	142,377
<b>Repayment Capacity</b>						
Capital Debt Repay Capacity	125,933	168,638	136,321	178,715	131,631	14,361
Capital Debt Repay Margin	14,608	58,650	28,879	79,207	15,738	-109,434
Replacement Margin	-36,616	5,112	-25,379	23,193	-34,581	-151,424
Term Debt Coverage Ratio	1.17	1.53	1.27	1.80	1.14	0.12
Replacement Coverage Ratio	0.78	1.03	0.84	1.17	0.79	0.09
<b>Efficiency</b>						
Asset Turnover Rate	38.4%	40.4%	40.2%	40.0%	37.6%	33.6%
Operating Exp Ratio	78.7%	77.7%	79.4%	73.5%	77.5%	85.3%
Depreciation Exp Ratio	7.4%	6.3%	6.8%	7.2%	7.9%	8.8%
Interest Exp Ratio	4.5%	4.7%	4.2%	4.3%	4.7%	4.4%
Net Farm Inc Ratio	9.7%	12.0%	9.6%	14.9%	9.9%	2.3%

**Farm Income Statement**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Cash Farm Income</b>				
Barley	4,176	2,443	-	13,286
		-	-	
Beans, Black Turtle	3,688	-	-	17,516
Corn	220,359	148,732	138,764	373,937
Rye	709	-	-	3,367
Soybeans	241,612	196,628	130,981	362,201
Soybeans Seed	36,050	41,033	3,880	85,045
Sugar Beets	289,701	348,204	71,336	684,322
Wheat, Spring	172,454	196,474	60,877	300,991
Hay	3,289	807	-	6,234
Miscellaneous crop income	2,298	208	1,577	5,165
Livestock Income	23,934			
Crop government payments	8,713	4,273	4,060	18,073
CRP payments	712	950	1,033	313
Other government payments	53,004	48,709	26,017	87,900
Custom work income	12,560	1,333	631	25,439
Patronage dividends, cash	30,074	32,000	9,770	63,807
Crop insurance income	14,726	16,545	4,917	26,498
Property insurance income	1,328	1,262	261	3,988
Other farm income	47,040	38,552	20,357	111,891
Gross Cash Farm Income	1,157,715	1,086,688	541,391	2,189,971

**Farm Income Statement (continued)**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Cash Farm Expense</b>				
Seed and plants	136,480	108,931	54,571	275,035
Fertilizer	133,240	97,770	63,261	286,480
Crop chemicals	88,874	82,607	36,349	151,255
Crop insurance	34,454	38,778	13,729	53,027
Drying expense	3,007	2,617	1,695	4,577
Storage	1,259	1,459	1,889	1,797
Crop miscellaneous	7,232	3,898	1,360	8,659
Consultants	4,669	2,902	2,067	9,249
Feeder livestock purchase	4,407	-	22,329	-
Purchased feed	1,344	976	5,373	-
Breeding fees	83	423	-	-
Veterinary	199	398	175	-
Supplies	301	942	200	-
Grazing fees	163	827	-	-
Interest	54,592	56,783	33,436	90,608
Fuel & oil	50,166	50,312	17,888	93,502
Repairs	77,162	86,544	34,063	155,310
Custom hire	13,235	10,906	6,510	35,016
Hired labor	66,006	64,594	34,251	106,527
Land rent	204,180	191,009	101,636	353,611
Stock/quota lease	22,113	20,107	7,400	63,020
Machinery leases	24,445	11,232	9,924	20,358
Building leases	4,976	6,421	1,533	7,569
Real estate taxes	11,775	10,308	7,197	23,813
Farm insurance	15,168	20,437	8,028	24,975
Utilities	10,507	12,958	6,253	14,608
Hauling and trucking	4,933	4,081	1,518	14,502
Marketing	1,212	1,728	450	1,900
Dues & professional fees	7,806	7,208	4,591	11,655
Purchase of resale items	1,652	-	-	7,842
Miscellaneous	9,285	8,938	5,282	17,488
Total cash expense	994,925	906,095	482,959	1,832,381
Net cash farm income	162,790	180,592	58,432	357,590
<b>Inventory Changes</b>				
Prepays and supplies	19,834	-13,562	-141	84,000
Accounts receivable	-531	-15,253	9,630	52,780
Hedging accounts	7,790	-131	-400	31,088
Other current assets	19	990	-492	199
Crops and feed	27,326	-115,878	64,567	70,326
Market livestock	-1,199	-738	-5,448	-
Breeding livestock	865	-10	4,973	-
Other assets	11,117	4,447	4,567	20,445
Accounts payable	-6,627	-2,832	-22,843	-18,668
Accrued interest	-1,704	-605	2,096	-9,957
Total inventory change	56,892	-143,572	56,510	230,213
Net operating profit	219,681	37,020	114,942	587,803
<b>Depreciation</b>				
Machinery and equipment	-62,775	-81,832	-28,109	-113,835
Titled vehicles	-3,987	-5,283	-3,220	-6,041
Buildings and improvements	-9,458	-5,103	-2,906	-19,564
Total depreciation	-76,220	-92,218	-34,235	-139,440
Net farm income from operations	143,462	-55,198	80,707	448,363
Gain or loss on capital sales	1,038	2,415	-105	1,853
Net farm income	144,499	-52,783	80,602	450,217

**Inventory Changes**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
Net cash farm income	162,790	180,592	58,432	357,590
<b>Crops and Feed</b>				
Ending inventory	629,189	510,859	348,800	1,258,920
Beginning inventory	601,863	626,737	284,233	1,188,594
Inventory change	27,326	-115,878	64,567	70,326
<b>Market Livestock</b>				
Ending inventory	13,040	2,156	60,756	-
Beginning inventory	14,239	2,894	66,204	-
Inventory change	-1,199	-738	-5,448	-
<b>Accts Receivable</b>				
Ending inventory	58,981	35,299	24,259	152,107
Beginning inventory	59,512	50,552	14,630	99,327
Inventory change	-531	-15,253	9,630	52,780
<b>Prepaid Expenses and Supplies</b>				
Ending inventory	121,401	37,573	30,517	333,037
Beginning inventory	101,567	51,135	30,658	249,037
Inventory change	19,834	-13,562	-141	84,000
<b>Hedging Activities</b>				
Ending inventory	10,669	1,010	-	40,282
Withdrawals	10,963	55	-	42,648
Beginning inventory	13,151	901	400	49,430
Deposits	691	295	-	2,413
Gain or loss	7,790	-131	-400	31,088
<b>Other Current Assets</b>				
Ending inventory	956	2,130	-	2,545
Beginning inventory	938	1,140	492	2,346
Inventory change	19	990	-492	199
<b>Breeding Livestock</b>				
Ending inventory	14,266	17,837	46,133	-
Capital sales	1,639	3,667	-	-
Beginning inventory	14,376	21,347	40,893	-
Capital purchases	664	167	267	-
Depreciation, capital adjust	865	-10	4,973	-
<b>Other Capital Assets</b>				
Ending inventory	387,416	376,035	100,362	1,041,589
Capital sales	789	-	-	3,468
Beginning inventory	346,682	371,589	91,546	895,743
Capital purchases	30,405	-	4,250	128,869
Depreciation, capital adjust	11,117	4,447	4,567	20,445
<b>Accounts Payable</b>				
Beginning inventory	35,895	39,403	36,829	55,714
Ending inventory	42,522	42,235	59,672	74,382
Inventory change	-6,627	-2,832	-22,843	-18,668
<b>Accrued Interest</b>				
Beginning inventory	23,644	22,164	12,591	36,909
Ending inventory	25,348	22,769	10,495	46,866
Inventory change	-1,704	-605	2,096	-9,957
Total inventory change	56,892	-143,572	56,510	230,213
Net operating profit	219,681	37,020	114,942	587,803



**Depreciation**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
Net operating profit	219,681	37,020	114,942	587,803
<b>Machinery and Equipment</b>				
Ending inventory	658,734	742,095	286,667	1,275,348
Capital sales	21,740	22,608	5,133	63,150
Beginning inventory	641,408	787,797	294,107	1,160,540
Capital purchases	101,840	58,737	25,803	291,793
Depreciation, capital adjust.	-62,775	-81,832	-28,109	-113,835
<b>Titled Vehicles</b>				
Ending inventory	36,005	45,766	20,709	58,983
Capital sales	411	-	533	1,452
Beginning inventory	34,118	46,599	23,512	46,654
Capital purchases	6,284	4,450	950	19,821
Depreciation, capital adjust.	-3,987	-5,283	-3,220	-6,041
<b>Buildings and Improvements</b>				
Ending inventory	262,808	213,317	92,707	508,848
Capital sales	289	1,467	-	-
Beginning inventory	256,672	211,168	95,613	485,192
Capital purchases	15,884	8,719	-	43,220
Depreciation, capital adjust.	-9,458	-5,103	-2,906	-19,564
Total depreciation, capital adj.	-76,220	-92,218	-34,235	-139,440
Net farm income from operations	143,462	-55,198	80,707	448,363
Gain or loss on capital sales	1,038	2,415	-105	1,853
Net farm income	144,499	-52,783	80,602	450,217

