



# Farm Business Management



2015  
ANNUAL  
REPORT



## Northern Minnesota



April, 2016



[www.fbm.mnscu.edu](http://www.fbm.mnscu.edu)

A Management Education Program through AgCentric, Northern Center of Excellence for Agriculture

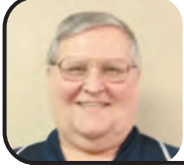
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## 2015 Annual Report – Executive Summary

The 2015 farm year can best be described as a great production year, with significantly reduced farm earnings. Crop yields and livestock production were at or near all-time records. On the down side, prices of crops and livestock dropped significantly during 2015. The decrease in accrual adjusted farm income was influenced by beginning inventory values that were significantly higher than the actual prices received for crops and livestock at the time of sale.

Average net farm income for the 588 farms in the Northern Minnesota database was \$37,182 for 2015. This was down drastically (67%) from the \$114,095 reported in 2014. Median net farm income was down significantly (48%) as

well, decreasing to \$23,730 in 2015, compared to \$46,104 in 2014.

Financial Factors	2012	2013	2014	2015
Average Net Farm Income	\$195,588	\$75,243	\$114,095	\$37,182
Median Net Farm Income	\$102,641	\$27,886	\$46,104	\$23,730

The continued declines in the prices of virtually all major commodities caused Northern Minnesota farm profits to drop to their lowest levels since 2009. Unlike 2014, when strong incomes for most livestock farms strengthened the Northern Minnesota data, most livestock producers suffered major declines in prices and profits in 2015. Profits earned by crop producers inched upward from very low levels of 2014, with record yields offsetting further declines in corn, soybeans, wheat and other crop commodity prices.

Several other key financial measures deteriorated in 2015 for most Northern Minnesota farms. Working capital fell to \$138,627 at the end of 2015 compared to \$171,051 at the end of 2014, a decrease of 19%. Working Capital shows the dollar amount that current assets can or cannot cover current liabilities. Working capital remains respectable for most operations, but the concern becomes how long farms can handle the current prices received for their crop and livestock products, and the current cost of farm inputs.

Term Debt Coverage is a key financial measure that Ag lenders consider in loan decisions. The 2015 Northern Minnesota average was .88 compared to 1.75 in 2014, and 3.24 in 2012. The major reduction in this factor tells us that farms needed to use working capital to help make all their scheduled payments on intermediate, long-term and personal loans. Working capital was used to offset the shortage of income in the operation in 2015.

With the reduced revenue generated in 2015, the operating expense ratio increased to levels that put the Northern Minnesota

Financial Factors	2012	2013	2014	2015
Working Capital	\$235,430	\$130,026	\$171,051	\$138,627
Working Capital as % of Gross	33.9%	27.9%	25.4%	24.7%
Term Debt Coverage Ratio	3.24	1.31	1.75	0.88
Operating Expense Ratio	63.0%	76.2%	73.1%	81.4%

database average into the red zone, based on the Financial Scorecard on the back of this report. 80% is the start of the red zone area, and Northern Minnesota farms ended the 2015 year at 81.4%, compared to 73.1% in 2014 and 63% back in 2012. This ratio indicates that for every dollar of farm revenue produced, it took 81.4 cents to cover the annual operating expenses; excluding interest paid, loan payments or depreciation, and family living. When operating expenses take that large of a slice of the gross revenue, cash flow issues are created for most farms.

Trend information for the 2011-2015 Financial Summary can be found on page 4 of this report. A quick look at 2015 can be found on page 5, Year at a Glance. The impact of spending on the farm economy of Northern Minnesota by the average farmer in this report can be found on page 9.

## 2015 Annual Report – Executive Summary

Our two major livestock enterprises in Northern Minnesota are Dairy and Beef Cow-Calf operations. On a statewide basis, these enterprises generated a profit in 2015 which was down considerably from near record levels in 2014. Dairy farms generated a Net Return/cow of \$289 compared to \$1,249 in 2014. This reduction in profit is tied directly to the drop in average price received for milk, which reduced significantly in 2015 to a level of \$17.75 per hundredweight; compared to \$24.36 per hundredweight in 2014.

Statewide MnSCU Data	Dairy			
	2012	2013	2014	2015
Gross Margin	\$4,263	\$4,400	\$5,618	\$4,187
Feed Cost / Cow	\$2,321	\$2,393	\$2,430	\$2,108
Dir & Ovhd Expense/Cow	\$3,972	\$4,113	\$4,369	\$3,897
Net Return / Cow	\$290	\$287	\$1,249	\$289
Average Milk Price	\$19.47	\$20.20	\$24.36	\$17.75
Dir & Ovhd Expense/Cwt Milk	\$17.44	\$17.81	\$18.38	\$16.22

Beef Cow/Calf enterprises showed a Net Return of \$117 compared to \$452 in 2014. Feed costs were

Statewide MnSCU Data	Beef Cow-Calf			
	2012	2013	2014	2015
Gross Margin	\$800	\$778	\$1,295	\$864
Feed Cost / Cow	\$446	\$479	\$508	\$439
Dir & Ovhd Expense/Cow	\$712	\$741	\$844	\$747
Net Return / Cow	\$88	\$37	\$452	\$117
Ave Price per CWT calf sold	\$146.91	\$152.83	\$212.33	\$206.46

lower for both the Beef Cow/Calf and Dairy enterprises in 2015, but the reduced prices more than offset decreased feed costs and modest increases in production levels.

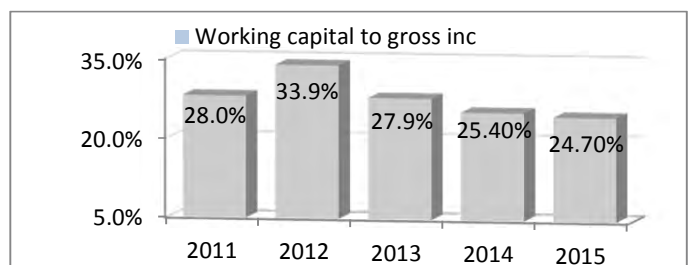
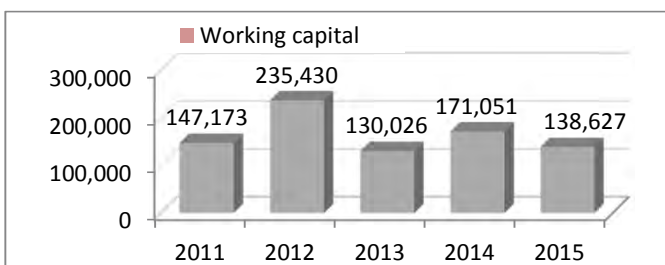
2015 was a great year for crop production in Minnesota. Some isolated areas experienced hail damage or missed some key late growing season rains, but most farms produced one of the best crops ever. The average yield per acre for the northern half of Minnesota was 164 bushels for corn, 40 bushels for soybeans, and 66 bushels for wheat. Even though farms experienced near record yields in 2015, net returns were only modest in soybeans and wheat, and negative returns were seen in Corn. Total direct and overhead expense for the crops listed below showed a modest reduction, due in part to a slight decline in some direct crop inputs.

The chart below displays the 4-year history of selected factors for these crops.

Rented Land		Yield per Acre	Value per Unit	Gross Revenue /Acre	Dir & Ovhd Expense /Acre	Net Return /Acre	Dir & Ovhd Expense /Unit
Corn	2012	128.5	\$6.38	\$832.19	\$544.50	\$287.69	\$4.24
	2013	105.4	\$4.01	\$494.27	\$564.51	(\$70.24)	\$5.36
	2014	118.2	\$3.49	\$521.63	\$611.16	(\$89.53)	\$5.17
	2015	164.2	\$3.32	\$558.23	\$585.59	(\$27.36)	\$3.57
Soybeans	2012	37.0	\$13.86	\$520.96	\$309.50	\$211.46	\$8.37
	2013	30.6	\$12.59	\$402.48	\$310.57	\$91.91	\$10.15
	2014	32.8	\$9.78	\$342.20	\$329.59	\$12.61	\$10.04
	2015	40.1	\$8.37	\$347.59	\$320.92	\$26.67	\$8.01
Spring Wheat	2012	59.3	\$8.30	\$496.23	\$342.80	\$153.43	\$5.87
	2013	65.7	\$6.32	\$422.88	\$355.27	\$67.61	\$5.41
	2014	62.4	\$5.56	\$361.53	\$351.33	\$10.20	\$5.63
	2015	66.3	\$5.02	\$346.93	\$330.46	\$16.47	\$4.99

**Financial Trend Summary**  
**Northern Minnesota Farm Business Management Data**

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
<b>Income Statement</b>					
Gross Cash Farm Income	489,148	609,139	595,950	658,798	551,703
Total Cash Farm Expense	389,571	473,448	467,633	522,485	469,847
Net Cash Farm Income	99,577	135,691	128,317	136,314	81,857
Inventory change	45,283	94,606	-16,741	18,383	-5,368
Depreciation	-29,184	-34,864	-36,037	-40,880	-40,070
Net Farm Income From Operations	115,675	195,433	75,539	113,816	36,419
Gain or loss on capital sales	1,197	155	-296	279	763
Average Net Farm Income	116,872	195,588	75,243	114,095	37,182
Median Net Farm Income	66,755	102,641	27,886	46,104	23,730
<b>Profitability (Cost)</b>					
Rate of Return on Assets	9.6%	13.9%	4.4%	6.4%	1.4%
Rate of Return on Equity	14.4%	22.2%	4.5%	8.3%	-0.9%
Operating Profit Margin	22.1%	29.1%	12.7%	17.8%	4.7%
Asset Turnover Rate	43.7%	47.7%	34.6%	36.2%	29.8%
<b>Liquidity &amp; Repayment (end of year)</b>					
Current Assets	298,668	433,205	320,139	379,735	362,417
Current Liabilities	151,495	197,776	190,113	208,684	223,790
Current Ratio	1.97	2.19	1.68	1.82	1.62
Working capital	147,173	235,430	130,026	171,051	138,627
Working capital to gross inc	28.0%	33.9%	27.9%	25.40%	24.70%
Term Debt Coverage Ratio	2.47	3.24	1.31	1.75	0.88
Replacement coverage ratio	2.10	2.79	1.15	1.50	0.76
Term debt to EBITDA	-	-	-	2.45	4.33
<b>Solvency (Market)</b>					
Number of Farms	395	405	412	566	588
Total Assets	1,480,387	1,846,773	1,685,236	2,032,113	2,003,026
Total Liabilities	670,483	830,038	785,428	883,164	895,016
Net Worth	809,903	1,016,735	899,809	1,148,949	1,108,011
Net Worth Change	116,594	174,381	64,982	111,833	30,645
Farm Debt to Asset Ratio	47%	47%	44%	44%	47%
Total Debt to Asset Ratio	45%	45%	47%	43%	45%
Change in total net worth %	-	-	-	11%	3%
<b>Nonfarm Information</b>					
Net Nonfarm Income	27,828	24,030	26,161	25,050	28,964
Farms Reporting Liv Expenses	49	53	51	88	76
Total Family Living Expense	40,784	46,842	43,192	51,248	48,783
Total Living, Invest, & Cap Purch	50,363	77,238	60,826	69,840	74,687
<b>Crop Acres</b>					
Total Crop Acres	712	836	749	697	688
Total Crop Acres Owned	251	299	278	253	248
Total Crop Acres Cash Rented	452	521	462	432	428
Total Crop Acres Share Rent	9	17	9	12	12
Machinery value per crop acre	-	-	-	607	542



<u><b>Year at a Glance</b></u>				<b>Your</b>	<b>Your</b>
<i>Data for the Average Farm</i>	<b>Northern</b>	<b>State</b>	<b>Local</b>	<b>Farm</b>	<b>Farm</b>
	<b>Minnesota</b>	<b>FBM</b>	<b>Area</b>	<b>Data</b>	<b>Goal</b>
	<b>588</b>	<b>2031</b>			
	<b><u>Farms</u></b>	<b><u>Farms</u></b>			
<b><u>Income Statement</u></b>					
Gross Cash Farm Income	\$551,703	\$766,404	_____	_____	_____
Total Cash Operating Expense	\$469,847	\$657,505	_____	_____	_____
Net Cash Farm Income	\$81,857	\$108,899	_____	_____	_____
Net Operating Profit	\$76,489	\$95,233	_____	_____	_____
Net Farm Income	\$37,182	\$42,877	_____	_____	_____
Median Farm Income	\$23,730	\$25,392	_____	_____	_____
<b><u>Balance Sheet (Market)</u></b>					
Total Assets - 12/31	\$2,003,026	\$2,816,577	_____	_____	_____
Total Liabilities - 12/31	\$895,016	\$1,204,953	_____	_____	_____
Net Worth - 12/31	\$1,108,011	\$1,611,624	_____	_____	_____
Change in Net Worth	\$30,645	\$35,430	_____	_____	_____
<b><u>Financial Standards Measures</u></b>					
Working Capital - 12/31	\$138,627	\$211,908	_____	_____	_____
Debt to Asset Ratio - 12/31	47%	45%	_____	_____	_____
Rate of Return on Farm Assets - Cost	1.4%	1.2%	_____	_____	_____
Rate of Return on Farm Equity - Cost	-0.9%	-1.0%	_____	_____	_____
Term Debt Coverage Ratio	0.88	0.83	_____	_____	_____
Asset Turnover Rate	29.8%	32.3%	_____	_____	_____
Operating Expense Ratio	81.4%	83.1%	_____	_____	_____
Interest Expense Ratio	5.0%	4.4%	_____	_____	_____
<b><u>Operator Information</u></b>					
Average Age of the Farmer	46.2	47.8	_____	_____	_____
Average Years Farming	21.4	24.0	_____	_____	_____
<b><u>Personal Spending &amp; Income</u></b>					
Total Cash Family Living Expense	\$48,783	\$60,798	_____	_____	_____
Total Non Farm Income	\$28,964	\$33,868	_____	_____	_____

Net Farm Income dollars are used to pay for Family Living, Social Security and Income Tax, Retirement Accounts, Medical and Health expenses, and loan principle payments. A positive balance indicates revenue for other uses, while a negative balance indicates a need for revenue from other sources.