**Profitability Measures**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Profitability (assets valued at cost)</b>				
Net farm income from operations	143,462	-55,198	80,707	448,363
Rate of return on assets	3.6 %	-3.3 %	4.7 %	6.8 %
Rate of return on equity	3.1 %	-10.2 %	4.8 %	8.5 %
Operating profit margin	9.0 %	-9.6 %	11.0 %	17.1 %
Asset turnover rate	40.4 %	34.2 %	42.7 %	39.7 %
Farm interest expense	56,296	57,388	31,340	100,565
Value of operator lbr and mgmt.	92,119	94,146	46,894	145,981
Return on farm assets	107,638	-91,956	65,153	402,947
Average farm assets	2,955,760	2,802,960	1,385,558	5,932,203
Return on farm equity	51,342	-149,344	33,813	302,382
Average farm equity	1,643,256	1,462,535	697,391	3,546,919
Value of farm production	1,195,362	957,222	591,087	2,356,967
	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	76	15	15	16
<b>Profitability (assets valued at market)</b>				
Net farm income from operations	106,789	-40,490	35,984	330,877
Rate of return on assets	1.7 %	-1.8 %	0.9 %	3.5 %
Rate of return on equity	0.6 %	-5.5 %	-0.9 %	4.0 %
Operating profit margin	5.9 %	-8.1 %	3.5 %	12.1 %
Asset turnover rate	27.9 %	22.1 %	26.6 %	29.2 %
Farm interest expense	56,296	57,388	31,340	100,565
Value of operator lbr and mgmt.	92,119	94,146	46,894	145,981
Return on farm assets	70,966	-77,249	20,430	285,461
Average farm assets	4,282,687	4,339,419	2,218,447	8,071,830
Return on farm equity	14,670	-134,637	-10,910	184,896
Average farm equity	2,415,732	2,455,629	1,225,695	4,626,182
Value of farm production	1,195,362	957,222	591,087	2,356,967

**Liquidity & Repayment Capacity Measures**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Liquidity</b>				
Current ratio	1.47	1.27	1.44	1.63
Working capital	288,430	140,681	147,479	726,839
Working capital to gross inc	24.0 %	14.7 %	23.8 %	30.7 %
Current assets	899,073	659,840	486,042	1,878,794
Current liabilities	610,643	519,159	338,563	1,151,955
Gross revenues (accrual)	1,202,764	958,198	618,788	2,364,809
<b>Repayment capacity</b>				
Net farm income from operations	143,462	-55,198	80,707	448,363
Depreciation	76,220	92,218	34,235	139,440
Personal income	33,413	6,702	23,861	34,235
Family living/owner withdrawals	-88,503	-82,528	-61,092	-132,712
Cash discrepancy	-68	-171	-154	-19
Payments on personal debt	-7,708	-4,648	-5,850	-12,803
Income taxes paid	-20,783	-15,659	-7,146	-54,521
Interest on term debt	32,607	38,231	17,796	56,289
Capital debt repayment capacity	168,638	-21,053	82,357	478,272
Scheduled term debt payments	-109,988	-107,801	-62,244	-192,307
Capital debt repayment margin	58,650	-128,854	20,113	285,964
Cash replacement allowance	-53,538	-76,591	-19,191	-99,823
Replacement margin	5,112	-205,445	922	186,142
Term debt coverage ratio	1.53	-0.20	1.32	2.49
Replacement coverage ratio	1.03	-0.11	1.01	1.64

**Balance Sheet at Cost Values**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Assets</b>				
<b>Current Farm Assets</b>				
Cash and checking balance	64,836	70,813	21,710	91,903
Prepaid expenses & supplies	121,401	37,573	30,517	333,037
Growing crops	378	1,917	-	-
Accounts receivable	58,981	35,299	24,259	152,107
Hedging accounts	10,669	1,010	-	40,282
Crops held for sale or feed	629,189	510,859	348,800	1,258,920
Crops under government loan	-	-	-	-
Market livestock held for sale	13,040	2,156	60,756	-
Other current assets	578	213	-	2,545
Total current farm assets	899,073	659,840	486,042	1,878,794
<b>Intermediate Farm Assets</b>				
Breeding livestock	14,266	17,837	46,133	-
Machinery and equipment	658,734	742,095	286,667	1,275,348
Titled vehicles	36,005	45,766	20,709	58,983
Other intermediate assets	334,233	302,768	71,822	938,214
Total intermediate farm assets	1,043,238	1,108,466	425,331	2,272,545
<b>Long Term Farm Assets</b>				
Farm land	783,003	669,304	390,704	1,436,041
Buildings and improvements	262,808	213,317	92,707	508,848
Other long-term assets	53,183	73,267	28,540	103,375
Total long-term farm assets	1,098,994	955,889	511,951	2,048,264
Total Farm Assets	3,041,305	2,724,194	1,423,324	6,199,603
Total Nonfarm Assets	364,380	193,812	189,565	788,333
Total Assets	3,405,685	2,918,006	1,612,889	6,987,936
<b>Liabilities</b>				
<b>Current Farm Liabilities</b>				
Accrued interest	25,348	22,769	10,495	46,866
Accounts payable	42,522	42,235	59,672	74,382
Current notes	466,587	383,960	229,054	882,631
Government crop loans	-	-	-	-
Principal due on term debt	76,187	70,195	39,342	148,077
Total current farm liabilities	610,643	519,159	338,563	1,151,955
Total intermediate farm liab	173,060	160,434	78,926	329,486
Total long term farm liabilities	590,437	652,777	291,402	1,055,312
Total farm liabilities	1,374,140	1,332,371	708,890	2,536,753
Total nonfarm liabilities	122,170	53,486	104,457	217,717
Total liabilities	1,496,310	1,385,857	813,347	2,754,470
Net worth (farm and nonfarm)	1,909,375	1,532,149	799,541	4,233,466
Net worth change	59,799	-155,708	21,655	285,409
Percent net worth change	3 %	-9 %	3 %	7 %
<b>Ratio Analysis</b>				
Current farm liabilities / assets	68 %	79 %	70 %	61 %
Intermediate farm liab. / assets	17 %	14 %	19 %	14 %
Long term farm liab. / assets	54 %	68 %	57 %	52 %
Total debt to asset ratio	44 %	47 %	50 %	39 %

**Balance Sheet at Market Values**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Assets</b>				
<b>Current Farm Assets</b>				
Cash and checking balance	64,836	70,813	21,710	91,903
Prepaid expenses & supplies	121,401	37,573	30,517	333,037
Growing crops	378	1,917	-	-
Accounts receivable	58,981	35,299	24,259	152,107
Hedging accounts	10,669	1,010	-	40,282
Crops held for sale or feed	629,189	510,859	348,800	1,258,920
Crops under government loan	-	-	-	-
Market livestock held for sale	13,040	2,156	60,756	-
Other current assets	578	213	-	2,545
<b>Total current farm assets</b>	<b>899,073</b>	<b>659,840</b>	<b>486,042</b>	<b>1,878,794</b>
<b>Intermediate Farm Assets</b>				
Breeding livestock	14,731	17,837	46,133	-
Machinery and equipment	894,232	1,033,577	375,100	1,679,729
Titled vehicles	51,927	59,684	35,924	77,706
Other intermediate assets	473,779	719,774	117,297	1,087,492
<b>Total intermediate farm assets</b>	<b>1,434,669</b>	<b>1,830,871</b>	<b>574,454</b>	<b>2,844,927</b>
<b>Long Term Farm Assets</b>				
Farm land	1,597,211	1,398,934	1,037,608	2,806,948
Buildings and improvements	345,037	264,737	123,720	629,443
Other long-term assets	90,620	99,653	31,411	179,798
<b>Total long-term farm assets</b>	<b>2,032,869</b>	<b>1,763,324</b>	<b>1,192,739</b>	<b>3,616,189</b>
<b>Total Farm Assets</b>	<b>4,366,610</b>	<b>4,254,035</b>	<b>2,253,235</b>	<b>8,339,909</b>
<b>Total Nonfarm Assets</b>	<b>520,212</b>	<b>301,289</b>	<b>276,740</b>	<b>1,118,450</b>
<b>Total Assets</b>	<b>4,886,823</b>	<b>4,555,323</b>	<b>2,529,975</b>	<b>9,458,360</b>
<b>Liabilities</b>				
<b>Current Farm Liabilities</b>				
Accrued interest	25,348	22,769	10,495	46,866
Accounts payable	42,522	42,235	59,672	74,382
Current notes	466,587	383,960	229,054	882,631
Government crop loans	-	-	-	-
Principal due on term debt	76,187	70,195	39,342	148,077
<b>Total current farm liabilities</b>	<b>610,643</b>	<b>519,159</b>	<b>338,563</b>	<b>1,151,955</b>
<b>Total intermediate farm liab</b>	<b>173,060</b>	<b>160,434</b>	<b>78,926</b>	<b>329,486</b>
<b>Total long term farm liabilities</b>	<b>590,437</b>	<b>652,777</b>	<b>291,402</b>	<b>1,055,312</b>
<b>Total farm liabilities</b>	<b>1,374,140</b>	<b>1,332,371</b>	<b>708,890</b>	<b>2,536,753</b>
<b>Total nonfarm liabilities</b>	<b>122,170</b>	<b>53,486</b>	<b>104,457</b>	<b>217,717</b>
<b>Total liab</b> excluding deferreds	<b>1,496,310</b>	<b>1,385,857</b>	<b>813,347</b>	<b>2,754,470</b>
<b>Total deferred liabilities</b>	<b>601,861</b>	<b>553,796</b>	<b>339,426</b>	<b>1,186,365</b>
<b>Total liabilities</b>	<b>2,098,171</b>	<b>1,939,653</b>	<b>1,152,773</b>	<b>3,940,835</b>
<b>Retained earnings</b>	<b>1,909,375</b>	<b>1,532,149</b>	<b>799,541</b>	<b>4,233,466</b>
<b>Market valuation equity</b>	<b>879,276</b>	<b>1,083,521</b>	<b>577,660</b>	<b>1,284,059</b>
<b>Net worth (farm and nonfarm)</b>	<b>2,788,651</b>	<b>2,615,670</b>	<b>1,377,202</b>	<b>5,517,525</b>
<b>Net worth excluding deferreds</b>	<b>3,390,513</b>	<b>3,169,466</b>	<b>1,716,627</b>	<b>6,703,890</b>
<b>Net worth change</b>	<b>32,347</b>	<b>-138,436</b>	<b>-11,646</b>	<b>187,093</b>
<b>Percent net worth change</b>	<b>1 %</b>	<b>-5 %</b>	<b>-1 %</b>	<b>4 %</b>
<b>Ratio Analysis</b>				
Current farm liabilities / assets	68 %	79 %	70 %	61 %
Intermediate farm liab. / assets	12 %	9 %	14 %	12 %
Long term farm liab. / assets	29 %	37 %	24 %	29 %
Total debt to asset ratio	43 %	43 %	46 %	42 %
Debt to assets excl deferreds	31 %	30 %	32 %	29 %