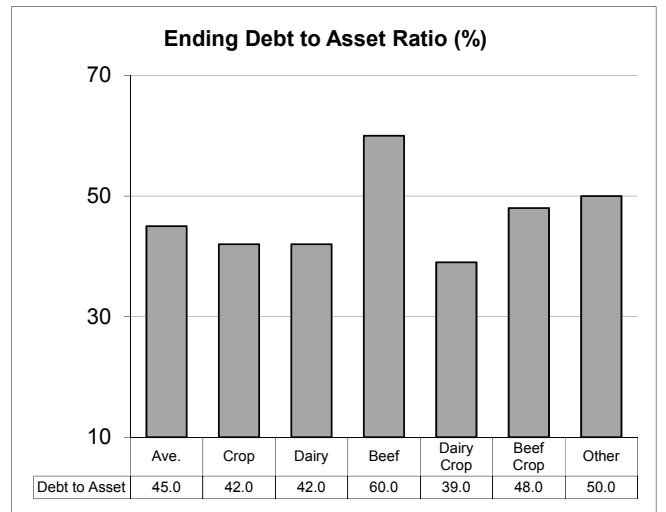
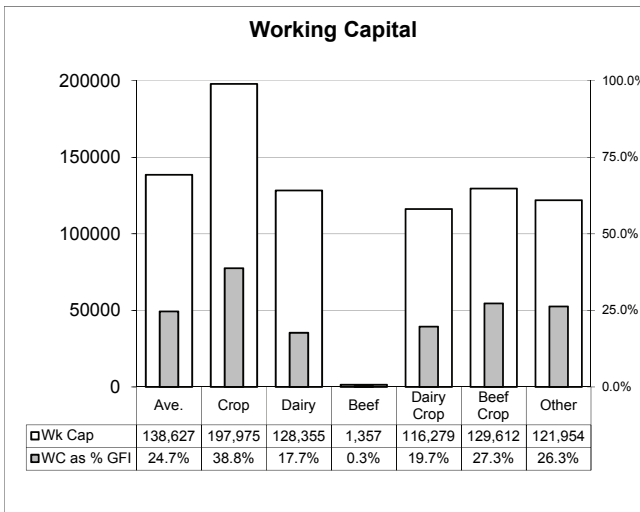
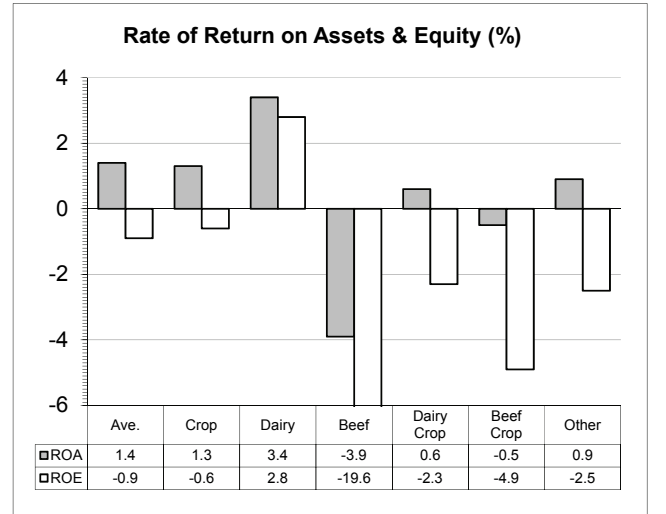
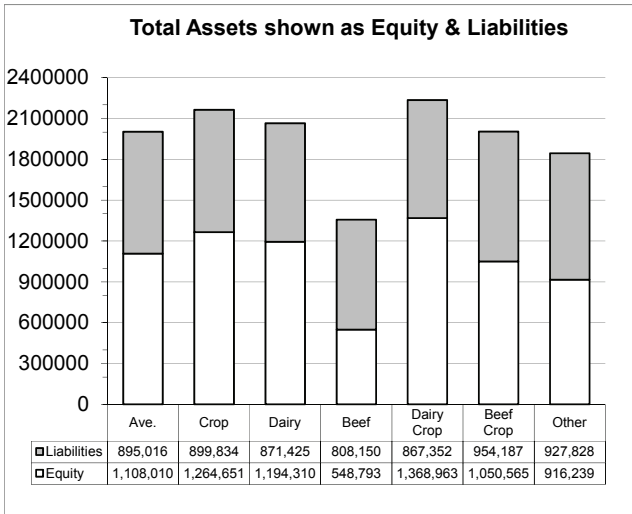
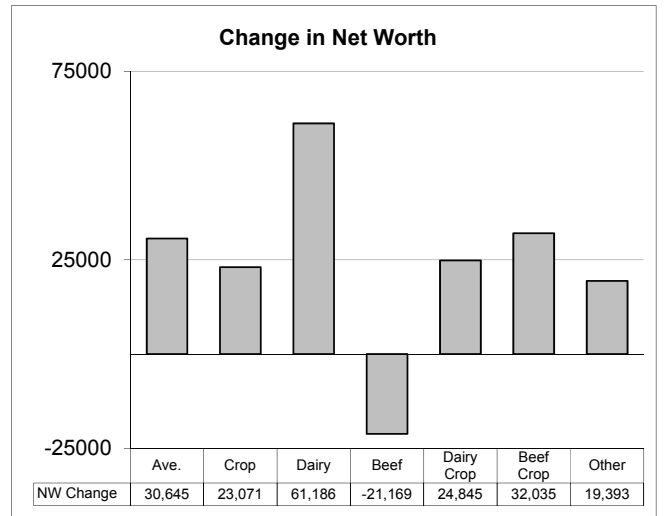
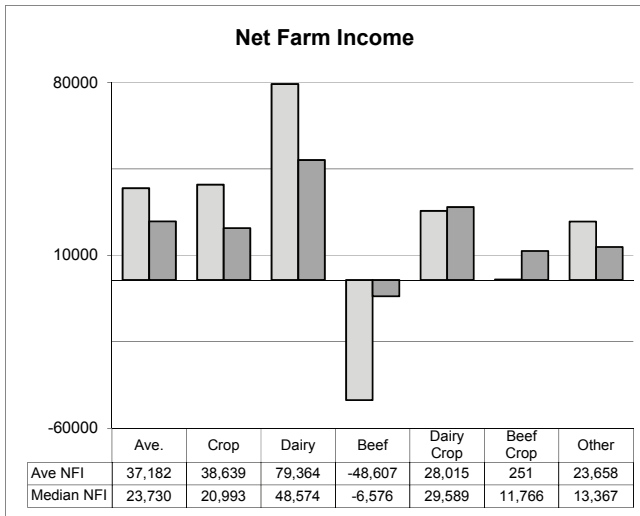
The following list shows expenses for the year:

		<u>Northern Minnesota</u>	<u>State Data</u>
Net Farm Income	(+)	\$37,182	\$42,877
Depreciation	(+)	\$40,070	\$53,309
Family Living (Excl Health/Med)	(-)	\$40,841	\$50,446
Social Security and Income Tax	(-)	\$7,181	\$13,574
Health and Medical Expense	(-)	\$7,217	\$10,577
Retirement Accounts	(-)	\$3,923	\$5,462
Principal Payments	(-)	\$56,922	\$66,266
Balance	(=)	-\$38,832	-\$50,139

**Financial Summary**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Farm Type)**

	<u>Avg. Of All Farms</u>	<u>Crop</u>	<u>Dairy</u>	<u>Beef</u>	<u>Crop and Dairy</u>	<u>Crop and Beef</u>	<u>Other</u>
Number of farms	588	181	172	42	25	46	119
<b>Income Statement</b>							
Gross cash farm income	551,703	490,719	713,877	469,074	611,993	456,019	453,142
Total cash farm expense	469,847	415,731	587,324	458,126	492,973	409,057	393,490
Net cash farm income	81,857	74,988	126,553	10,947	119,020	46,962	59,653
Inventory change	-5,368	5,997	-3,359	-40,341	-39,320	-11,716	-1,902
Depreciation	-40,070	-43,318	-44,096	-18,397	-50,638	-35,088	-36,474
Net farm income from operations	36,419	37,667	79,098	-47,791	29,062	157	21,277
Gain or loss on capital sales	763	972	266	-815	-1,047	94	2,381
Average net farm income	37,182	38,639	79,364	-48,607	28,015	251	23,658
Median net farm income	23,730	20,993	48,574	-6,576	29,589	11,766	13,367
<b>Profitability (cost)</b>							
Rate of return on assets	1.4 %	1.3 %	3.4 %	-3.9 %	0.6 %	-0.5 %	0.9 %
Rate of return on equity	-0.9 %	-0.6 %	2.8 %	-19.6 %	-2.3 %	-4.9 %	-2.5 %
Operating profit margin	4.7 %	4.0 %	10.4 %	-28.1 %	1.9 %	-1.9 %	3.5 %
Asset turnover rate	29.8 %	33.0 %	32.2 %	13.7 %	32.1 %	26.9 %	25.4 %
<b>Profitability (market)</b>							
Rate of return on assets	2.1 %	1.8 %	3.4 %	-2.1 %	1.8 %	1.8 %	1.7 %
Rate of return on equity	0.9 %	0.8 %	3.5 %	-12.6 %	0.5 %	0.4 %	-0.2 %
Operating profit margin	8.3 %	6.6 %	12.5 %	-17.5 %	7.2 %	8.7 %	7.8 %
Asset turnover rate	24.6 %	26.4 %	27.3 %	11.9 %	24.5 %	20.9 %	21.5 %
<b>Liquidity &amp; Repayment (end of year)</b>							
Current assets	362,417	464,001	262,688	319,821	282,287	395,590	366,243
Current liabilities	223,790	266,026	134,333	318,464	166,008	265,978	244,289
Current ratio	1.62	1.74	1.96	1.00	1.70	1.49	1.50
Working capital	138,627	197,975	128,355	1,357	116,279	129,612	121,954
Working capital to gross inc	24.7 %	38.8 %	17.7 %	0.3 %	19.7 %	27.3 %	26.3 %
Term debt coverage ratio	0.88	0.87	1.26	-0.13	0.76	0.60	0.73
Replacement coverage ratio	0.76	0.68	1.13	-0.12	0.64	0.47	0.66
Term debt to EBITDA	4.33	3.61	3.61	126.41	4.31	6.60	5.40
<b>Solvency (end of year at cost)</b>							
Number of farms	588	181	172	42	25	46	119
Total assets	1,665,278	1,750,226	1,769,848	1,174,917	1,750,619	1,563,522	1,574,214
Total liabilities	726,975	700,120	717,098	729,718	707,105	738,827	773,664
Net worth	938,303	1,050,107	1,052,750	445,199	1,043,514	824,695	800,550
Net worth change	14,662	9,486	49,529	-36,318	-1,447	-7,032	4,583
Farm debt to asset ratio	46 %	42 %	43 %	67 %	44 %	48 %	52 %
Total debt to asset ratio	44 %	40 %	41 %	62 %	40 %	47 %	49 %
Change in earned net worth %	2 %	1 %	5 %	-8 %	0 %	-1 %	1 %
<b>Solvency (end of year at market)</b>							
Number of farms	588	181	172	42	25	46	119
Total assets	2,003,026	2,164,485	2,065,735	1,356,943	2,236,315	2,004,752	1,844,067
Total liabilities	895,016	899,834	871,425	808,150	867,352	954,187	927,828
Net worth	1,108,011	1,264,651	1,194,310	548,793	1,368,963	1,050,565	916,239
Total net worth change	30,645	23,071	61,186	-21,169	24,845	32,035	19,393
Farm debt to asset ratio	47 %	44 %	45 %	64 %	42 %	49 %	53 %
Total debt to asset ratio	45 %	42 %	42 %	60 %	39 %	48 %	50 %
Change in total net worth %	3 %	2 %	5 %	-4 %	2 %	3 %	2 %
<b>Nonfarm Information</b>							
Net nonfarm income	28,964	35,095	17,299	46,859	12,670	37,157	30,373
Farms reporting living expenses	76	18	23	4	3	5	22
Total family living expense	48,783	50,122	46,614	29,461	-	59,099	50,682
Total living, invest, cap. purch	74,687	67,655	54,793	21,857	-	109,679	104,996
<b>Crop Acres</b>							
Total crop acres	688	1,241	338	393	616	724	449
Total crop acres owned	248	424	148	112	219	247	176
Total crop acres cash rented	428	793	185	279	397	459	265
Total crop acres share rented	12	24	5	1	-	17	7
Machinery value per crop acre	611	447	1,031	554	923	563	811