**Statement Of Cash Flows**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
Beginning cash (farm & nonfarm)	43,110	48,497	35,361	77,927
<b>Cash Provided By Operating Activities</b>				
Gross cash farm income	1,157,715	1,086,688	541,391	2,189,971
Total cash farm expense	-994,925	-906,095	-482,959	-1,832,381
Net cash from hedging transactions	10,272	-240	-	40,236
Cash provided by operating	173,062	180,352	58,432	397,826
<b>Cash Provided By Investing Activities</b>				
Sale of breeding livestock	1,639	3,667	-	-
Sale of machinery & equipment	22,351	22,780	5,028	65,080
Sale of titled vehicles	395	-	533	1,375
Sale of farm land	2,214	8,910	-	-
Sale of farm buildings	289	1,467	-	-
Sale of other farm assets	789	-	-	3,468
Sale of nonfarm assets	6,435	1,333	-	24,877
Purchase of breeding livestock	-664	-167	-267	-
Purchase of machinery & equip.	-101,840	-58,737	-25,803	-291,793
Purchase of titled vehicles	-6,284	-4,450	-950	-19,821
Purchase of farm land	-30,171	-	-17,800	-
Purchase of farm buildings	-15,884	-8,719	-	-43,220
Purchase of other farm assets	-30,405	-	-4,250	-128,869
Purchase of nonfarm assets	-40,197	-5,271	-30,874	-121,693
Cash provided by investing	-191,335	-39,187	-74,381	-510,596
<b>Cash Provided By Financing Activities</b>				
Money borrowed	646,481	516,414	314,325	1,362,451
Principal payments	-523,435	-536,696	-266,938	-1,070,568
Personal income	33,413	6,702	23,861	34,235
Family living/owner withdrawals	-88,503	-82,528	-61,092	-132,712
Income and social security tax	-16,600	-8,635	-5,840	-42,848
Capital contributions	-	-	-	-
Capital distributions	-	-	-	-
Dividends paid	-	-	-	-
Cash gifts and inheritances	2,551	267	2,021	9,974
Gifts given	-1,338	-	-	-6,356
Other cash flows	-	-	-	-
Cash provided by financing	52,568	-104,476	6,337	154,175
Net change in cash balance	34,294	36,689	-9,612	41,405
Ending cash (farm & nonfarm)	77,336	85,015	25,596	119,313
Discrepancy	68	171	154	19

**Financial Standards Measures**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Liquidity</b>				
Current ratio	1.47	1.27	1.44	1.63
Working capital	288,430	140,681	147,479	726,839
Working capital to gross inc	24.0 %	14.7 %	23.8 %	30.7 %
<b>Solvency (market)</b>				
Farm debt to asset ratio	45 %	44 %	46 %	44 %
Farm equity to asset ratio	55 %	56 %	54 %	56 %
Farm debt to equity ratio	0.80	0.78	0.85	0.78
<b>Profitability (cost)</b>				
Rate of return on farm assets	3.6 %	-3.3 %	4.7 %	6.8 %
Rate of return on farm equity	3.1 %	-10.2 %	4.8 %	8.5 %
Operating profit margin	9.0 %	-9.6 %	11.0 %	17.1 %
Net farm income	144,499	-52,783	80,602	450,217
EBITDA	275,977	94,408	146,282	688,368
<b>Repayment Capacity</b>				
Capital debt repayment capacity	168,638	-21,053	82,357	478,272
Capital debt repayment margin	58,650	-128,854	20,113	285,964
Replacement margin	5,112	-205,445	922	186,142
Term debt coverage ratio	1.53	-0.20	1.32	2.49
Replacement coverage ratio	1.03	-0.11	1.01	1.64
<b>Efficiency</b>				
Asset turnover rate (cost)	40.4 %	34.2 %	42.7 %	39.7 %
Operating expense ratio	77.1 %	90.1 %	76.4 %	70.9 %
Depreciation expense ratio	6.3 %	9.6 %	5.5 %	5.9 %
Interest expense ratio	4.7 %	6.0 %	5.1 %	4.3 %
Net farm income ratio	12.0 %	-5.5 %	13.0 %	19.0 %

**Crop Production and Marketing Summary**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Acreage Summary</b>				
Total acres owned	476	418	306	823
Total crop acres	2,017	1,729	1,128	3,464
Crop acres owned	416	320	282	662
Crop acres cash rented	1,572	1,399	846	2,786
Crop acres share rented	29	10	-	17
Total pasture acres	22	-	93	-
Percent crop acres owned	21 %	19 %	25 %	19 %
Mach invest/crop acre cost	340	469	277	367
Mach invest/crop acre market	469	650	371	491
<b>Average Price Received (Cash Sales Only)</b>				
Wheat, Spring per bushel	5.67	5.47	5.85	5.68
Soybeans per bushel	8.80	8.88	8.88	9.05
Corn per bushel	3.08	3.09	3.18	3.17
Soybeans Seed per bushel	10.49	-	-	10.62
Soybeans, Food per bushel	11.22	-	-	-
<b>Average Yield Per Acre</b>				
Soybeans (bushel)	45.10	42.37	41.50	45.95
Wheat, Spring (bushel)	62.88	60.37	61.33	66.63
Sugar Beets (ton)	29.80	28.00	28.58	31.21
Corn (bushel)	184.26	182.06	176.51	183.76
Soybeans Seed (bushel)	46.26	44.55	-	44.53
Soybeans, Food (bushel)	36.44	-	-	-
Hay, Alfalfa (ton)	2.55	-	-	-



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**Household and Personal Expenses**  
**2018 Moorhead Farm Business Management Annual Report**  
**(Farms Sorted By Net Farm Income)**

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	<u>Avg. Of All Farms</u>
Number of farms	9
Average family size	3.2
<b>Family Living Expenses</b>	
Food and meals expense	13,140
Medical care	5,804
Health insurance	7,076
Cash donations	2,675
Household supplies	4,458
Clothing	4,684
Personal care	3,163
Child / Dependent care	1,455
Alimony and child support	-
Gifts	2,769
Education	7,298
Recreation	10,083
Utilities (household share)	3,639
Personal vehicle operating exp	4,856
Household real estate taxes	572
Dwelling rent	-
Household repairs	5,087
Personal interest	1,655
Disability / Long term care ins	27
Life insurance payments	1,936
Personal property insurance	821
Miscellaneous	14,186
Total cash family living expense	95,382
Family living from the farm	-
Total family living	95,382
<b>Other Nonfarm Expenditures</b>	
Income taxes	16,790
Furnishing & appliance purchases	857
Nonfarm vehicle purchases	683
Nonfarm real estate purchases	12,699
Other nonfarm capital purchases	208
Nonfarm savings & investments	11,050
Total other nonfarm expenditures	42,287
Total cash family living investment & nonfarm capital purch	137,670

**Operator and Labor Information**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Operator Information</b>				
Average number of operators	1.1	1.1	0.8	1.3
Average age of operators	46.7	50.6	43.6	49.6
Average number of years farming	23.7	27.5	20.1	27.6
<b>Results Per Operator</b>				
Working capital	272,985	122,331	178,403	553,782
Total assets (market)	4,625,137	3,961,151	3,060,454	7,206,369
Total liabilities	1,985,816	1,686,655	1,394,484	3,002,541
Net worth (market)	2,639,321	2,274,496	1,665,970	4,203,828
Net worth excl deferred liabs	3,208,953	2,756,057	2,076,566	5,107,726
Gross farm income	1,138,357	833,216	748,534	1,801,759
Total farm expense	1,002,578	881,214	650,905	1,460,149
Net farm income from operations	135,779	-47,998	97,629	341,610
Net nonfarm income	31,624	5,828	28,864	26,084
Family living & tax withdrawals	103,499	85,529	82,732	142,668
Total acres owned	450.9	363.6	370.4	626.7
Total crop acres	1,909.2	1,503.4	1,364.6	2,639.6
Crop acres owned	393.3	278.4	340.8	504.2
Crop acres cash rented	1,488.3	1,216.2	1,023.8	2,122.8
Crop acres share rented	27.7	8.7	-	12.6
Total pasture acres	20.6	-	112.9	-
<b>Labor Analysis</b>				
Number of farms	76	15	15	16
Total unpaid labor hours	1,666	1,693	1,363	2,094
Total hired labor hours	3,452	2,728	1,429	5,289
Total labor hours per farm	5,118	4,421	2,792	7,383
Unpaid hours per operator	1,577	1,472	1,649	1,595
Value of farm production / hour	233.58	216.49	211.68	319.24
Net farm income / unpaid hour	86.12	-32.60	59.20	214.14
Average hourly hired labor wage	22.95	34.81	24.81	21.34
<b>Partnerships &amp; LLCs</b>				
Number of farms	7	2	1	2
Number of operators	2.1	-	-	-
Owner withdrawals per farm	-	-	-	-
Withdrawals per operator	-	-	-	-

**Nonfarm Summary**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Nonfarm Income</b>				
Personal wages & salary	18,898	6,411	22,758	11,283
Net nonfarm business income	1,082	-	-163	369
Personal interest income	33	1	4	128
Tax refunds	2,485	93	704	8,754
Other nonfarm income	10,915	198	560	13,702
Total nonfarm income	33,413	6,702	23,861	34,235
Gifts and inheritances	2,551	267	2,021	9,974
<b>Nonfarm Assets (market)</b>				
Checking & savings	12,500	14,202	3,886	27,410
Stocks & bonds	48,476	3,692	3,903	191,319
Other current assets	8,836	-	2,536	34,321
Furniture & appliances	13,173	11,433	12,300	17,029
Nonfarm vehicles	25,796	15,406	16,645	45,362
Cash value of life ins.	17,482	9,362	21,471	30,345
Retirement accounts	132,348	110,750	61,386	200,177
Other intermediate assets	4,198	2,360	4,368	5,515
Nonfarm real estate	211,487	118,084	142,853	371,333
Personal bus. investment	18,226	-	-	86,572
Other long term assets	27,691	16,000	7,392	109,068
Total nonfarm assets	520,212	301,289	276,740	1,118,450
<b>Nonfarm Liabilities</b>				
Accrued interest	452	141	493	359
Accounts payable	409	1,354	333	78
Current notes	613	100	1,058	1,435
Princ due on term debt	7,904	4,309	7,697	12,341
Total current liabilities	27,073	19,904	16,515	62,847
Intermediate liabilities	6,506	2,748	2,747	8,315
Long term liabilities	88,591	30,834	85,196	146,555
Total nonfarm liabilities	122,170	53,486	104,457	217,717
Nonfarm net worth	398,042	247,802	172,282	900,734
Nonfarm debt to asset ratio	23 %	18 %	38 %	19 %

**Financial Summary**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
<b>Income Statement</b>				
Gross cash farm income	1,157,715	1,086,688	541,391	2,189,971
Total cash farm expense	994,925	906,095	482,959	1,832,381
Net cash farm income	162,790	180,592	58,432	357,590
Inventory change	56,892	-143,572	56,510	230,213
Depreciation	-76,220	-92,218	-34,235	-139,440
Net farm income from operations	143,462	-55,198	80,707	448,363
Gain or loss on capital sales	1,038	2,415	-105	1,853
Average net farm income	144,499	-52,783	80,602	450,217
Median net farm income	85,203	-41,355	76,527	359,254
<b>Profitability (cost)</b>				
Rate of return on assets	3.6 %	-3.3 %	4.7 %	6.8 %
Rate of return on equity	3.1 %	-10.2 %	4.8 %	8.5 %
Operating profit margin	9.0 %	-9.6 %	11.0 %	17.1 %
Asset turnover rate	40.4 %	34.2 %	42.7 %	39.7 %
<b>Profitability (market)</b>				
Rate of return on assets	1.7 %	-1.8 %	0.9 %	3.5 %
Rate of return on equity	0.6 %	-5.5 %	-0.9 %	4.0 %
Operating profit margin	5.9 %	-8.1 %	3.5 %	12.1 %
Asset turnover rate	27.9 %	22.1 %	26.6 %	29.2 %
<b>Liquidity &amp; Repayment (end of year)</b>				
Current assets	899,073	659,840	486,042	1,878,794
Current liabilities	610,643	519,159	338,563	1,151,955
Current ratio	1.47	1.27	1.44	1.63
Working capital	288,430	140,681	147,479	726,839
Change in working capital	7,734	-102,058	15,851	19,606
Working capital to gross inc	24.0 %	14.7 %	23.8 %	30.7 %
Term debt coverage ratio	1.53	-0.20	1.32	2.49
Replacement coverage ratio	1.03	-0.11	1.01	1.64
Term debt to EBITDA	2.57	8.73	2.53	1.89
<b>Solvency (end of year at cost)</b>				
Number of farms	76	15	15	16
Total assets	3,405,685	2,918,006	1,612,889	6,987,936
Total liabilities	1,496,310	1,385,857	813,347	2,754,470
Net worth	1,909,375	1,532,149	799,541	4,233,466
Net worth change	59,799	-155,708	21,655	285,409
Farm debt to asset ratio	45 %	49 %	50 %	41 %
Total debt to asset ratio	44 %	47 %	50 %	39 %
Change in earned net worth %	3 %	-9 %	3 %	7 %
<b>Solvency (end of year at market)</b>				
Number of farms	76	15	15	16
Total assets	4,886,823	4,555,323	2,529,975	9,458,360
Total liabilities	2,098,171	1,939,653	1,152,773	3,940,835
Net worth	2,788,651	2,615,670	1,377,202	5,517,525
Total net worth change	32,347	-138,436	-11,646	187,093
Farm debt to asset ratio	45 %	44 %	46 %	44 %
Total debt to asset ratio	43 %	43 %	46 %	42 %
Change in total net worth %	1 %	-5 %	-1 %	4 %
<b>Nonfarm Information</b>				
Net nonfarm income	33,413	6,702	23,861	34,235
Farms reporting living expenses	9	2	1	1
Total family living expense	95,382	-	-	-
Total living, invest, cap. purch	137,670	-	-	-
<b>Crop Acres</b>				
Total crop acres	2,017	1,729	1,128	3,464
Total crop acres owned	416	320	282	662
Total crop acres cash rented	1,572	1,399	846	2,786
Total crop acres share rented	29	10	-	17
Machinery value per crop acre	469	650	371	491

**Summary Farm Income Statement**  
**2018 Moorhead Farm Business Management Annual Report**  
**(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	76	15	15	16
Crop sales	974,152	934,529	407,416	1,851,269
Crop inventory change	27,326	-115,878	64,567	70,326
Gross crop income	1,001,478	818,651	471,983	1,921,595
Livestock sales	14,964	8,518	65,896	-
Livestock inventory change	-1,199	-738	-5,448	-
Gross livestock income	13,765	7,780	60,448	-
Government payments	62,429	53,932	31,110	106,285
Other cash farm income	106,170	89,709	36,969	232,417
Change in accounts receivable	-531	-15,253	9,630	52,780
Gain or loss on hedging accounts	7,790	-131	-400	31,088
Change in other assets	10,798	3,520	4,075	20,644
Gain or loss on breeding lvst	865	-10	4,973	-
Gross farm income	1,202,764	958,198	618,788	2,364,809
Cash operating expenses	940,333	849,312	449,522	1,741,773
Change in prepaids and supplies	-19,834	13,562	141	-84,000
Change in growing crops	-338	-1,917	-	-
Change in accounts payable	6,627	2,832	22,843	18,668
Depreciation	76,220	92,218	34,235	139,440
Total operating expense	1,003,007	956,008	506,741	1,815,881
Interest paid	54,592	56,783	33,436	90,608
Change in accrued interest	1,704	605	-2,096	9,957
Total interest expense	56,296	57,388	31,340	100,565
Total expenses	1,059,303	1,013,396	538,081	1,916,446
Net farm income from operations	143,462	-55,198	80,707	448,363
Gain or loss on capital sales	1,038	2,415	-105	1,853
Net farm income	144,499	-52,783	80,602	450,217

## Per Operator Information

Moorhead Farm Business Management Program - Northland College

	<u>5-yr Average</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
<b>Number of Farms</b>	68.8	76	74	68	64	62
<b>Operator Information</b>						
Ave Age of Operator	47.4	46.7	47.8	47.7	47.3	47.7
Ave Years Farming	24.6	23.7	24.9	24.6	24.7	24.9
<b>Net Farm Income / Op</b>	102,640	135,779	102,601	157,760	103,023	14,037
Net Non-farm Income	29,527	31,624	28,669	30,037	30,269	27,034
Family Living + Income Taxes	109,539	103,499	99,198	107,588	108,628	128,780
<b>Crop Acres per Operator</b>						
Total Crop Acres	1,849.8	1,909.9	1,857.7	1,836.1	1,850.8	1,794.3
Crop Acres Owned	433.8	450.9	425.1	405.5	404.1	483.6
Crop Acres Cash Rented	1,403.3	1,488.3	1,402.7	1,392.8	1,399.5	1,333.4
Crop Acres Share Rented	38.8	27.7	30.0	37.8	47.2	51.2
<b>Labor Analysis</b>						
Total labor Hours per farm	4,463	5,118	5,285	4,016	3,889	4,005
Value of farm prod/hour	244.22	233.58	212.51	262.69	272.56	239.78
Net farm Income / unpaid hour	65.46	86.12	68.48	99.13	64.55	9.00

**CROP**

**DATA**

**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**(Farms Sorted By Return to Overhead)**

**Corn on Owned Land**

	<u>Avg. Of All Farms</u>
Number of farms	20
Acres	262.69
Yield per acre (bu.)	184.55
Operators share of yield %	100.00
Value per bu.	3.27
Total product return per acre	603.75
Hedging gains/losses per acre	11.34
Crop insurance per acre	2.43
Other crop income per acre	11.95
Gross return per acre	629.47
<b>Direct Expenses</b>	
Seed and plants	87.71
Fertilizer	101.41
Crop chemicals	26.26
Crop insurance	18.99
Drying expense	9.17
Storage	1.67
Fuel & oil	28.99
Repairs	44.39
Custom hire	5.73
Hired labor	2.49
Machinery leases	5.23
Marketing	0.25
Operating interest	13.59
Miscellaneous	7.58
Total direct expenses per acre	353.47
Return over direct exp per acre	276.00
<b>Overhead Expenses</b>	
Hired labor	28.49
Machinery leases	4.22
Building leases	4.75
RE & pers. property taxes	25.58
Farm insurance	8.26
Utilities	9.16
Dues & professional fees	4.65
Interest	52.59
Mach & bldg depreciation	53.05
Miscellaneous	7.04
Total overhead expenses per acre	197.78
Total dir & ovhd expenses per acre	551.25
Net return per acre	78.22
Government payments	1.57
Net return with govt pmts	79.79
Labor & management charge	49.97
Net return over lbr & mgt	29.82
<b>Cost of Production</b>	
Total direct expense per bu.	1.92
Total dir & ovhd exp per bu.	2.99
Less govt & other income	2.84
With labor & management	3.11
Net value per unit	3.33
Machinery cost per acre	134.36
Est. labor hours per acre	2.78