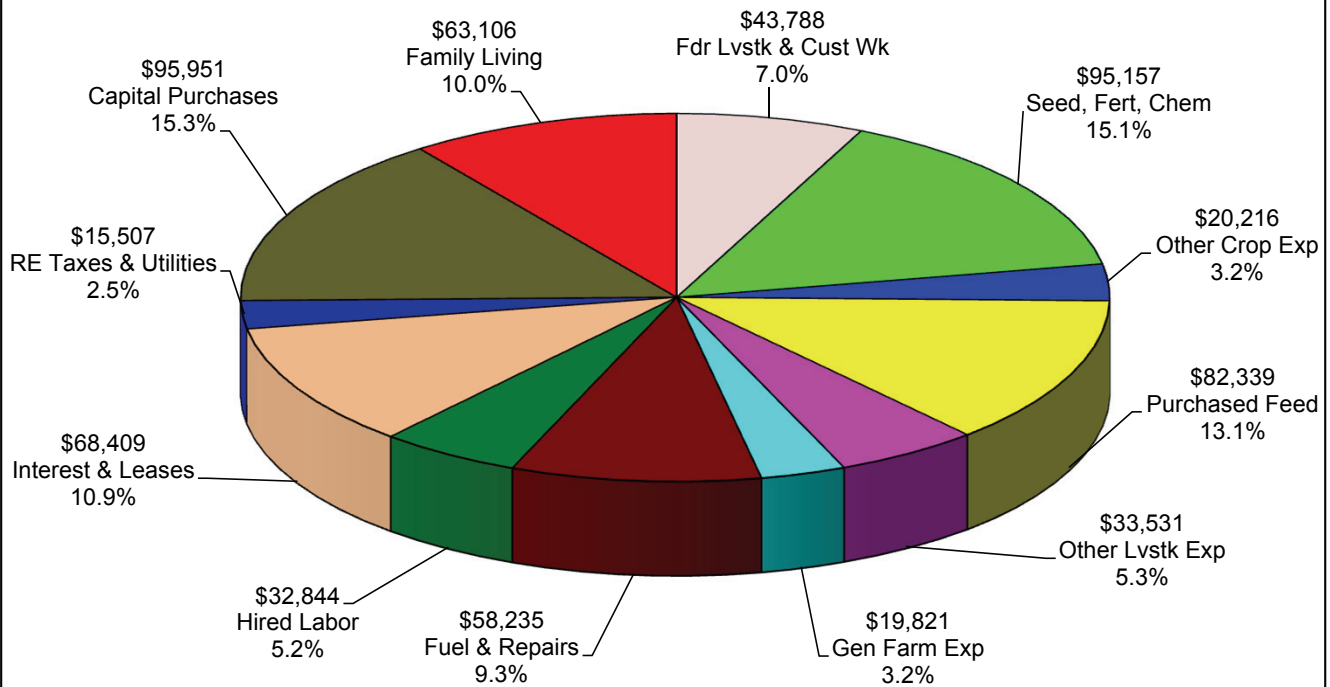
## Selected Factors by Type of Farm



**Financial Summary**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Number of Years Farming)**

	<u>Avg. Of All Farms</u>	<u>10 or Less</u>	<u>11 - 20</u>	<u>21 - 30</u>	<u>31 - 40</u>	<u>Over 40</u>
Number of farms	588	155	120	99	136	78
<b>Income Statement</b>						
Gross cash farm income	551,703	329,782	465,553	660,525	838,696	486,723
Total cash farm expense	469,847	290,652	402,553	555,534	709,906	402,145
Net cash farm income	81,857	39,129	63,000	104,991	128,790	84,579
Inventory change	-5,368	11,295	-1,056	-11,963	-18,325	-14,150
Depreciation	-40,070	-19,027	-32,591	-49,958	-61,336	-43,763
Net farm income from operations	36,419	31,396	29,353	43,069	49,129	26,666
Gain or loss on capital sales	763	-44	-227	3,889	651	119
Average net farm income	37,182	31,352	29,126	46,958	49,780	26,786
Median net farm income	23,730	13,367	36,972	34,867	23,700	20,131
<b>Profitability (cost)</b>						
Rate of return on assets	1.4 %	2.6 %	1.4 %	1.4 %	1.3 %	0.5 %
Rate of return on equity	-0.9 %	1.1 %	-1.7 %	-0.7 %	-0.8 %	-1.8 %
Operating profit margin	4.7 %	7.6 %	4.7 %	4.8 %	4.3 %	1.9 %
Asset turnover rate	29.8 %	34.6 %	30.1 %	28.5 %	29.4 %	27.8 %
<b>Profitability (market)</b>						
Rate of return on assets	2.1 %	2.9 %	2.9 %	2.0 %	1.8 %	1.1 %
Rate of return on equity	0.9 %	2.4 %	2.1 %	1.0 %	0.5 %	-0.2 %
Operating profit margin	8.3 %	9.4 %	11.3 %	8.8 %	7.3 %	5.2 %
Asset turnover rate	24.6 %	31.3 %	25.4 %	22.8 %	24.2 %	21.7 %
<b>Liquidity &amp; Repayment (end of year)</b>						
Current assets	362,417	191,056	278,840	391,415	602,885	375,437
Current liabilities	223,790	134,946	213,031	230,883	330,714	221,459
Current ratio	1.62	1.42	1.31	1.70	1.82	1.70
Working capital	138,627	56,110	65,810	160,533	272,171	153,978
Working capital to gross inc	24.7 %	15.9 %	13.9 %	24.1 %	32.6 %	30.9 %
Term debt coverage ratio	0.88	1.19	0.80	0.79	0.87	0.79
Replacement coverage ratio	0.76	1.09	0.73	0.67	0.72	0.64
Term debt to EBITDA	4.33	4.81	4.70	4.52	3.83	4.22
<b>Solvency (end of year at cost)</b>						
Number of farms	588	155	120	99	136	78
Total assets	1,665,278	916,274	1,391,637	2,030,301	2,443,756	1,754,021
Total liabilities	726,975	519,161	716,025	831,805	940,355	651,683
Net worth	938,303	397,114	675,612	1,198,496	1,503,401	1,102,338
Net worth change	14,662	32,646	12,496	12,601	10,532	-7,926
Farm debt to asset ratio	46 %	59 %	54 %	43 %	41 %	41 %
Total debt to asset ratio	44 %	57 %	51 %	41 %	38 %	37 %
Change in earned net worth %	2 %	9 %	2 %	1 %	1 %	-1 %
<b>Solvency (end of year at market)</b>						
Number of farms	588	155	120	99	136	78
Total assets	2,003,026	1,006,228	1,642,568	2,521,159	2,951,673	2,226,716
Total liabilities	895,016	570,768	825,805	1,067,232	1,218,493	863,236
Net worth	1,108,011	435,460	816,764	1,453,927	1,733,180	1,363,479
Total net worth change	30,645	37,582	37,158	34,001	28,423	6,453
Farm debt to asset ratio	47 %	59 %	53 %	45 %	43 %	42 %
Total debt to asset ratio	45 %	57 %	50 %	42 %	41 %	39 %
Change in total net worth %	3 %	9 %	5 %	2 %	2 %	0 %
<b>Nonfarm Information</b>						
Net nonfarm income	28,964	33,426	33,438	20,467	26,297	28,650
Farms reporting living expenses	76	20	23	13	13	7
Total family living expense	48,783	37,874	48,430	61,028	47,427	60,883
Total living, invest, cap. purch	74,687	52,413	70,260	86,594	70,231	139,035
<b>Crop Acres</b>						
Total crop acres	688	432	529	712	1,001	866
Total crop acres owned	248	89	161	267	397	414
Total crop acres cash rented	428	341	357	435	591	419
Total crop acres share rented	12	3	11	10	12	33
Machinery value per crop acre	611	426	587	770	660	549

**Each farmer, on average, spent \$628,904 in the Greater Community in 2015**



**Average Money Spent by Each Farmer in the Greater Community: \$628,904**  
**Average Money Spent by Each Farmer in a 30 Yr Career: \$18,867,120**  
**Money Spent in Community by 588 Farmers: \$369,795,552**

**2015 Report Overview**

*Farm Business Management Education has been a part of agricultural education programs in Minnesota since 1953. FBM Programs are now an integral part of the Minnesota State Colleges and University System, delivered through eight two-year colleges. In 2015, the Northern Minnesota Annual Report is an expansion of the 13-year partnership between Northland Community & Technical College and Central Lakes College Farm Business Management Programs; to include Alexandria Technical & Community College, Ridgewater College, and St. Cloud Technical & Community Colleges.*

*This report was prepared under the direction of Ron Dvergsten and DelRay Lecy through AgCentric, Northern Center of Excellence for Agriculture. A special thank you goes to Keith Olander, AgCentric Director & Central Lakes College Dean, for his leadership and Rosemary Gustafson, Northland Community & Technical College, for her assistance.*

*The tables in this report were created using FINPACK and RankEm Central, copyrighted software of the Center for Farm Financial Management, University of Minnesota.*

*The financial portion of the report, found in the first 26 pages, uses a standard format for each table. Data from the analysis system is printed in a four column format, which includes: Average, Low, Middle, & High. The High, Middle, & Low ranges are calculated based on a 20% slice of the farms in the total group.*

*The enterprise tables begin on page 30. Each of these tables consist of: a size indicator, a total and per unit income, direct & overhead expenses, and other information. Costs which are considered operating, whether easily assigned or are allocated, are listed as Direct Expenses. Costs which are general in nature, whether fixed or variable, are listed as Overhead Expenses.*

*The criteria for determining the 20% categories in each area are listed below:*

<u>Analysis Section</u>	<u>Criteria to determine the "20%" categories</u>
Financial	Net Farm Income
Crops	Return to Overhead
Statewide Livestock	Return to Overhead