**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**(Farms Sorted By Return to Overhead)**

**Corn on Cash Rent**

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	41	8	8	9
Acres	485.92	190.41	277.63	653.89
Yield per acre (bu.)	184.43	171.88	181.18	186.74
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	3.29	3.21	3.28	3.34
Total product return per acre	606.27	552.57	593.81	624.37
Hedging gains/losses per acre	8.47	-	-	24.33
Crop insurance per acre	4.47	-	-	13.18
Other crop income per acre	6.75	5.68	7.34	7.58
Gross return per acre	625.96	558.24	601.15	669.47
<b>Direct Expenses</b>				
Seed and plants	92.22	94.53	89.03	78.55
Fertilizer	101.04	102.48	91.13	92.86
Crop chemicals	24.80	28.97	27.39	20.77
Crop insurance	17.72	24.27	20.12	16.92
Drying expense	6.67	14.41	7.32	8.43
Storage	0.48	1.67	1.91	0.00
Fuel & oil	25.59	29.76	26.31	28.80
Repairs	35.53	55.64	36.03	38.27
Custom hire	5.91	5.96	12.31	3.76
Hired labor	4.30	5.58	-	4.54
Land rent	135.58	147.91	120.19	143.36
Machinery leases	8.53	2.33	3.71	0.80
Marketing	0.34	0.41	1.27	0.02
Operating interest	10.84	16.04	21.49	6.29
Miscellaneous	5.30	3.02	2.73	4.23
Total direct expenses per acre	474.82	532.99	460.93	447.60
Return over direct exp per acre	151.15	25.26	140.22	221.88
<b>Overhead Expenses</b>				
Hired labor	23.20	8.91	9.51	30.87
Machinery leases	6.08	21.24	9.16	9.95
Building leases	2.80	3.54	1.38	4.47
Farm insurance	6.82	10.89	5.94	7.98
Utilities	6.30	6.67	5.96	5.10
Dues & professional fees	3.13	2.10	3.77	3.64
Interest	5.15	4.64	4.39	5.64
Mach & bldg depreciation	41.92	60.03	42.60	38.37
Miscellaneous	6.09	8.04	3.00	9.19
Total overhead expenses per acre	101.50	126.05	85.71	115.21
Total dir & ovhd expenses per acre	576.32	659.04	546.63	562.80
Net return per acre	49.65	-100.79	54.51	106.67
Government payments	1.89	1.36	2.67	1.96
Net return with govt pmts	51.54	-99.44	57.19	108.63
Labor & management charge	48.38	58.68	56.31	35.37
Net return over lbr & mgt	3.15	-158.12	0.87	73.26
<b>Cost of Production</b>				
Total direct expense per bu.	2.57	3.10	2.54	2.40
Total dir & ovhd exp per bu.	3.12	3.83	3.02	3.01
Less govt & other income	3.01	3.79	2.96	2.76
With labor & management	3.27	4.13	3.27	2.95
Net value per unit	3.33	3.21	3.28	3.47
Machinery cost per acre	122.92	172.36	130.62	118.15
Est. labor hours per acre	2.43	2.41	2.07	2.52

**Crop Enterprise Analysis**  
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**(Farms Sorted By Return to Overhead)**

**Hay, Alfalfa on Cash Rent**

	<b>Avg. Of All Farms</b>
Number of farms	5
Acres	60.40
Yield per acre (ton)	2.41
Operators share of yield %	100.00
Value per ton	107.53
Total product return per acre	259.21
Other crop income per acre	13.33
Gross return per acre	272.54
<b>Direct Expenses</b>	
Fertilizer	14.60
Crop chemicals	3.35
Fuel & oil	18.81
Repairs	37.43
Custom hire	3.31
Hired labor	1.88
Land rent	136.99
Operating interest	3.81
Miscellaneous	2.67
Total direct expenses per acre	222.85
Return over direct exp per acre	49.69
<b>Overhead Expenses</b>	
Hired labor	38.17
Machinery leases	5.34
Farm insurance	10.31
Utilities	7.18
Dues & professional fees	2.53
Interest	6.83
Mach & bldg depreciation	38.33
Miscellaneous	6.96
Total overhead expenses per acre	115.65
Total dir & ovhd expenses per acre	338.50
Net return per acre	-65.96
Government payments	4.48
Net return with govt pmts	-61.48
Labor & management charge	44.30
Net return over lbr & mgt	-105.78
<b>Cost of Production</b>	
Total direct expense per ton	92.44
Total dir & ovhd exp per ton	140.42
Less govt & other income	133.03
With labor & management	151.41
Net value per unit	107.53
Machinery cost per acre	104.08
Est. labor hours per acre	3.05

**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**(Farms Sorted By Return to Overhead)**

**Soybeans on Owned Land**

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	40	8	8	8
Acres	330.93	243.10	340.13	224.82
Yield per acre (bu.)	45.24	35.68	43.43	50.13
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	8.11	8.12	8.14	8.26
Total product return per acre	366.91	289.72	353.68	414.00
Hedging gains/losses per acre	1.87	-	-	13.76
Crop insurance per acre	11.41	18.00	17.42	17.51
Other crop income per acre	75.75	60.55	71.55	106.88
Gross return per acre	455.93	368.28	442.65	552.15
<b>Direct Expenses</b>				
Seed and plants	62.39	61.58	61.08	68.98
Fertilizer	6.56	8.49	9.17	3.84
Crop chemicals	34.15	29.15	35.88	24.76
Crop insurance	18.40	16.27	19.38	17.03
Storage	0.85	0.57	2.36	-
Fuel & oil	13.61	17.12	14.98	14.24
Repairs	21.79	24.10	22.96	27.25
Custom hire	3.78	1.66	1.96	1.64
Hired labor	0.41	2.46	-	0.35
Machinery leases	9.44	0.51	1.36	0.54
Marketing	0.32	0.76	0.24	0.04
Operating interest	7.02	7.83	6.47	10.35
Miscellaneous	3.51	1.74	3.91	4.47
Total direct expenses per acre	182.23	172.24	179.74	173.49
Return over direct exp per acre	273.70	196.03	262.91	378.65
<b>Overhead Expenses</b>				
Hired labor	14.71	11.84	18.19	12.95
Machinery leases	2.65	9.52	4.05	1.18
Building leases	1.21	0.22	2.42	1.37
RE & pers. property taxes	22.68	19.98	26.11	26.24
Farm insurance	6.76	10.67	8.81	7.45
Utilities	4.96	9.38	4.90	6.02
Dues & professional fees	3.36	2.18	4.83	4.28
Interest	55.54	63.72	69.86	54.38
Mach & bldg depreciation	26.20	35.10	28.88	29.47
Miscellaneous	2.62	3.02	1.85	2.35
Total overhead expenses per acre	140.69	165.64	169.90	145.68
Total dir & ovhd expenses per acre	322.92	337.89	349.63	319.17
Net return per acre	133.01	30.39	93.02	232.98
Government payments	3.28	1.14	3.42	6.40
Net return with govt pmts	136.29	31.53	96.43	239.38
Labor & management charge	30.63	35.05	28.68	26.25
Net return over lbr & mgt	105.66	-3.52	67.75	213.13
<b>Cost of Production</b>				
Total direct expense per bu.	4.03	4.83	4.14	3.46
Total dir & ovhd exp per bu.	7.14	9.47	8.05	6.37
Less govt & other income	5.10	7.24	5.92	3.48
With labor & management	5.78	8.22	6.58	4.01
Net value per unit	8.15	8.12	8.14	8.53
Machinery cost per acre	75.58	86.73	72.31	70.33
Est. labor hours per acre	1.53	1.50	1.68	1.59

**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**(Farms Sorted By Return to Overhead)**

**Soybeans on Cash Rent**

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	58	11	11	12
Acres	655.42	624.75	1,025.31	507.46
Yield per acre (bu.)	45.36	40.90	45.20	48.98
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	8.09	8.00	8.18	8.20
Total product return per acre	367.09	327.05	369.64	401.70
Hedging gains/losses per acre	4.59	0.34	-	8.63
Crop insurance per acre	9.87	21.83	7.16	11.32
Other crop income per acre	75.85	66.36	72.42	92.78
Gross return per acre	457.40	415.58	449.23	514.45
<b>Direct Expenses</b>				
Seed and plants	61.92	62.20	58.45	64.41
Fertilizer	9.09	10.03	4.57	6.86
Crop chemicals	31.88	34.96	31.24	22.46
Crop insurance	18.68	19.97	16.81	15.86
Storage	0.75	2.98	0.30	0.07
Fuel & oil	13.80	12.11	10.60	14.72
Repairs	20.52	27.27	14.50	21.65
Custom hire	5.49	9.57	4.13	4.56
Hired labor	0.32	0.82	-	0.51
Land rent	134.28	151.66	132.01	119.70
Machinery leases	7.41	0.52	22.56	0.76
Operating interest	6.65	7.17	5.39	6.25
Miscellaneous	3.42	2.46	3.64	2.36
Total direct expenses per acre	314.23	341.72	304.20	280.18
Return over direct exp per acre	143.16	73.86	145.03	234.27
<b>Overhead Expenses</b>				
Hired labor	12.19	10.22	16.64	11.02
Machinery leases	2.45	4.76	0.44	1.53
Building leases	2.31	2.19	1.44	4.53
Farm insurance	5.72	4.44	4.50	5.72
Utilities	3.04	2.40	2.94	4.07
Dues & professional fees	3.33	2.32	3.53	3.80
Interest	2.64	2.18	2.08	2.70
Mach & bldg depreciation	23.95	23.08	19.47	23.16
Miscellaneous	2.25	1.23	0.96	4.57
Total overhead expenses per acre	57.87	52.83	51.99	61.09
Total dir & ovhd expenses per acre	372.10	394.55	356.19	341.27
Net return per acre	85.30	21.03	93.04	173.17
Government payments	2.45	1.00	2.43	3.98
Net return with govt pmts	87.75	22.03	95.46	177.16
Labor & management charge	28.77	27.90	27.94	28.73
Net return over lbr & mgt	58.98	-5.87	67.53	148.43
<b>Cost of Production</b>				
Total direct expense per bu.	6.93	8.36	6.73	5.72
Total dir & ovhd exp per bu.	8.20	9.65	7.88	6.97
Less govt & other income	6.16	7.46	6.07	4.58
With labor & management	6.79	8.14	6.68	5.17
Net value per unit	8.19	8.01	8.18	8.38
Machinery cost per acre	73.16	76.72	70.66	64.36
Est. labor hours per acre	1.38	1.28	1.34	1.55

**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**(Farms Sorted By Return to Overhead)**

**Soybeans, Food on Cash Rent**

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	316.75
Yield per acre (bu.)	36.50
Operators share of yield %	100.00
Value per bu.	12.62
Total product return per acre	460.75
Other crop income per acre	61.84
Gross return per acre	522.58
<b>Direct Expenses</b>	
Seed and plants	6.63
Fertilizer	8.75
Crop chemicals	45.12
Crop insurance	23.00
Fuel & oil	16.56
Repairs	26.88
Custom hire	4.38
Land rent	145.39
Machinery leases	1.10
Operating interest	7.10
Miscellaneous	5.15
Total direct expenses per acre	290.07
Return over direct exp per acre	232.51
<b>Overhead Expenses</b>	
Hired labor	15.87
Building leases	3.25
Farm insurance	9.02
Utilities	5.18
Dues & professional fees	3.63
Interest	1.54
Mach & bldg depreciation	29.38
Miscellaneous	6.21
Total overhead expenses per acre	74.08
Total dir & ovhd expenses per acre	364.16
Net return per acre	158.43
Government payments	3.36
Net return with govt pmts	161.78
Labor & management charge	32.15
Net return over lbr & mgt	129.63
<b>Cost of Production</b>	
Total direct expense per bu.	7.95
Total dir & ovhd exp per bu.	9.98
Less govt & other income	8.19
With labor & management	9.07
Net value per unit	12.62
Machinery cost per acre	74.88
Est. labor hours per acre	1.30

**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**(Farms Sorted By Return to Overhead)**

**Soybeans Seed on Cash Rent**

	<u>Avg. Of All Farms</u>
Number of farms	14
Acres	546.28
Yield per acre (bu.)	45.61
Operators share of yield %	100.00
Value per bu.	9.72
Total product return per acre	443.56
Hedging gains/losses per acre	16.76
Crop insurance per acre	5.74
Other crop income per acre	73.88
Gross return per acre	539.94
<b>Direct Expenses</b>	
Seed and plants	58.92
Fertilizer	16.44
Crop chemicals	36.32
Crop insurance	16.14
Drying expense	0.15
Fuel & oil	16.24
Repairs	25.01
Custom hire	1.60
Hired labor	0.80
Land rent	134.91
Machinery leases	3.06
Marketing	0.73
Operating interest	6.29
Miscellaneous	3.56
Total direct expenses per acre	320.17
Return over direct exp per acre	219.77
<b>Overhead Expenses</b>	
Hired labor	14.56
Machinery leases	1.75
Building leases	0.87
Farm insurance	5.02
Utilities	3.02
Dues & professional fees	3.41
Interest	2.07
Mach & bldg depreciation	25.35
Miscellaneous	2.03
Total overhead expenses per acre	58.09
Total dir & ovhd expenses per acre	378.25
Net return per acre	161.68
Government payments	3.94
Net return with govt pmts	165.62
Labor & management charge	35.91
Net return over lbr & mgt	129.71
<b>Cost of Production</b>	
Total direct expense per bu.	7.02
Total dir & ovhd exp per bu.	8.29
Less govt & other income	6.09
With labor & management	6.88
Net value per unit	10.09
Machinery cost per acre	72.75
Est. labor hours per acre	1.58

**Crop Enterprise Analysis**  
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**Wheat, Spring on Owned Land**

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	38	7	7	8
Acres	210.15	189.83	265.43	266.80
Yield per acre (bu.)	63.26	55.99	60.81	70.49
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	5.53	5.41	5.39	5.77
Total product return per acre	350.09	302.85	327.70	406.64
Hedging gains/losses per acre	1.54	-	0.31	5.51
Crop insurance per acre	2.21	2.36	-	6.37
Other crop income per acre	20.84	16.10	17.99	33.59
Gross return per acre	374.68	321.31	346.00	452.11
<b>Direct Expenses</b>				
Seed and plants	21.06	19.16	19.92	22.80
Fertilizer	83.19	93.22	82.57	80.83
Crop chemicals	30.27	36.87	29.83	32.20
Crop insurance	12.85	14.62	11.35	14.38
Storage	0.78	0.13	0.00	1.52
Fuel & oil	14.95	15.41	15.84	14.87
Repairs	22.57	29.63	16.82	26.68
Custom hire	4.95	3.43	6.78	3.01
Machinery leases	3.67	0.70	0.08	1.42
Marketing	0.40	0.66	0.35	0.02
Operating interest	7.79	7.09	5.16	10.34
Miscellaneous	4.29	2.96	1.22	4.08
Total direct expenses per acre	206.76	223.87	189.91	212.16
Return over direct exp per acre	167.93	97.44	156.09	239.95
<b>Overhead Expenses</b>				
Hired labor	14.22	23.31	15.88	10.11
Machinery leases	1.82	0.15	0.57	3.23
Building leases	1.75	0.14	2.07	0.32
RE & pers. property taxes	22.96	22.22	22.73	25.58
Farm insurance	7.64	10.66	5.98	9.28
Utilities	4.22	9.09	1.75	3.63
Dues & professional fees	4.36	4.34	5.99	4.46
Interest	61.05	45.76	52.25	83.59
Mach & bldg depreciation	26.59	39.53	22.03	23.68
Miscellaneous	3.16	4.51	6.01	1.18
Total overhead expenses per acre	147.76	159.69	135.26	165.06
Total dir & ovhd expenses per acre	354.51	383.56	325.18	377.22
Net return per acre	20.17	-62.25	20.83	74.89
Government payments	3.62	5.06	3.07	5.32
Net return with govt pmts	23.79	-57.19	23.89	80.21
Labor & management charge	30.48	37.57	31.89	24.99
Net return over lbr & mgt	-6.69	-94.77	-8.00	55.22
<b>Cost of Production</b>				
Total direct expense per bu.	3.27	4.00	3.12	3.01
Total dir & ovhd exp per bu.	5.60	6.85	5.35	5.35
Less govt & other income	5.16	6.43	5.00	4.63
With labor & management	5.64	7.10	5.52	4.99
Net value per unit	5.56	5.41	5.39	5.85
Machinery cost per acre	73.87	84.73	65.23	72.70
Est. labor hours per acre	1.59	2.41	1.66	1.34



**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**(Farms Sorted By Return to Overhead)**

**Wheat, Spring on Cash Rent**

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	61	12	12	13
Acres	547.54	464.30	475.37	563.72
Yield per acre (bu.)	63.11	55.58	63.16	71.63
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	5.55	5.51	5.48	5.57
Total product return per acre	350.24	306.19	346.06	398.93
Hedging gains/losses per acre	3.97	0.53	-	10.57
Crop insurance per acre	3.35	1.30	3.09	4.09
Other crop income per acre	17.37	13.95	11.34	27.38
Gross return per acre	374.93	321.97	360.50	440.97
<b>Direct Expenses</b>				
Seed and plants	19.87	21.78	19.80	20.07
Fertilizer	80.23	81.91	81.64	80.20
Crop chemicals	29.05	28.62	28.65	29.84
Crop insurance	12.23	13.85	13.18	9.72
Drying expense	0.49	1.06	0.30	0.26
Storage	0.46	0.72	1.69	0.14
Fuel & oil	14.86	16.36	12.96	13.06
Repairs	23.14	28.03	21.19	27.09
Custom hire	6.54	8.67	5.85	3.99
Land rent	131.87	137.51	126.82	119.45
Machinery leases	3.52	0.65	3.74	1.77
Operating interest	7.14	8.74	9.34	5.29
Miscellaneous	4.13	2.87	3.44	4.71
Total direct expenses per acre	333.53	350.77	328.60	315.60
Return over direct exp per acre	41.40	-28.80	31.90	125.36
<b>Overhead Expenses</b>				
Hired labor	12.53	18.24	7.27	13.90
Machinery leases	2.35	1.67	9.44	0.33
Building leases	1.74	2.06	0.24	0.47
Farm insurance	6.59	7.06	5.58	7.43
Utilities	3.04	3.99	2.65	3.48
Dues & professional fees	3.47	3.29	4.04	2.65
Interest	3.05	4.21	1.68	2.80
Mach & bldg depreciation	25.00	25.09	20.13	28.60
Miscellaneous	2.15	1.76	1.58	2.54
Total overhead expenses per acre	59.92	67.37	52.60	62.20
Total dir & ovhd expenses per acre	393.45	418.14	381.20	377.80
Net return per acre	-18.52	-96.17	-20.71	63.17
Government payments	3.51	1.96	2.98	7.08
Net return with govt pmts	-15.01	-94.21	-17.73	70.24
Labor & management charge	30.05	27.45	29.99	31.06
Net return over lbr & mgt	-45.07	-121.66	-47.72	39.19
<b>Cost of Production</b>				
Total direct expense per bu.	5.29	6.31	5.20	4.41
Total dir & ovhd exp per bu.	6.23	7.52	6.04	5.27
Less govt & other income	5.79	7.20	5.76	4.59
With labor & management	6.26	7.70	6.23	5.02
Net value per unit	5.61	5.52	5.48	5.72
Machinery cost per acre	76.05	83.04	74.14	74.27
Est. labor hours per acre	1.41	1.58	1.25	1.49



**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**Sugarbeets Excluding Joint Ventures**  
**(Farms Sorted By Return to Overhead)**

**Sugar Beets on Owned Land**

	<b>Avg. Of All Farms</b>
Number of farms	11
Acres	130.83
Yield per acre (ton)	27.54
Operators share of yield %	100.00
Value per ton	37.72
Total product return per acre	1,038.72
Crop insurance per acre	37.37
Other crop income per acre	4.37
Gross return per acre	1,080.46
<b>Direct Expenses</b>	
Seed and plants	218.21
Fertilizer	72.62
Crop chemicals	119.97
Crop insurance	34.62
Fuel & oil	50.05
Repairs	89.49
Custom hire	7.06
Hired labor	41.66
Machinery leases	11.79
Hauling and trucking	3.84
Operating interest	25.33
Miscellaneous	5.50
Total direct expenses per acre	680.16
Return over direct exp per acre	400.30
<b>Overhead Expenses</b>	
Hired labor	61.22
Machinery leases	5.59
Building leases	2.18
RE & pers. property taxes	24.02
Farm insurance	10.32
Utilities	11.55
Dues & professional fees	4.06
Interest	84.24
Mach & bldg depreciation	94.79
Miscellaneous	6.97
Total overhead expenses per acre	304.93
Total dir & ovhd expenses per acre	985.09
Net return per acre	95.37
Government payments	1.51
Net return with govt pmts	96.88
Labor & management charge	109.84
Net return over lbr & mgt	-12.97
<b>Cost of Production</b>	
Total direct expense per ton	24.70
Total dir & ovhd exp per ton	35.77
Less govt & other income	34.20
With labor & management	38.19
Net value per unit	37.72
Machinery cost per acre	265.10
Est. labor hours per acre	5.45