**Financial Summary**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Gross Farm Income)**

	<u>Less than 100,000</u>	<u>100,001 - 250,000</u>	<u>250,001 - 500,000</u>	<u>500,001 - 1,000,000</u>	<u>1,000,001- 2,000,000</u>	<u>Over 2,000,000</u>
Number of farms	104	136	153	112	64	19
<b>Income Statement</b>						
Gross cash farm income	50,349	171,086	367,295	704,632	1,420,808	3,676,363
Total cash farm expense	56,119	149,947	310,798	599,367	1,216,029	3,028,083
Net cash farm income	-5,770	21,139	56,497	105,265	204,779	648,280
Inventory change	6,484	9,531	11,759	-13,146	-27,732	-193,624
Depreciation	-6,664	-14,732	-27,630	-58,957	-102,288	-183,563
Net farm income from operations	-5,950	15,938	40,626	33,161	74,760	271,094
Gain or loss on capital sales	28	1,422	8	-90	3,579	1,699
Average net farm income	-5,922	17,360	40,634	33,071	78,339	272,792
Median net farm income	-5,360	19,683	47,776	42,776	103,301	171,131
<b>Profitability (cost)</b>						
Rate of return on assets	-3.5 %	0.8 %	1.8 %	0.7 %	1.6 %	3.3 %
Rate of return on equity	-13.0 %	-3.1 %	0.0 %	-2.2 %	-0.7 %	2.7 %
Operating profit margin	-23.0 %	3.7 %	6.1 %	2.5 %	4.7 %	10.0 %
Asset turnover rate	15.3 %	22.7 %	30.0 %	29.8 %	33.1 %	33.3 %
<b>Profitability (market)</b>						
Rate of return on assets	-2.2 %	1.1 %	2.3 %	2.0 %	2.3 %	3.6 %
Rate of return on equity	-7.4 %	-1.1 %	1.5 %	0.8 %	1.3 %	3.6 %
Operating profit margin	-18.9 %	6.5 %	9.6 %	8.2 %	7.9 %	11.7 %
Asset turnover rate	11.5 %	17.2 %	24.0 %	23.8 %	28.6 %	30.4 %
<b>Liquidity &amp; Repayment (end of year)</b>						
Current assets	46,975	166,472	236,392	497,783	946,704	1,740,353
Current liabilities	36,246	95,383	140,083	341,584	587,390	924,418
Current ratio	1.30	1.75	1.69	1.46	1.61	1.88
Working capital	10,729	71,089	96,309	156,199	359,315	815,935
Working capital to gross inc	18.5 %	37.7 %	25.0 %	22.0 %	24.8 %	23.1 %
Term debt coverage ratio	1.05	0.97	1.04	0.67	0.74	1.25
Replacement coverage ratio	0.88	0.86	0.85	0.55	0.68	1.04
Term debt to EBITDA	18.90	6.44	3.87	4.35	4.10	2.90
<b>Solvency (end of year at cost)</b>						
Number of farms	104	136	153	112	64	19
Total assets	449,558	858,598	1,265,085	2,237,184	3,520,992	7,694,411
Total liabilities	220,449	437,023	531,268	1,004,475	1,638,650	2,444,233
Net worth	229,109	421,574	733,816	1,232,709	1,882,342	5,250,178
Net worth change	12,056	20,901	17,777	-11,190	-1,670	166,584
Farm debt to asset ratio	57 %	55 %	46 %	48 %	47 %	33 %
Total debt to asset ratio	49 %	51 %	42 %	45 %	47 %	32 %
Change in earned net worth %	6 %	5 %	2 %	-1 %	0 %	3 %
<b>Solvency (end of year at market)</b>						
Number of farms	104	136	153	112	64	19
Total assets	569,722	1,099,066	1,553,992	2,776,892	4,067,775	8,418,175
Total liabilities	249,180	506,150	644,702	1,251,371	2,057,190	3,213,942
Net worth	320,542	592,916	909,290	1,525,521	2,010,585	5,204,232
Total net worth change	14,531	25,230	29,489	22,528	32,801	207,493
Farm debt to asset ratio	49 %	49 %	45 %	48 %	51 %	39 %
Total debt to asset ratio	44 %	46 %	41 %	45 %	51 %	38 %
Change in total net worth %	5 %	4 %	3 %	1 %	2 %	4 %
<b>Nonfarm Information</b>						
Net nonfarm income	47,814	34,556	22,070	20,218	16,518	34,753
Farms reporting living expenses	18	15	25	13	4	1
Total family living expense	43,617	40,428	48,465	58,695	60,202	-
Total living, invest, cap. purch	48,917	72,823	58,459	85,567	194,460	-
<b>Crop Acres</b>						
Total crop acres	133	327	509	1,071	1,636	2,306
Total crop acres owned	57	168	189	424	470	554
Total crop acres cash rented	71	156	313	619	1,142	1,723
Total crop acres share rented	5	2	6	28	23	29
Machinery value per crop acre	554	539	563	598	595	857

**Farm Income Statement**  
**Northern Minnesota Farm Business Management Data**  
**(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	588	117	117	118
<b>Sale of Crops</b>				
Barley	2,805	5,440	389	6,271
Beans, Edible	5,469	9,905	1,772	7,157
Corn	43,731	67,293	24,338	56,479
Corn Silage	794	409	280	2,529
Hay, Alfalfa	2,771	5,889	1,888	1,958
Hay, Other	1,265	3,039	1,165	100
Fruit and Vegetable Crops	2,067	638	3,099	-
Organic Crops	1,499	-	-	6,992
Soybeans	62,965	66,808	41,634	112,015
Soybeans Food	550	1,076	342	639
Sunflowers	1,452	3,561	591	1,064
Oats	760	872	1,131	325
Wheat, Spring	36,456	33,400	19,028	78,843
Wheat, Winter	402	211	56	1,474
Grass Seed	3,902	3,074	-	12,139
Other Crop Enterprises	5,923	4,832	2,113	16,372
Miscellaneous crop income	432	235	206	10
<b>Total Crop Sales</b>	<b>173,243</b>	<b>206,682</b>	<b>98,032</b>	<b>304,367</b>
<b>Sale of Livestock</b>				
Beef Cow-Calf, Beef Calves	10,730	11,174	10,717	18,877
Beef, Backgrounding	16,055	41,274	11,145	13,515
Beef, Finishing	9,608	20,522	4,421	5,975
Other Beef Enterprises	2,919	8,881	375	1,528
Dairy, Milk	195,674	129,620	77,047	515,228
Dairy Calves	5,671	2,934	2,179	14,592
Dairy Heifers (for sale)	2,011	4,310	296	2,636
Dairy Feeders & Backgrounding	13,302	37,637	4,155	6,010
Dairy Finishing	22,808	33,408	15,095	38,759
Hogs, Weaning to Finish	2,647	12,916	-	-
Other Livestock Enterprises	1,015	32	3,544	-
Cull breeding livestock	18,290	13,478	9,784	42,672
Misc. livestock income	1,209	1,369	639	1,145
<b>Total Livestock &amp; Product Sales</b>	<b>301,939</b>	<b>317,555</b>	<b>139,397</b>	<b>660,937</b>
<b>Other farm income</b>				
Crop government payments	12,773	14,767	6,877	22,784
CRP payments	417	707	243	507
Livestock govt payments	494	290	-	374
Other government payments	6,821	6,330	4,447	13,624
Custom work income	12,550	24,859	4,700	22,667
Patronage dividends, cash	5,742	5,327	2,788	12,856
Insurance income	18,677	27,521	7,711	37,600
Contract livestock income	4,428	-	1,171	19,211
Other farm income	14,619	16,295	11,277	27,160
<b>Total Other Farm Income</b>	<b>76,521</b>	<b>96,096</b>	<b>39,214</b>	<b>156,783</b>
<b>Gross Cash Farm Income</b>	<b>551,703</b>	<b>620,333</b>	<b>276,643</b>	<b>1,122,087</b>

**Farm Income Statement**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Net Farm Income)**

	<u>Average</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
<b>Number of farms</b>	588	117	117	118
<b>Direct Crop Expense</b>				
Seed	33,395	39,782	19,036	55,681
Fertilizer	44,339	53,986	22,871	84,849
Crop chemicals	17,423	22,626	7,854	30,891
Crop insurance	8,165	9,234	4,922	13,675
Drying Expense	1,378	2106	604	1,998
Other direct crop expenses	10,673	11,003	7,140	18,362
<b>Total Direct Crop Expense</b>	<b>115,373</b>	<b>138,737</b>	<b>62,427</b>	<b>205,456</b>
<b>Direct Livestock Expense</b>				
Feeder livestock purchase	36,125	86665	18,377	32,360
Purchased feed	82,339	78,009	37,120	192,412
Breeding fees	2,470	1856	958	5,823
Veterinary	7,170	8,538	3,176	15,395
Supplies and related Livestock expenses	11,521	12,171	6,110	24,555
Contract production exp.	2,241	1,913	1,933	5,012
Livestock hauling and trucking	2,739	2,697	2,019	4,966
Livestock marketing	2,560	2,215	1,698	5,374
Bedding	4,830	4,677	1,326	11,669
<b>Total Direct Livestock Expense</b>	<b>151,995</b>	<b>198,741</b>	<b>72,717</b>	<b>297,566</b>
<b>Other Farm Expense</b>				
Interest	27,045	42,820	17,222	38,265
CCC Buybacks	1,257	226	-	5,847
Fuel & oil	21,260	26,694	11,943	39,962
Repairs	36,975	44,776	20,981	68,813
Custom hire	7,663	7,846	3,526	18,636
Hired labor	32,844	33,402	9,947	82,635
Land rent	34,453	50,365	16,699	61,593
Machinery & bldg leases	6,911	8,360	3,492	14,754
Real estate taxes	4,966	5,675	3,239	8,072
Farm insurance	8,523	10,617	5,548	14,621
Utilities	10,541	10,524	6,798	20,138
Dues & professional fees	2,796	3,621	1,445	4,810
Miscellaneous	7,245	10,669	4,512	9,398
<b>Total Other Farm Expense</b>	<b>202,479</b>	<b>255,595</b>	<b>105,352</b>	<b>387,544</b>
<b>Total cash expense</b>	<b>469,847</b>	<b>593,073</b>	<b>240,496</b>	<b>890,566</b>
<b>Net cash farm income</b>	<b>81,856</b>	<b>27,260</b>	<b>36,147</b>	<b>231,521</b>
<b>Inventory Changes</b>				
Prepays and supplies	-7,871	-18,074	-4,065	-5,422
Accounts receivable	-14,716	-16,293	-5327	-34,894
Hedging acct. & Oth Cur Assets	928	-884	455	5,937
Crops and feed	25,421	16,390	17,428	55,642
Market livestock	-6,647	-35,877	770	6,359
Breeding livestock	1,364	-6,694	3,055	10,406
Accounts payable	-6,050	-20,315	-3,902	-3,047
Accrued Interest & other assets	2,204	-838	1,859	7,033
<b>Total inventory change</b>	<b>-5,367</b>	<b>-82,585</b>	<b>10,273</b>	<b>42,014</b>
<b>Net operating profit</b>	<b>76,489</b>	<b>-55,325</b>	<b>46,420</b>	<b>273,535</b>
<b>Depreciation</b>				
Machinery and equipment	-29,680	-35,884	-16,263	-55,780
Titled vehicles	-2,434	-3,117	-1,682	-3,534
Buildings and improvements	-7,957	-10,057	-4,186	-15,575
<b>Total depreciation</b>	<b>-40,070</b>	<b>-49,058</b>	<b>-22,131</b>	<b>-74,889</b>
<b>Net farm income from operations</b>	<b>36,419</b>	<b>-104,383</b>	<b>24,289</b>	<b>198,646</b>
Gain or loss on capital sales	763	-479	-153	4,104
<b>Net farm income</b>	<b>37,182</b>	<b>-104,862</b>	<b>24,136</b>	<b>202,750</b>

**Balance Sheet at Cost Values**  
**Northern Minnesota Farm Business Management Data**  
**(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	588	117	117	118
<b>Assets</b>				
<b>Current Farm Assets</b>				
Cash and checking balance	20,986	9,679	9,649	53,945
Prepaid expenses & supplies	35,050	24,531	12,836	95,306
Growing crops	1,972	1,826	397	5,538
Accounts receivable	20,755	20,298	9,500	48,266
Hedging accounts	751	468	85	2,658
Crops held for sale or feed	203,617	198,935	111,599	431,680
Crops under government loan	13,276	25,530	5,958	15,469
Market livestock held for sale	54,494	101,028	38,040	72,830
Other current assets	11,515	47,498	1,668	6,195
Total current farm assets	362,417	429,792	189,732	731,888
<b>Intermediate Farm Assets</b>				
Breeding livestock	144,024	116,253	86,839	314,879
Machinery and equipment	367,642	428,498	202,260	697,031
Titled vehicles	26,655	32,071	17,841	40,009
Other intermediate assets	22,738	18,553	9,718	52,984
Total intermediate farm assets	561,059	595,375	316,660	1,104,903
<b>Long Term Farm Assets</b>				
Farm land	352,812	382,140	288,300	561,188
Buildings and improvements	198,698	197,851	129,419	396,234
Other long-term assets	31,321	35,177	14,722	63,411
Total long-term farm assets	582,831	615,168	432,442	1,020,833
Total Farm Assets	1,506,307	1,640,335	938,833	2,857,623
Total Nonfarm Assets	158,971	176,842	130,706	192,406
Total Assets	1,665,278	1,817,177	1,069,539	3,050,030
<b>Liabilities</b>				
<b>Current Farm Liabilities</b>				
Accrued interest	6,814	13,767	4,342	7,427
Accounts payable	24,450	52,996	13,394	30,892
Current notes	127,829	228,084	67,078	155,525
Government crop loans	7,775	14,493	3,785	8,836
Principal due on term debt	56,922	74,839	35,321	90,246
Total current farm liabilities	223,790	384,179	123,920	292,926
Total intermediate farm liabs	153,603	210,761	96,849	245,297
Total long term farm liabilities	317,526	437,782	242,565	433,023
Total farm liabilities	694,920	1,032,722	463,334	971,247
Total nonfarm liabilities	32,055	37,227	19,437	36,952
Total liabilities	726,975	1,069,949	482,771	1,008,198
Net worth (farm and nonfarm)	938,303	747,227	586,768	2,041,831
Net worth change	14,662	-109,146	18,553	133,136
Percent net worth change	2 %	-13 %	3 %	7 %
<b>Ratio Analysis</b>				
Current farm liabilities / assets	62 %	89 %	65 %	40 %
Intermediate farm liab. / assets	27 %	35 %	31 %	22 %
Long term farm liab. / assets	54 %	71 %	56 %	42 %
Total debt to asset ratio	44 %	59 %	45 %	33 %