**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**Sugarbeets Excluding Joint Ventures**  
**(Farms Sorted By Return to Overhead)**

**Sugar Beets on Cash Rent**

	<u>Avg. Of All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	24	5	5
Acres	258.36	154.02	232.57
Yield per acre (ton)	29.66	30.42	32.93
Operators share of yield %	100.00	100.00	100.00
Value per ton	37.60	40.08	40.10
Total product return per acre	1,115.26	1,219.42	1,320.48
Crop insurance per acre	9.53	-	-
Other crop income per acre	6.10	2.68	12.97
Gross return per acre	1,130.89	1,222.10	1,333.45
<b>Direct Expenses</b>			
Seed and plants	216.81	233.24	215.19
Fertilizer	73.43	80.23	77.00
Crop chemicals	112.63	105.36	107.92
Crop insurance	30.74	31.14	22.21
Fuel & oil	55.81	68.31	60.12
Repairs	95.82	103.91	95.98
Custom hire	15.55	2.46	7.21
Hired labor	46.51	49.17	46.49
Land rent	137.94	142.81	133.56
Machinery leases	9.10	6.47	7.24
Hauling and trucking	24.98	5.84	17.93
Operating interest	17.30	37.67	7.90
Miscellaneous	7.17	10.44	3.59
Total direct expenses per acre	843.79	877.04	802.35
Return over direct exp per acre	287.10	345.06	531.10
<b>Overhead Expenses</b>			
Hired labor	69.43	63.01	55.54
Machinery leases	2.07	4.87	0.00
Building leases	2.27	2.26	1.72
Farm insurance	10.98	9.47	8.04
Utilities	10.34	10.45	7.59
Dues & professional fees	5.37	4.57	1.88
Interest	10.15	24.48	6.31
Mach & bldg depreciation	96.40	85.12	87.55
Miscellaneous	8.03	6.63	9.01
Total overhead expenses per acre	215.04	210.86	177.63
Total dir & ovhd expenses per acre	1,058.83	1,087.90	979.98
Net return per acre	72.06	134.20	353.47
Government payments	3.95	0.73	6.78
Net return with govt pmts	76.01	134.93	360.25
Labor & management charge	121.50	98.47	114.35
Net return over lbr & mgt	-45.49	36.46	245.90
<b>Cost of Production</b>			
Total direct expense per ton	28.45	28.83	24.37
Total dir & ovhd exp per ton	35.69	35.76	29.76
Less govt & other income	35.03	35.65	29.16
With labor & management	39.13	38.88	32.63
Net value per unit	37.60	40.08	40.10
Machinery cost per acre	272.76	294.67	248.36
Est. labor hours per acre	5.81	5.43	6.24

**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**Sugarbeets - Joint Ventures**  
**(Farms Sorted By Return to Overhead)**

**Sugar Beets on Owned Land**

	<u>Avg. Of All Farms</u>
Number of farms	11
Acres	148.31
Yield per acre (ton)	32.71
Operators share of yield %	100.00
Value per ton	38.77
Total product return per acre	1,268.41
Crop insurance per acre	0.77
Other crop income per acre	15.57
Gross return per acre	1,284.75
<b>Direct Expenses</b>	
Seed and plants	231.08
Fertilizer	78.86
Crop chemicals	95.30
Crop insurance	31.44
Fuel & oil	56.93
Repairs	80.92
Custom hire	25.57
Hired labor	34.89
Stock/quota lease	201.38
Machinery leases	5.34
Hauling and trucking	22.39
Operating interest	35.29
Miscellaneous	4.25
Total direct expenses per acre	903.64
Return over direct exp per acre	381.11
<b>Overhead Expenses</b>	
Hired labor	40.16
Machinery leases	10.92
Building leases	11.20
RE & pers. property taxes	24.33
Farm insurance	13.27
Utilities	12.65
Dues & professional fees	6.18
Interest	86.17
Mach & bldg depreciation	103.19
Miscellaneous	7.09
Total overhead expenses per acre	315.16
Total dir & ovhd expenses per acre	1,218.80
Net return per acre	65.95
Government payments	2.22
Net return with govt pmts	68.17
Labor & management charge	84.95
Net return over lbr & mgt	-16.79
<b>Cost of Production</b>	
Total direct expense per ton	27.62
Total dir & ovhd exp per ton	37.26
Less govt & other income	36.69
With labor & management	39.29
Net value per unit	38.77
Machinery cost per acre	287.16
Est. labor hours per acre	4.62

**Crop Enterprise Analysis**  
**2018 Moorhead Farm Business Management Annual Report**  
**Sugarbeets - Joint Ventures**  
**(Farms Sorted By Return to Overhead)**

**Sugar Beets on Cash Rent**

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	28	5	5	6
Acres	253.89	352.96	156.94	186.36
Yield per acre (ton)	29.79	25.16	32.61	32.60
Operators share of yield %	100.00	100.00	100.00	100.00
Value per ton	37.68	33.67	40.30	39.85
Total product return per acre	1,122.28	847.22	1,314.14	1,299.19
Crop insurance per acre	6.90	27.03	1.71	-
Other crop income per acre	6.76	2.26	6.20	20.33
Gross return per acre	1,135.95	876.52	1,322.04	1,319.52
<b>Direct Expenses</b>				
Seed and plants	228.67	227.03	232.39	216.63
Fertilizer	78.06	72.40	89.86	83.71
Crop chemicals	104.16	124.92	121.69	77.51
Crop insurance	27.37	33.77	29.08	26.51
Fuel & oil	55.55	60.00	55.70	57.64
Repairs	96.77	99.22	88.11	115.28
Custom hire	20.46	11.62	26.44	3.02
Hired labor	40.36	42.15	55.47	28.65
Land rent	143.20	149.32	147.72	113.78
Stock/quota lease	204.51	218.63	221.74	156.57
Machinery leases	2.74	1.59	4.06	6.86
Hauling and trucking	18.51	9.87	56.73	0.74
Operating interest	28.65	24.95	26.01	28.83
Miscellaneous	4.09	4.00	0.43	4.53
Total direct expenses per acre	1,053.09	1,079.47	1,155.43	920.27
Return over direct exp per acre	82.85	-202.95	166.61	399.25
<b>Overhead Expenses</b>				
Hired labor	42.24	51.16	51.13	28.90
Machinery leases	8.29	5.16	0.30	8.29
Building leases	5.12	2.23	4.95	1.78
Farm insurance	12.27	11.03	6.95	7.85
Utilities	9.81	12.22	10.68	13.58
Dues & professional fees	5.73	5.39	3.48	6.05
Interest	13.58	7.80	23.41	13.95
Mach & bldg depreciation	86.04	78.14	101.01	98.32
Miscellaneous	12.56	35.69	10.79	6.52
Total overhead expenses per acre	195.64	208.82	212.70	185.23
Total dir & ovhd expenses per acre	1,248.73	1,288.29	1,368.13	1,105.49
Net return per acre	-112.78	-411.77	-46.09	214.02
Government payments	2.51	1.93	2.20	1.82
Net return with govt pmts	-110.27	-409.84	-43.89	215.84
Labor & management charge	94.77	82.77	109.64	109.96
Net return over lbr & mgt	-205.04	-492.61	-153.53	105.89
<b>Cost of Production</b>				
Total direct expense per ton	35.36	42.90	35.43	28.23
Total dir & ovhd exp per ton	41.92	51.20	41.95	33.91
Less govt & other income	41.38	49.96	41.64	33.23
With labor & management	44.56	53.25	45.01	36.61
Net value per unit	37.68	33.67	40.30	39.85
Machinery cost per acre	273.97	250.90	293.91	288.18
Est. labor hours per acre	4.59	4.20	5.75	5.19

# Corn on Cash Rented Land

## Moorhead Farm Business Management Program - Northland College

	<u>5-yr Average</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Number of Fields	39	41	40	37		
Acres	463.25	485.92	460.64	475.51	430.94	
Yield per Acre	166.58	184.43	168.11	182.04	158.54	139.78
** Value per Unit	3.29	3.29	2.99	3.06	3.33	3.78
Product Value	544.56	606.27	502.20	557.95	528.54	527.83
Other Income	31.29	19.69	14.18	32.53	29.96	60.10
<b>Gross Return</b>	<b>579.88</b>	<b>625.96</b>	<b>516.38</b>	<b>590.48</b>	<b>558.50</b>	<b>608.10</b>
<b>Direct Costs</b>						
Seed	92.94	92.22	90.66	90.84	95.04	95.94
Fertilizer	109.25	101.04	93.21	97.20	124.16	130.62
Chemicals	26.79	24.80	31.74	27.17	24.71	25.52
Crop Insurance	20.79	17.72	22.23	17.65	22.03	24.34
Fuel & Oil	26.13	25.59	20.13	20.38	24.37	40.19
Repairs	34.92	35.53	34.88	35.53	32.84	35.84
Custom Hire	5.05	5.91	5.76	5.08	5.47	3.05
Land Rent	130.47	135.58	127.14	126.94	131.67	131.01
Other Direct Exp	28.34	36.46	26.26	22.44	20.14	36.39
Total Direct	476.15	474.82	452.02	450.58	480.43	522.89
Return over Direct	103.74	151.15	64.36	139.90	78.07	85.20
<b>Overhead Costs</b>						
Other Labor	22.44	23.20	23.11	21.36	20.66	23.86
Intermediate Interest	5.28	5.15	4.42	5.95	5.92	4.98
Depreciation	52.24	41.92	46.75	51.09	59.75	61.67
Other Overhead Exp	31.15	31.23	33.74	29.33	29.89	31.55
Total Ovhd Expenses	111.11	101.50	108.02	107.73	116.22	122.06
<b>Total Direct/Ovhd Expenses</b>	<b>587.26</b>	<b>576.32</b>	<b>560.04</b>	<b>558.31</b>	<b>596.65</b>	<b>644.96</b>
<b>*** Net Return</b>	<b>-7.37</b>	<b>49.65</b>	<b>-43.66</b>	<b>32.17</b>	<b>-38.15</b>	<b>-36.86</b>

\*\* - Value per Unit is a combination of actual Fall selling price and/or value on Dec 31st of that crop year.