**Balance Sheet at Market Values**  
**Northern Minnesota Farm Business Management Data**  
**(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	588	117	117	118
<b>Assets</b>				
<b>Current Farm Assets</b>				
Cash and checking balance	20,986	9,679	9,649	53,945
Prepaid expenses & supplies	35,050	24,531	12,836	95,306
Growing crops	1,972	1,826	397	5,538
Accounts receivable	20,755	20,298	9,500	48,266
Hedging accounts	751	468	85	2,658
Crops held for sale or feed	203,617	198,935	111,599	431,680
Crops under government loan	13,276	25,530	5,958	15,469
Market livestock held for sale	54,494	101,028	38,040	72,830
Other current assets	11,515	47,498	1,668	6,195
<b>Total current farm assets</b>	<b>362,417</b>	<b>429,792</b>	<b>189,732</b>	<b>731,888</b>
<b>Intermediate Farm Assets</b>				
Breeding livestock	146,173	118,321	87,831	316,486
Machinery and equipment	416,855	488,413	236,443	762,694
Titled vehicles	29,552	37,407	19,442	44,289
Other intermediate assets	23,792	18,328	9,759	57,633
<b>Total intermediate farm assets</b>	<b>616,372</b>	<b>662,469</b>	<b>353,475</b>	<b>1,181,102</b>
<b>Long Term Farm Assets</b>				
Farm land	592,376	634,376	475,359	891,728
Buildings and improvements	221,019	225,492	144,508	420,384
Other long-term assets	39,530	68,887	15,492	69,711
<b>Total long-term farm assets</b>	<b>852,925</b>	<b>928,755</b>	<b>635,358</b>	<b>1,381,823</b>
<b>Total Farm Assets</b>	<b>1,831,714</b>	<b>2,021,016</b>	<b>1,178,565</b>	<b>3,294,813</b>
<b>Total Nonfarm Assets</b>	<b>171,312</b>	<b>188,943</b>	<b>143,592</b>	<b>209,751</b>
<b>Total Assets</b>	<b>2,003,026</b>	<b>2,209,958</b>	<b>1,322,157</b>	<b>3,504,564</b>
<b>Liabilities</b>				
<b>Current Farm Liabilities</b>				
Accrued interest	6,814	13,767	4,342	7,427
Accounts payable	24,450	52,996	13,394	30,892
Current notes	127,829	228,084	67,078	155,525
Government crop loans	7,775	14,493	3,785	8,836
Principal due on term debt	56,922	74,839	35,321	90,246
<b>Total current farm liabilities</b>	<b>223,790</b>	<b>384,179</b>	<b>123,920</b>	<b>292,926</b>
<b>Total intermediate farm liabs</b>	<b>153,603</b>	<b>210,761</b>	<b>96,849</b>	<b>245,297</b>
<b>Total long term farm liabilities</b>	<b>317,526</b>	<b>437,782</b>	<b>242,565</b>	<b>433,023</b>
<b>Total farm liabilities</b>	<b>694,920</b>	<b>1,032,722</b>	<b>463,334</b>	<b>971,247</b>
<b>Total nonfarm liabilities</b>	<b>32,055</b>	<b>37,227</b>	<b>19,437</b>	<b>36,952</b>
<b>Total liabs excluding deferreds</b>	<b>726,975</b>	<b>1,069,949</b>	<b>482,771</b>	<b>1,008,198</b>
<b>Total deferred liabilities</b>	<b>168,041</b>	<b>182,727</b>	<b>99,387</b>	<b>325,892</b>
<b>Total liabilities</b>	<b>895,016</b>	<b>1,252,677</b>	<b>582,158</b>	<b>1,334,090</b>
<b>Retained earnings</b>	<b>938,303</b>	<b>747,227</b>	<b>586,768</b>	<b>2,041,831</b>
<b>Market valuation equity</b>	<b>169,708</b>	<b>210,055</b>	<b>153,231</b>	<b>128,642</b>
<b>Net worth (farm and nonfarm)</b>	<b>1,108,011</b>	<b>957,282</b>	<b>739,999</b>	<b>2,170,474</b>
<b>Net worth excluding deferreds</b>	<b>1,276,052</b>	<b>1,140,009</b>	<b>839,386</b>	<b>2,496,366</b>
<b>Net worth change</b>	<b>30,645</b>	<b>-74,890</b>	<b>32,784</b>	<b>138,386</b>
<b>Percent net worth change</b>	<b>3 %</b>	<b>-7 %</b>	<b>5 %</b>	<b>7 %</b>
<b>Ratio Analysis</b>				
Current farm liabilities / assets	62 %	89 %	65 %	40 %
Intermediate farm liab. / assets	25 %	32 %	27 %	21 %
Long term farm liab. / assets	37 %	47 %	38 %	31 %
Total debt to asset ratio	45 %	57 %	44 %	38 %
Debt to assets excl deferreds	36 %	48 %	37 %	29 %

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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.

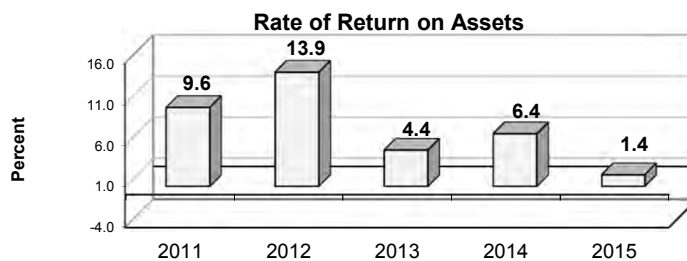
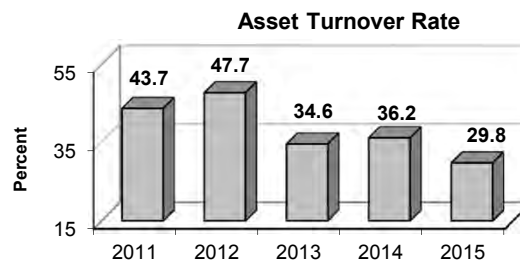
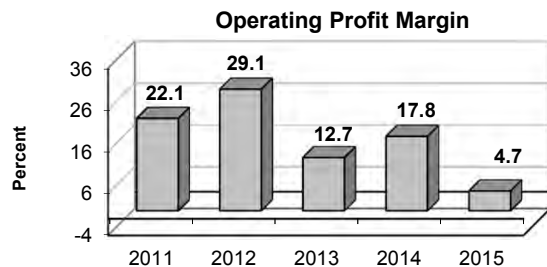
**Interest Expense Ratio:** This ratio indicates the percent of the gross farm income, which is used to pay farm interest expenses.

**Net Farm Income Ratio:** The ratio indicates the percent of the gross farm income, which remains after all expenses.

**Financial Standards Measures**  
**Northern Minnesota Farm Business Management Data**  
**(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	588	117	117	118
<b>Liquidity</b>				
Current ratio	1.62	1.12	1.53	2.50
Working capital	138,627	45,613	65,811	438,961
Working capital to gross inc.	24.7%	7.9%	22.3%	37.4%
<b>Solvency (market)</b>				
Farm debt to asset ratio	47%	60%	48%	39%
Farm equity to asset ratio	53%	40%	52%	61%
Farm debt to equity ratio	0.89	1.50	0.91	0.65
<b>Profitability (cost)</b>				
Rate of return on farm assets	1.4%	-6.2%	1.2%	5.9%
Rate of return on farm equity	-0.9%	-22.1%	-1.4%	6.9%
Operating profit margin	4.7%	-25.0%	4.5%	17.5%
Net farm income	37,182	-104,862	24,136	202,750
EBIDTA	104,332	-10,711	63,628	312,504
<b>Repayment Capacity</b>				
Capital debt repayment capacity	70,274	-37,110	47,456	235,678
Capital debt repayment margin	-9,279	-134,422	2,030	101,229
Replacement margin	-22,698	-147,120	-6,923	74,457
Term debt coverage ratio	0.88	-0.38	1.04	1.75
Replacement coverage ratio	0.76	-0.34	0.87	1.46
<b>Efficiency</b>				
Asset turnover rate (cost)	29.8%	24.9%	26.1%	33.9%
Operating expense ratio	81.4%	101.9%	78.4%	73.4%
Depreciation expense ratio	7.1%	8.5%	7.5%	6.4%
Interest expense ratio	5.0%	7.7%	5.8%	3.3%
Net farm income ratio	6.6%	-18.1%	8.2%	17.3%

**Operating Profit Margin X Asset Turnover Rate = Rate of Return on Farm Assets**



## How does your Farm Stack Up?

### Northern Minnesota Farm Business Management Data

Below is a summary of the low, average, and high farms using the 21 Financial Standards Measures. The numbers listed below are intended to provide a general overview of the farm situation for the current year and over a five year period. The current year data provides a snapshot of the conditions that represent the present while the five year data provides a longer term look at these factors to enable their use in potential decision making activities.

**For additional information, please see the back cover of this report. A "Financial Scorecard" is provided in color for your use.**

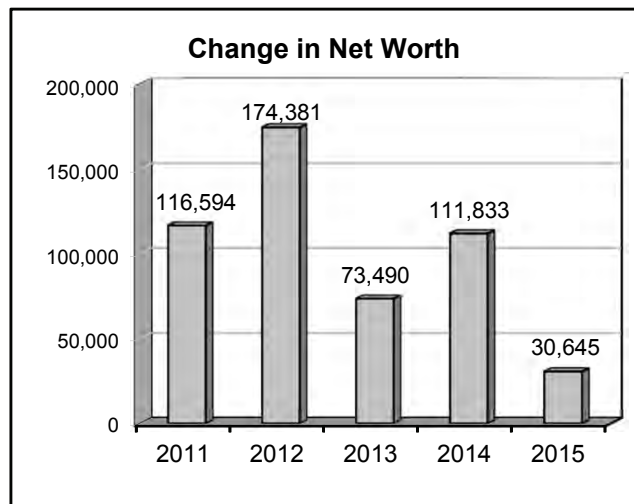
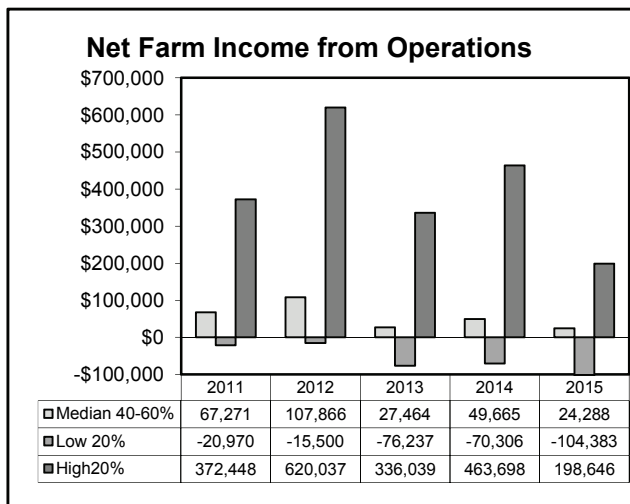
<b>Evaluation Chart</b>	<b>Low Farms</b>		<b>Average</b>		<b>High Farms</b>		<b>Your Farm</b>	
	2015	5 Yr Ave	2015	5 Yr Ave	2015	5 Yr Ave	2015	5 Yr Ave
<b><u>Liquidity</u></b>								
Current Ratio	1.12	1.00	1.62	1.86	2.50	2.46		
Working Capital	\$ 45,613	6,381	138,627	164,461	438,961	530,709		
Working Capital to Gross Inc.	% 7.9%	0.3%	24.7%	28.0%	37.4%	36.8%		
<b><u>Solvency (Market)</u></b>								
Farm Debt to Asset Ratio	% 60%	57%	47%	46%	39%	40%		
Farm Equity to Asset Ratio	% 40%	43%	53%	54%	61%	60%		
Farm Debt to Equity Ratio	% 1.5	1.36	0.89	0.84	0.65	0.68		
<b><u>Profitability (Cost)</u></b>								
Rate of Return on Farm Assets	% -6.2%	-5.2%	1.4%	7.1%	5.9%	12.7%		
Rate of Return on Farm Equity	% -22.1%	-22.0%	-0.9%	9.7%	6.9%	17.9%		
Operating Profit Margin	% -25.0%	-20.1%	4.7%	17.3%	17.5%	27.4%		
Net Farm Income	\$ -104,862	-57,922	37,182	107,796	202,750	400,078		
EBIDTA	\$ -10,711	2,093	104,332	169,752	312,504	521,338		
<b><u>Repayment Capacity (Accrual)</u></b>								
Capital Debt Repayment Cap.	\$ -37,110	-14,172	70,274	131,940	235,678	429,009		
Capital Debt Repayment Margin	\$ -134,422	-78,539	-9,279	61,106	101,229	290,626		
Replacement Margin	\$ -147,120	-87,698	-22,698	49,671	74,457	266,889		
Term Debt Coverage Ratio	-0.38	-0.09	0.88	1.93	1.75	3.14		
Replacement Coverage Ratio	-0.34	-0.08	0.76	1.66	1.46	2.67		
<b><u>Efficiency</u></b>								
Asset Turnover Rate (Cost)	% 24.9%	25.9%	29.8%	38.4%	33.9%	45.0%		
Operating Expense Ratio	% 101.9%	97.8%	81.4%	72.3%	73.4%	65.9%		
Depreciation Expense Ratio	% 8.5%	8.5%	7.1%	6.0%	6.4%	5.4%		
Interest Expense Ratio	% 7.7%	8.4%	5.0%	4.3%	3.3%	2.9%		
Net Farm Income Ratio	% -18.1%	-15.1%	6.6%	17.4%	17.3%	26.0%		

**Profitability Measures**  
**Northern Minnesota Farm Business Management Data**  
**(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	588	117	117	118
<b>Profitability (assets valued at cost)</b>				
Net farm income from operations	36,419	-104,383	24,288	198,646
Rate of return on assets	1.4 %	-6.2 %	1.2 %	5.9 %
Rate of return on equity	-0.9 %	-22.1 %	-1.4 %	6.9 %
Operating profit margin	4.7 %	-25.0 %	4.5 %	17.5 %
Asset turnover rate	29.8 %	24.9 %	26.1 %	33.9 %
Farm interest expense	27,843	44,614	17,208	38,969
Value of operator lbr and mgmt.	43,447	42,814	30,890	72,238
Return on farm assets	20,814	-102,583	10,606	165,377
Average farm assets	1,479,257	1,648,526	911,964	2,789,580
Return on farm equity	-7,028	-147,197	-6,602	126,408
Average farm equity	807,974	664,967	468,734	1,826,619
Value of farm production	441,427	410,669	237,772	946,925
	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	588	117	117	118
<b>Profitability (assets valued at market)</b>				
Net farm income from operations	52,406	-69,247	37,904	203,609
Rate of return on assets	2.1 %	-3.3 %	2.1 %	5.3 %
Rate of return on equity	0.9 %	-13.2 %	1.2 %	6.8 %
Operating profit margin	8.3 %	-16.4 %	10.2 %	18.0 %
Asset turnover rate	24.6 %	20.4 %	20.8 %	29.4 %
Farm interest expense	27,843	44,614	17,208	38,969
Value of operator lbr and mgmt.	43,447	42,814	30,890	72,238
Return on farm assets	36,802	-67,446	24,222	170,340
Average farm assets	1,794,840	2,014,874	1,141,654	3,219,460
Return on farm equity	8,959	-112,060	7,014	131,371
Average farm equity	959,578	848,014	604,311	1,938,918
Value of farm production	441,427	410,669	237,772	946,925

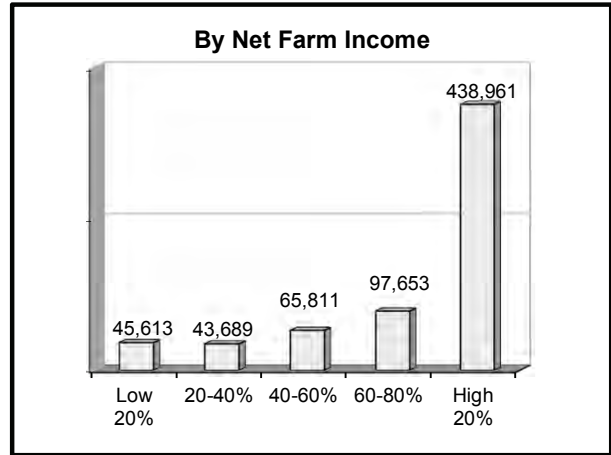
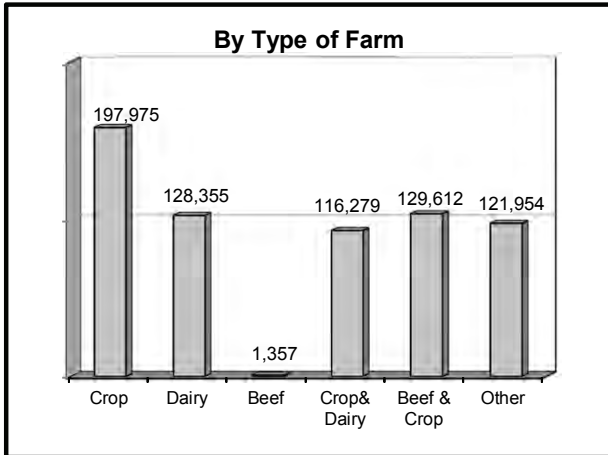
**Liquidity & Repayment Capacity Measures**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Net Farm Income)**

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	588	117	117	118
<b>Liquidity</b>				
Current ratio	1.62	1.12	1.53	2.5
Working capital	138,627	45,613	65,811	438,961
Working capital to gross inc.	24.70%	7.90%	22.30%	37.40%
Current assets	362,417	429,792	189,732	731,888
Current liabilities	223,790	384,179	123,920	292,926
Gross revenues (accrual)	561,184	577,944	294,869	1,173,080
<b>Repayment capacity</b>				
Net farm income from operations	36,419	-104,383	24,288	198,646
Depreciation	40,070	49,058	22,131	74,889
Personal income	28,964	37,732	25,912	20,450
Family living/owner withdrawals	-48,058	-43,266	-32,997	-73,141
	-10	-4	-88	120
Payments on personal debt	-2,889	-3,222	-2,625	-2,496
Income taxes paid	-6,713	-3,900	-3,946	-17,480
Interest on term debt	22,480	30,871	14,693	34,810
Capital debt repayment capacity	70,274	-37,110	47,456	235,678
Scheduled term debt payments	-79,553	-97,312	-45,426	-134,450
Capital debt repayment margin	-9,279	-134,422	2,030	101,229
Cash replacement allowance	-13,418	-12,698	-8,953	-26,771
Replacement margin	-22,698	-147,120	-6,923	74,457
Term debt coverage ratio	0.88	-0.38	1.04	1.75
Replacement coverage ratio	0.76	-0.34	0.87	1.46

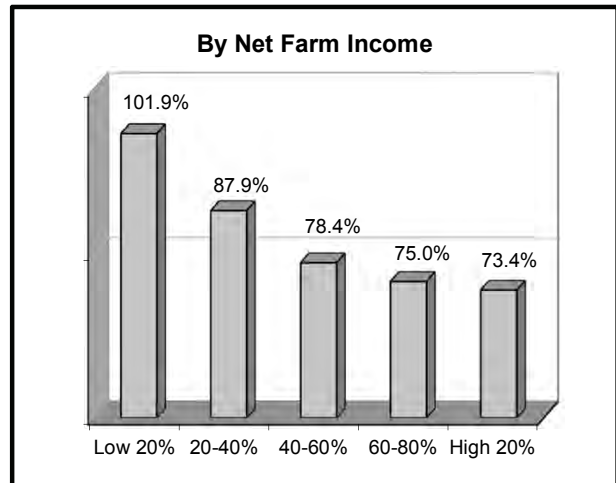
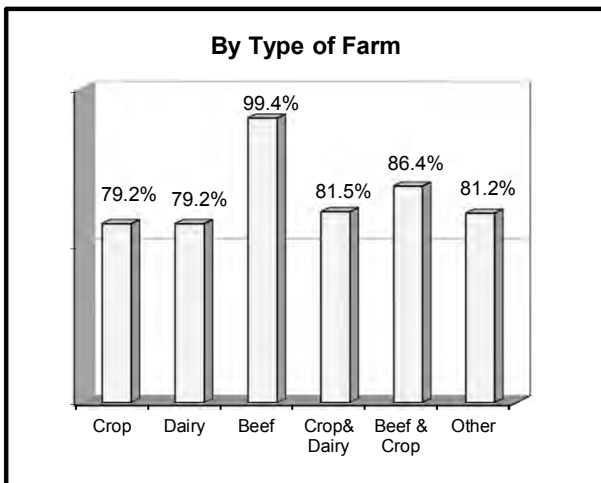


**Selected Financial Guideline Measures**  
**Northern Minnesota Farm Business Management Data**

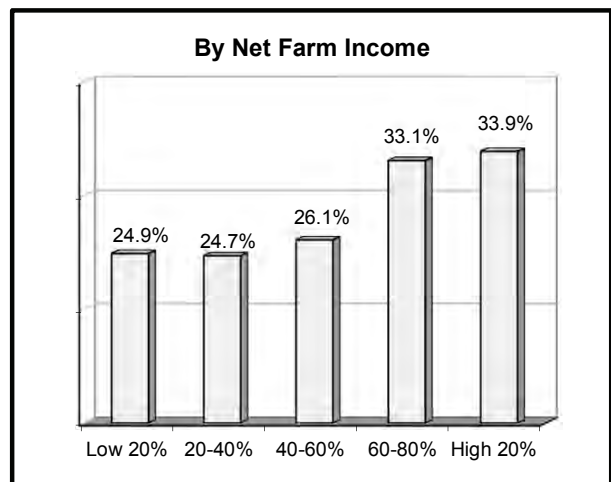
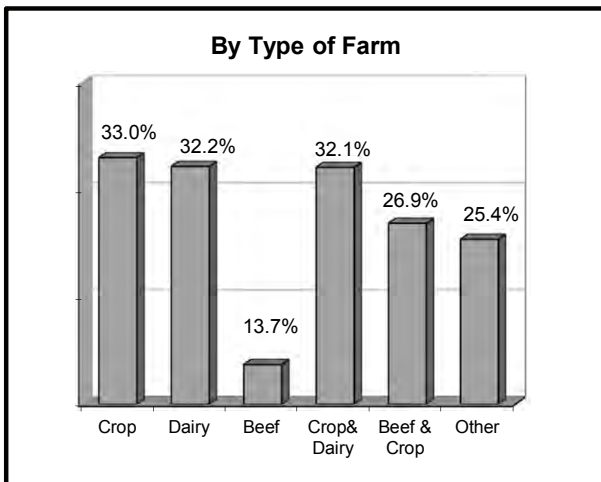
**Working Capital**



**Operating Expense Ratio**



**Asset Turnover Rate**



**Operator and Labor Information**  
**Northern Minnesota Farm Business Management Data**  
**(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	588	117	117	118
<b>Operator Information</b>				
Average number of operators	1.2	1.2	1.1	1.5
Average age of operators	46.2	47.0	46.1	46.0
Average number of years farming	21.4	22.6	20.7	22.9
<b>Results Per Operator</b>				
Working capital	115,727	38,869	60,297	295,310
Total assets (market)	1,672,151	1,883,213	1,211,373	2,357,688
Total liabilities	747,170	1,067,467	533,379	897,507
Net worth (market)	924,981	815,746	677,994	1,460,182
Net worth excl deferred liabs	1,065,264	971,457	769,054	1,679,425
Gross farm income	468,483	492,494	270,161	789,187
Total farm expense	438,080	581,444	247,909	655,548
Net farm income from operations	30,403	-88,950	22,253	133,639
Net nonfarm income	24,180	32,154	23,741	13,758
Family living & tax withdrawals	45,732	40,196	33,929	60,885
Total acres owned	249.5	287.3	197.1	295.5
Total crop acres	574.4	699.2	370.8	790.6
Crop acres owned	207.1	243.6	159.9	268.8
Crop acres cash rented	357.3	443.7	205.5	507.5
Crop acres share rented	9.9	12.0	5.4	14.3
Total pasture acres	31.6	36.0	38.9	17.7
<b>Labor Analysis</b>				
Number of farms	588	117	117	118
Total unpaid labor hours	2,682	2,585	2,082	3,966
Total hired labor hours	2,075	1,914	708	5,237
Total labor hours per farm	4,757	4,500	2,789	9,203
Unpaid hours per operator	2,239	2,203	1,908	2,668
Value of farm production / hour	92.79	91.27	85.24	102.89
Net farm income / unpaid hour	13.58	-40.37	11.67	50.09
Average hourly hired labor wage	17.06	15.07	16.47	17.45
<b>Partnerships &amp; LLCs</b>				
Number of farms	75	13	11	27
Number of operators	2.1	2.2	1.8	2.3
Owner withdrawals per farm	63,587	-	-	79,680
Withdrawals per operator	31,018	-	-	39,840
<b>Corporations</b>				
Number of farms	15	3	1	6
Number of operators	2.1	-	-	2.5

**Household and Personal Expenses**  
**Northern Minnesota Farm Business Management Data**  
**(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	24	13	9
Average family size	3.5	3.3	3.2	4.3
<b>Family Living Expenses</b>				
Food and meals expense	8,439	9,017	6,579	9,740
Medical care	3,078	2,879	1,123	6,780
Health insurance	3,869	3,744	1,811	5,178
Cash donations	1,340	412	1,466	1,988
Household supplies	3,125	1,467	3,151	2,621
Clothing	1,558	1,152	1,056	3,819
Personal care	2,843	4,545	1,933	3,335
Child / Dependent care	771	713	715	1,149
Alimony and child support	5	-	32	-
Gifts	1,603	1,103	1,639	3,665
Education	1,632	1,233	1,833	1,149
Recreation	2,815	2,421	1,497	6,238
Utilities (household share)	2,721	2,835	3,074	3,022
Personal vehicle operating exp	4,156	3,196	4,138	4,126
Household real estate taxes	260	188	274	153
Dwelling rent	564	525	-	1,988
Household repairs	1,544	1,694	1,472	4,255
Personal interest	1,488	1,357	916	1,497
Disability / Long term care ins	270	411	96	502
Life insurance payments	1,476	1,822	1,753	1,777
Personal property insurance	196	237	56	74
Miscellaneous	4,685	4,841	4,565	5,684
Total cash family living expense	48,439	45,791	39,178	68,740
Family living from the farm	344	624	-	597
Total family living	48,783	46,415	39,178	69,336
<b>Other Nonfarm Expenditures</b>				
Income taxes	7,714	6,221	4,487	35,410
Furnishing & appliance purchases	181	-	102	-
Nonfarm vehicle purchases	3,004	1,536	2,046	10,325
Nonfarm real estate purchases	10,241	696	-2,222	51,722
Other nonfarm capital purchases	1,185	-	1,185	8,182
Nonfarm savings & investments	3,923	6,728	6,402	7,077
Total other nonfarm expenditures	26,248	15,182	11,999	112,715
Total cash family living investment & nonfarm capital purch	74,687	60,973	51,177	181,455