\*\*\* - Net Return does **not** include direct government income or principal payment expenses or personal draw expenses

# Soybeans on Cash Rented Land

## Moorhead Farm Business Management Program - Northland College

	<u>5-yr Average</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Number of Fields	59	58	61	57		
Acres	662.90	655.42	721.63	658.37	616.17	
Yield per Acre	42.57	45.36	36.59	46.00	44.61	40.27
** Value per Unit	8.92	8.09	8.99	9.19	8.44	9.89
Product Value	378.72	367.09	329.10	422.91	376.35	398.15
Other Income	29.89	90.31	19.74	18.99	6.44	13.99
<b>Gross Return</b>	<b>408.61</b>	<b>457.40</b>	<b>348.84</b>	<b>441.89</b>	<b>382.79</b>	<b>412.14</b>
<b>Direct Costs</b>						
Seed	65.32	61.92	63.07	64.44	67.43	69.73
Fertilizer	12.85	9.09	15.27	15.78	13.68	10.43
Chemicals	30.33	31.88	36.24	29.39	28.87	25.25
Crop Insurance	18.87	18.68	19.36	16.62	18.31	21.37
Fuel & Oil	13.84	13.80	11.06	10.91	13.12	20.29
Repairs	20.26	20.52	19.53	19.52	18.95	22.76
Custom Hire	4.83	5.49	5.34	4.49	3.63	5.21
Land Rent	133.05	134.28	132.93	129.90	131.03	137.10
Other Direct Exp	14.18	18.55	12.64	13.99	10.55	15.17
Total Direct	313.52	314.23	315.45	305.04	305.58	327.31
Return over Direct	95.09	143.16	33.39	136.86	77.21	84.83
<b>Overhead Costs</b>						
Other Labor	12.17	12.19	13.62	11.08	11.76	12.20
Intermediate Interest	2.66	2.64	2.32	3.19	2.80	2.33
Depreciation	26.99	23.95	24.76	26.16	28.86	31.20
Other Overhead Exp	20.18	19.09	22.08	19.66	19.74	20.35
Total Ovhd Expenses	62.00	57.87	62.78	60.09	63.16	66.08
<b>Total Direct/Ovhd Expenses</b>	<b>375.51</b>	<b>372.10</b>	<b>378.22</b>	<b>365.12</b>	<b>368.74</b>	<b>393.39</b>
<b>*** Net Return</b>	<b>33.10</b>	<b>85.30</b>	<b>-29.39</b>	<b>76.77</b>	<b>14.05</b>	<b>18.75</b>

\*\* - Value per Unit is a combination of actual Fall selling price and/or value on Dec 31st of that crop year.

\*\*\* - Net Return does **not** include direct government income or principal payment expenses or personal draw expenses

# Spring Wheat on Cash Rented Land

## Moorhead Farm Business Management Program - Northland College

	<u>5-yr Average</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Number of Fields	53	61	51	48		
Acres	465.56	547.54	431.66	444.99	438.06	
Yield per Acre	70.39	63.11	73.41	69.20	75.50	70.73
** Value per Unit	5.42	5.55	6.01	5.03	4.95	5.58
Product Value	381.67	350.24	441.53	348.36	373.82	394.40
Other Income	14.00	24.69	3.26	15.10	11.99	14.97
<b>Gross Return</b>	<b>395.67</b>	<b>374.93</b>	<b>444.79</b>	<b>363.46</b>	<b>385.81</b>	<b>409.35</b>
<b>Direct Costs</b>						
Seed	21.14	19.87	19.55	18.86	22.75	24.66
Fertilizer	87.62	80.23	77.42	80.49	97.71	102.27
Chemicals	26.91	29.05	29.24	25.07	24.50	26.68
Crop Insurance	13.47	12.23	13.74	13.94	12.60	14.86
Fuel & Oil	14.67	14.86	12.31	11.53	13.76	20.87
Repairs	22.15	23.14	22.95	22.04	20.74	21.88
Custom Hire	6.06	6.54	5.29	6.05	5.52	6.89
Land Rent	132.48	131.87	131.79	132.94	132.66	133.13
Other Direct Exp	16.30	15.74	12.89	15.40	15.35	22.14
Total Direct	341.11	333.53	325.19	326.31	345.61	374.92
Return over Direct	54.56	41.40	119.60	37.15	40.20	34.43
<b>Overhead Costs</b>						
Other Labor	13.52	12.53	15.46	13.41	13.01	13.18
Intermediate Interest	2.61	3.05	2.02	2.71	2.80	2.49
Depreciation	26.57	25.00	24.50	26.95	26.99	29.40
Other Overhead Exp	20.01	19.34	21.03	19.54	21.18	18.95
Total Ovhd Expenses	62.71	59.92	63.01	62.61	63.98	64.02
<b>Total Direct/Ovhd Expenses</b>	<b>403.82</b>	<b>393.45</b>	<b>388.20</b>	<b>388.92</b>	<b>409.59</b>	<b>438.94</b>
<b>*** Net Return</b>	<b>-8.15</b>	<b>-18.52</b>	<b>56.59</b>	<b>-25.46</b>	<b>-23.78</b>	<b>-29.58</b>

\*\* - Value per Unit is a combination of actual Fall selling price and/or value on Dec 31st of that crop year.

\*\*\* - Net Return does **not** include direct government income or principal payment expenses or personal draw expenses



# Sugarbeets on Cash Rented Land (excluding joint venture)

## Moorhead Farm Business Management Program - Northland College

	<u>5-yr Average</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Number of Fields	20	24	20	17		
Acres	231.83	258.36	259.34	211.26	198.35	
Yield per Acre	29.10	29.66	31.47	33.10	28.69	22.56
** Value per Unit	38.77	37.60	39.78	36.08	44.77	35.61
Product Value	1,129.78	1,115.26	1,251.65	1,194.32	1,284.46	803.20
Other Income	9.79	15.63	6.82	4.64		12.06
<b>Gross Return</b>	<b>1,137.61</b>	<b>1,130.89</b>	<b>1,258.47</b>	<b>1,198.97</b>	<b>1,284.46</b>	<b>815.27</b>
<b>Direct Costs</b>						
Seed	220.88	216.81	226.50	227.09	218.20	215.82
Fertilizer	87.06	73.43	78.06	82.95	95.49	105.37
Chemicals	92.68	112.63	98.77	104.04	80.38	67.60
Crop Insurance	29.18	30.74	33.08	30.29	27.03	24.78
Fuel & Oil	57.46	55.81	46.03	43.83	59.17	82.44
Repairs	96.41	95.82	81.62	100.44	98.87	105.31
Direct Labor	39.09	46.51	36.83	40.92	45.05	26.12
Custom Hire	12.96	15.55	10.67	14.01	15.45	9.10
Land Rent	141.51	137.94	141.53	143.21	142.11	142.75
Other Direct Exp	38.94	58.55	40.08	39.72	29.50	26.83
Total Direct	816.17	843.79	793.17	826.51	811.24	806.13
Return over Direct	321.44	287.10	465.31	372.46	473.21	9.14
<b>Overhead Costs</b>						
Other Labor	79.00	69.43	85.73	82.37	73.80	83.69
Intermediate Interest	9.40	10.15	7.30	8.81	11.60	9.14
Depreciation	107.69	96.40	99.89	114.15	112.48	115.51
Other Overhead Exp	52.70	39.06	52.54	54.56	57.86	59.49
Total Ovhd Expenses	248.79	215.04	245.46	259.89	255.74	267.83
<b>Total Direct/Ovhd Expenses</b>	<b>1,064.96</b>	<b>1,058.83</b>	<b>1,038.63</b>	<b>1,086.40</b>	<b>1,066.98</b>	<b>1,073.95</b>
<b>*** Net Return</b>	<b>72.65</b>	<b>72.06</b>	<b>219.84</b>	<b>112.57</b>	<b>217.48</b>	<b>-258.69</b>

\*\* - Value per Unit is a combination of actual Fall selling price and/or value on Dec 31st of that crop year.

\*\*\* - Net Return does **not** include direct government income or principal payment expenses or personal draw expenses



# MyFarm Financial Scorecard

Year: \_\_\_\_\_

Name: \_\_\_\_\_

	This Year	5-Year Ave	Strong		Vulnerable
<b>Liquidity</b>					
Current ratio			2.0		1.3
Working capital					
Working cap to gross revenue			30%		10%
<b>Solvency (market)</b>	Note: These solvency ratios include deferred liabilities				
Farm debt/asset ratio			30%		60%
Farm equity/asset ratio			70%		40%
Farm debt/equity ratio			0.43		1.50
<b>Profitability (Cost)</b>					
Rate of return on farm assets			8%		4%
Rate of return on farm equity			10%		3%
Operating profit margin			25%		15%
Net farm income					
EBITDA					
<b>Repayment Capacity (Accrual)</b>					
Capital debt repay capacity					
Capital debt repay margin					
Replacement margin					
Term-debt coverage ratio			1.75		1.25
Replacement margin ratio			1.50		1.10
<b>Financial Efficiency</b>					
Asset-turnover rate (market)			45%		30%
Operating-expense ratio			60%		80%
Depreciation-expense ratio			5%		10%
Interest-expense ratio			5%		10%
Net farm income ratio			20%		10%