**Nonfarm Summary**  
**Northern Minnesota Farm Business Management Data**  
**(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	588	117	117	118
<b>Nonfarm Income</b>				
Personal wages & salary	19,200	21,979	18,403	8,823
Net nonfarm business income	3,011	2,105	4,165	3,638
Personal rental income	552	1,687	259	335
Personal interest income	107	32	51	222
Personal cash dividends	143	323	76	141
Tax refunds	1,447	2,030	1,057	1,708
Other nonfarm income	4,505	9,576	1,902	5,584
Total nonfarm income	28,964	37,732	25,912	20,450
Gifts and inheritances	2,425	1,681	5,294	2,747
<b>Nonfarm Assets (market)</b>				
Checking & savings	7,173	9,277	3,746	9,259
Stocks & bonds	7,651	5,272	11,129	12,337
Other current assets	1,869	1,837	1,120	4,692
Furniture & appliances	8,723	13,449	7,447	6,467
Nonfarm vehicles	13,762	15,511	12,687	15,455
Cash value of life ins.	5,049	5,416	4,138	6,087
Retirement accounts	37,832	36,778	34,393	41,918
Other intermediate assets	7,170	17,019	5,872	2,771
Nonfarm real estate	70,282	78,351	55,295	84,186
Personal bus. investment	4,472	2,675	1,166	17,687
Other long term assets	7,330	3,358	6,600	8,892
Total nonfarm assets	171,312	188,943	143,592	209,751
<b>Nonfarm Liabilities</b>				
Accrued interest	74	50	16	165
Accounts payable	884	1,365	343	1,820
Current notes	1,628	2,943	839	718
Princ due on term debt	2,836	3,151	2,634	2,721
Total current liabilities	7,412	8,127	4,382	12,096
Intermediate liabilities	4,001	5,999	3,274	2,915
Long term liabilities	20,642	23,101	11,781	21,940
Total nonfarm liabilities	32,055	37,227	19,437	36,952
Nonfarm net worth	139,257	151,716	124,155	172,799
Nonfarm debt to asset ratio	19 %	20 %	14 %	18 %

**Financial Summary**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Total Acres)**

	<u>Less than 100</u>	<u>101 - 250</u>	<u>251 - 500</u>	<u>501 - 1,000</u>	<u>1,001 - 1,500</u>	<u>1,501 - 2,000</u>	<u>2,001 - 5,000</u>
Number of farms	98	127	122	118	49	25	48
<b>Income Statement</b>							
Gross cash farm income	258,126	208,305	377,439	577,570	1,122,654	876,417	1,644,963
Total cash farm expense	217,463	173,313	322,876	494,603	999,421	778,426	1,353,209
Net cash farm income	40,663	34,991	54,563	82,967	123,234	97,991	291,754
Inventory change	-1,518	590	2,746	-5,913	38,465	-19,713	-78,557
Depreciation	-18,342	-15,740	-28,700	-39,603	-78,584	-63,925	-125,620
Net farm income from operations	20,802	19,842	28,609	37,450	83,114	14,352	87,577
Gain or loss on capital sales	-393	-6	1,750	2,445	-1,067	28	785
Average net farm income	20,409	19,836	30,358	39,895	82,047	14,380	88,362
Median net farm income	8,821	8,454	20,116	37,824	70,463	36,660	77,035
<b>Profitability (cost)</b>							
Rate of return on assets	1.3 %	1.1 %	1.0 %	1.4 %	2.6 %	0.1 %	1.4 %
Rate of return on equity	-2.1 %	-2.3 %	-1.6 %	-1.0 %	1.0 %	-3.9 %	-0.1 %
Operating profit margin	5.0 %	4.1 %	3.7 %	5.1 %	7.9 %	0.4 %	4.1 %
Asset turnover rate	25.7 %	26.3 %	27.3 %	28.0 %	32.5 %	31.9 %	33.7 %
<b>Profitability (market)</b>							
Rate of return on assets	2.8 %	2.4 %	1.3 %	1.9 %	2.6 %	0.9 %	2.3 %
Rate of return on equity	2.0 %	1.4 %	-0.4 %	0.5 %	1.6 %	-1.6 %	1.8 %
Operating profit margin	13.2 %	11.8 %	6.0 %	8.3 %	9.4 %	3.6 %	7.9 %
Asset turnover rate	21.0 %	19.9 %	22.2 %	22.7 %	27.2 %	26.2 %	29.1 %
<b>Liquidity &amp; Repayment (end of year)</b>							
Current assets	123,200	95,694	230,054	391,781	636,464	713,268	1,281,341
Current liabilities	104,082	60,917	123,099	237,307	421,680	543,723	752,988
Current ratio	1.18	1.57	1.87	1.65	1.51	1.31	1.70
Working capital	19,117	34,776	106,954	154,474	214,784	169,544	528,353
Working capital to gross inc	7.3 %	16.3 %	27.4 %	26.5 %	18.1 %	19.2 %	32.4 %
Term debt coverage ratio	0.94	0.98	1.07	0.82	0.93	0.38	0.87
Replacement coverage ratio	0.86	0.89	0.90	0.71	0.84	0.32	0.69
Term debt to EBITDA	4.88	5.64	4.60	4.91	4.12	5.07	2.86
<b>Solvency (end of year at cost)</b>							
Number of farms	98	127	122	118	49	25	48
Total assets	810,077	774,286	1,240,665	1,848,690	3,021,615	2,649,526	4,372,117
Total liabilities	428,707	382,178	527,677	840,833	1,362,696	1,267,076	1,554,884
Net worth	381,370	392,108	712,987	1,007,857	1,658,920	1,382,450	2,817,233
Net worth change	9,561	16,660	22,470	9,960	57,163	-43,691	1,062
Farm debt to asset ratio	57 %	55 %	46 %	49 %	47 %	50 %	36 %
Total debt to asset ratio	53 %	49 %	43 %	45 %	45 %	48 %	36 %
Change in earned net worth %	3 %	4 %	3 %	1 %	4 %	-3 %	0 %
<b>Solvency (end of year at market)</b>							
Number of farms	98	127	122	118	49	25	48
Total assets	982,607	986,054	1,492,354	2,251,012	3,589,360	3,193,065	5,098,527
Total liabilities	482,414	444,061	651,070	1,007,278	1,689,387	1,578,323	2,102,963
Net worth	500,193	541,994	841,284	1,243,734	1,899,973	1,614,742	2,995,564
Total net worth change	23,404	29,470	29,744	24,207	71,139	-21,389	54,176
Farm debt to asset ratio	52 %	49 %	47 %	47 %	49 %	52 %	42 %
Total debt to asset ratio	49 %	45 %	44 %	45 %	47 %	49 %	41 %
Change in total net worth %	5 %	6 %	4 %	2 %	4 %	-1 %	2 %
<b>Nonfarm Information</b>							
Net nonfarm income	27,070	34,019	27,768	25,854	35,594	15,058	31,001
Farms reporting living expenses	18	23	13	15	1	3	3
Total family living expense	42,112	49,741	40,348	53,446	-	-	-
Total living, invest, cap. purch	47,013	57,054	80,172	93,515	-	-	-
<b>Crop Acres</b>							
Total crop acres	22	172	370	704	1,231	1,733	2,972
Total crop acres owned	14	96	158	287	426	535	932
Total crop acres cash rented	7	72	208	409	802	1,171	1,948
Total crop acres share rented	1	3	3	7	4	27	92
Machinery value per crop acre	1,377	962	746	659	650	481	506

**Crop Production and Marketing Summary**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Net Farm Income)**

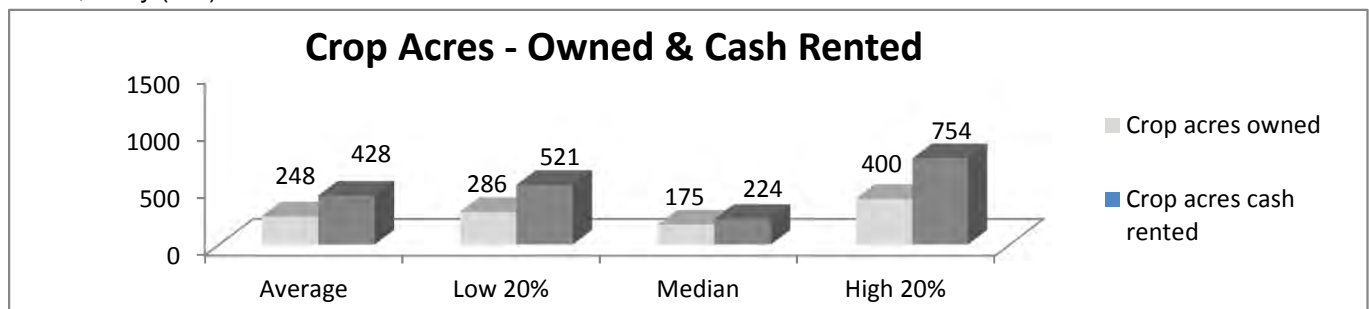
	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	588	117	117	118
<b>Acres Summary</b>				
Total acres owned	299	337	215	439
Total crop acres	688	821	405	1,175
Crop acres owned	248	286	175	400
Crop acres cash rented	428	521	224	754
Crop acres share rented	12	14	6	21
Total pasture acres	38	42	42	26
Percent crop acres owned	36%	35%	43%	34%
Mach invest/crop acre cost	542	521	499	604
Mach invest/crop acre market	611	585	573	664

**Average Price Received (Cash Sales Only)**

Soybeans per bushel	9.13	8.93	8.88	9.41
Corn per bushel	3.44	3.52	2.99	3.56
Wheat, Spring per bushel	5.26	5.07	4.87	5.45
Hay, Alfalfa per ton	108.39	118.97	130.27	100.43
Oats per bushel	2.65	2.47	3.75	2.39
Barley per bushel	4.69	5.50	-	4.13
Hay, Mixed per ton	78.66	73.59	-	-
Hay, Grass per ton	87.41	85.15	-	-
Corn Silage per ton	38.79	-	-	44.62
Rye per bushel	5.93	6.12	-	5.86
Sunflowers per cwt	20.56	-	-	-
Grass Seed, Perennial Rye per lb	0.662	0.683	-	0.654
Wheat, Winter per bushel	4.60	-	-	-
Beans, Navy per cwt	27.71	-	-	-

**Average Yield Per Acre**

Soybeans (bushel)	39.40	39.47	37.83	39.41
Corn (bushel)	164.15	169.70	156.57	165.85
Corn Silage (ton)	18.76	18.75	17.74	19.52
Hay, Alfalfa (ton)	3.85	3.71	3.68	4.34
Wheat, Spring (bushel)	66.01	62.83	63.60	67.99
Hay, Grass (ton)	2.00	2.19	1.67	2.24
Hay, Mixed (ton)	2.30	2.20	2.53	2.46
Oats (bushel)	82.92	73.53	81.65	95.30
Barley (bushel)	76.60	77.64	66.30	75.65
Rye (bushel)	43.60	44.49	35.46	40.75
Wheat, Winter (bushel)	41.86	36.68	-	45.28
Sunflowers (cwt)	17.35	-	-	-
Beans, Navy (cwt)	18.66	-	-	-



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## ***Individual Enterprise Analysis Tables***

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The individual crop and livestock tables are designed to identify the costs and returns for specific enterprises on the farm. Data from all farmers with each enterprise is merged. The minimum number of farms, in order to print a given column on the following reports, is five (5). This enables the necessary level of confidentiality for publication of this information.

Crop report costs such as fertilizer, chemicals, seed, crop drying expenses, hired labor, and custom hire are costs that are assigned to each individual crop. These costs are shown in the crop enterprise analysis as *Direct Costs*.

Other costs, called *Overhead Costs*, are divided out by formula. Overhead costs are assigned by an allocation factor to each enterprise. The allocation factor is based on historical data of labor and capital intensity.

There are a couple of subtle differences between the Owned Land and Cash Rented Land tables. Naturally, on cash rented land, the actual cost of renting the land is reported in the direct cost section. On the owned land, there are two different lines of information in the overhead cost section that would be included for calculating cost of ownership: real-estate taxes and interest on long-term debt.

The livestock reports have a format similar to the crop reports. Production information is listed at the top of each table. This will include animal or product sales, purchases, sales, transfers, and inventory change.

The *Direct Costs* include costs that are assigned to the enterprise, including items such as: feed, veterinary, breeding, marketing, hired labor, fuel & repairs, and livestock supplies. The *Overhead Costs* include formula-assigned costs, including items such as: depreciation, interest, utilities, and insurances.

At the bottom of each livestock report, there is a list of selected factors for each enterprise. These factors are a combination of production indicators and efficiency indicators.

Towards the bottom of both the crop and livestock enterprise tables, are four (4) factors that show varying levels of Cost of Production. Those factors include a cost of production based on: direct costs, overhead & direct costs, total cost less government payments and/or other revenue, and total cost including labor & management.

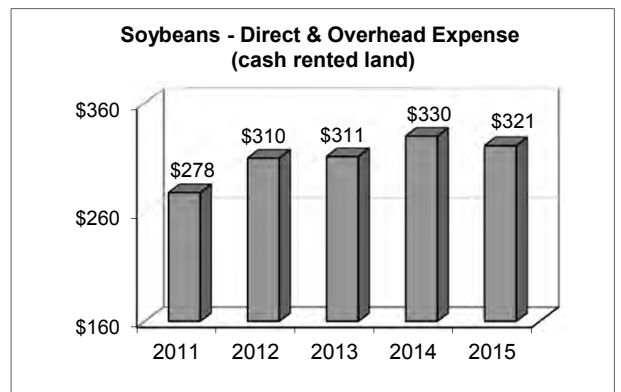
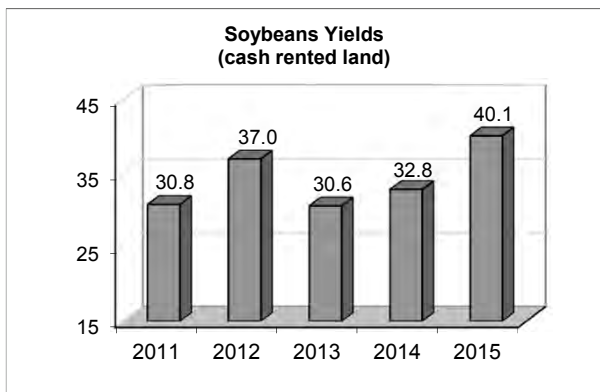
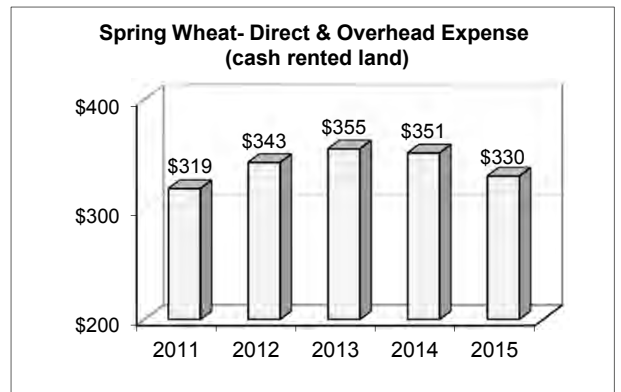
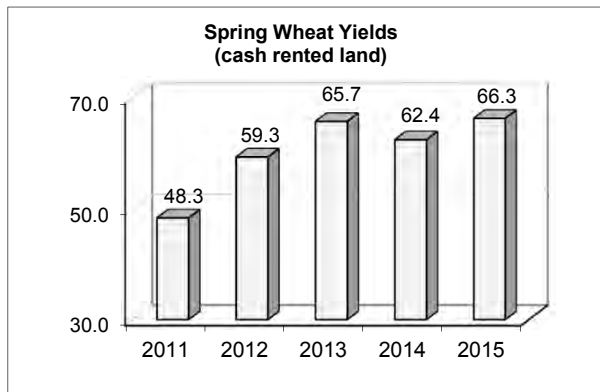
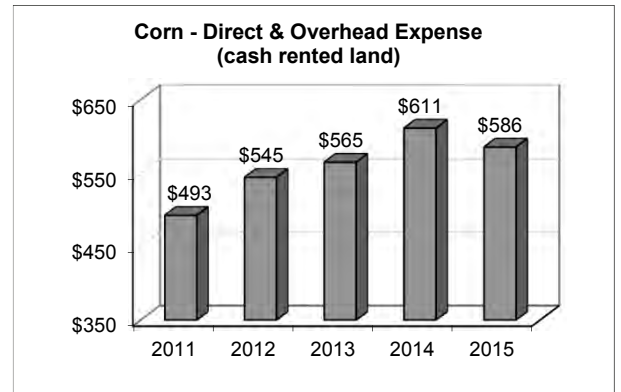
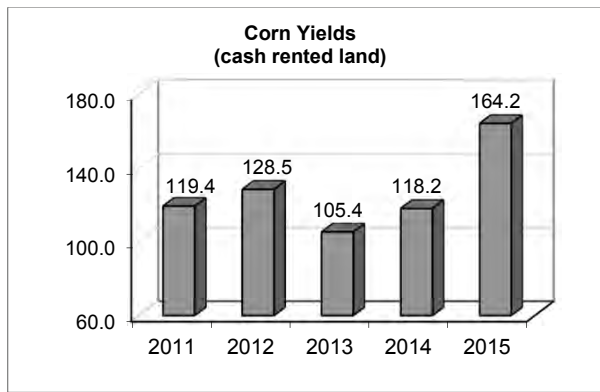
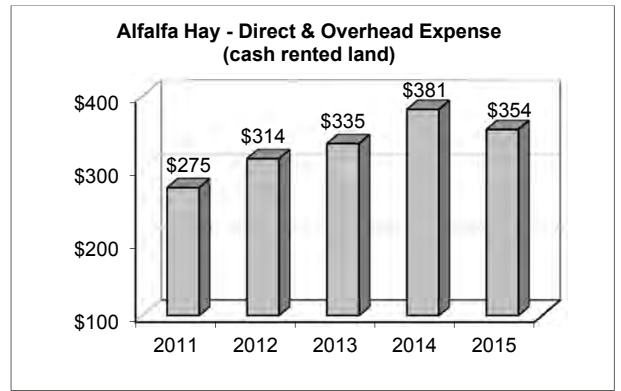
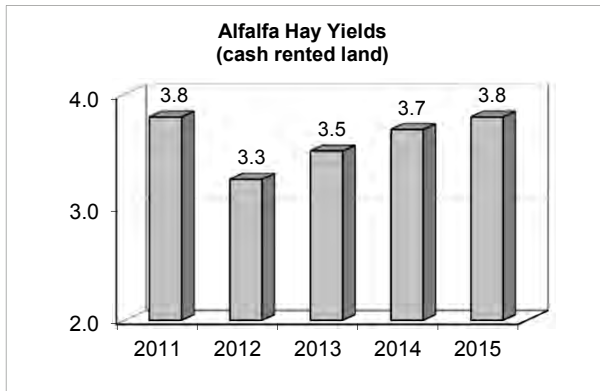
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Machinery Cost per Acre is a factor used to combine all costs related to machinery usage. The Machinery Cost per Acre includes: Fuel & Oil, Repairs, Custom hire, Machinery leases, Interest on machinery debt, and Machinery depreciation. A machinery cost summary for five prominent Northern Minnesota crops is listed below. Data is taken from the owned land enterprise tables.

<b>Crop</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Alfalfa Hay	\$134.95	\$150.94	\$145.46	\$190.49	\$164.47
Corn	\$142.37	154.11	152.35	\$162.84	\$159.23
Corn Silage	\$184.16	\$185.94	\$178.58	\$229.01	\$209.02
Soybeans	\$87.20	\$88.40	\$85.28	\$87.39	\$81.89
Spring Wheat	\$84.21	\$94.18	\$87.97	\$86.33	\$84.02

## Five Year History of Crop Yields and Cost of Production

### Northern Minnesota Farm Business Management Data



**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Corn on Owned Land**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	199	40	40
Acres	95.38	115.86	83.62
Yield per acre (bu.)	164.15	164.73	182.27
Operators share of yield %	100.00	100.00	100.00
Value per bu.	3.30	3.31	3.31
Other product return per acre	6.54	4.86	11.32
Total product return per acre	547.68	549.91	615.15
Hedging gains/losses per acre	-0.42	-	-
Crop insurance per acre	12.18	15.98	29.05
Other crop income per acre	3.25	1.45	3.82
Gross return per acre	562.70	567.33	648.02
<b>Direct Expenses</b>			
Seed	96.75	99.95	94.17
Fertilizer	123.68	136.71	90.80
Crop chemicals	27.44	27.08	25.05
Crop insurance	21.36	18.81	22.68
Drying expense	9.92	8.79	9.79
Storage	0.92	2.34	0.36
Packaging and supplies	1.11	0.30	1.99
Fuel & oil	30.19	28.26	27.87
Repairs	50.61	53.19	45.81
Custom hire	14.32	9.35	12.30
Hired labor	1.58	0.06	6.26
Machinery leases	2.44	1.68	1.78
Hauling and trucking	2.05	1.39	0.38
Marketing	0.76	0.91	0.67
Operating interest	8.50	8.95	3.93
Miscellaneous	2.47	1.38	2.88
Total direct expenses per acre	394.10	399.15	346.72
Return over direct exp per acre	168.60	168.19	301.30
<b>Overhead Expenses</b>			
Hired labor	13.13	18.86	6.88
Machinery leases	4.37	11.12	0.45
Building leases	0.72	0.12	0.52
RE & pers. property taxes	18.65	19.82	16.88
Farm insurance	9.44	10.39	9.74
Utilities	6.50	6.62	9.45
Dues & professional fees	3.42	3.15	4.24
Interest	51.17	67.48	45.16
Mach & bldg depreciation	56.10	58.61	61.99
Miscellaneous	5.14	4.56	4.01
Total overhead expenses per acre	168.65	200.74	159.32
Total dir & ovhd expenses per acre	562.75	599.89	506.04
Net return per acre	-0.05	-32.56	141.98
Government payments	33.00	32.46	32.93
Net return with govt pmts	32.95	-0.09	174.91
Labor & management charge	53.72	52.34	59.97
Net return over lbr & mgt	-20.77	-52.44	114.94
<b>Cost of Production</b>			
Total direct expense per bu.	2.40	2.42	1.90
Total dir & ovhd exp per bu.	3.43	3.64	2.78
Less govt & other income	3.10	3.31	2.35
With labor & management	3.42	3.63	2.68
Net value per unit	3.29	3.31	3.31
Machinery cost per acre	159.23	168.61	152.18
Est. labor hours per acre	4.22	3.96	4.45

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Corn on Cash Rent**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	236	47	48
Acres	159.28	201.41	114.44
Yield per acre (bu.)	164.17	158.52	179.77
Operators share of yield %	100.00	100.00	100.00
Value per bu.	3.32	3.37	3.33
Other product return per acre	4.40	4.50	11.87
Total product return per acre	548.80	539.20	610.38
Hedging gains/losses per acre	0.51	-	3.64
Crop insurance per acre	6.82	8.68	1.56
Other crop income per acre	2.10	2.01	2.06
Gross return per acre	558.23	549.88	617.65
<b>Direct Expenses</b>			
Seed	94.78	95.10	85.91
Fertilizer	124.86	135.31	99.36
Crop chemicals	27.35	24.64	24.88
Crop insurance	20.88	22.13	18.51
Drying expense	10.30	11.52	10.48
Storage	0.90	0.58	0.41
Packaging and supplies	1.29	0.04	1.86
Fuel & oil	25.19	23.34	27.76
Repairs	45.82	52.37	37.07
Custom hire	12.91	9.78	10.79
Hired labor	1.49	1.67	0.63
Land rent	102.00	87.26	81.42
Machinery leases	3.73	1.65	3.16
Utilities	0.33	0.88	0.00
Hauling and trucking	2.24	1.54	1.57
Marketing	0.88	1.35	1.00
Operating interest	6.47	7.49	4.70
Miscellaneous	2.41	0.74	2.06
Total direct expenses per acre	483.83	477.39	411.55
Return over direct exp per acre	74.40	72.49	206.09
<b>Overhead Expenses</b>			
Hired labor	15.83	15.48	15.03
Machinery leases	6.92	9.75	4.45
Building leases	0.59	0.52	1.94
Farm insurance	7.54	7.14	5.78
Utilities	4.91	3.57	4.96
Dues & professional fees	3.14	3.31	2.58
Interest	7.83	8.59	6.86
Mach & bldg depreciation	50.05	47.44	48.92
Miscellaneous	4.91	6.43	4.50
Total overhead expenses per acre	101.75	102.22	95.00
Total dir & ovhd expenses per acre	585.59	579.61	506.56
Net return per acre	-27.36	-29.73	111.09
Government payments	33.02	29.81	31.09
Net return with govt pmts	5.66	0.09	142.18
Labor & management charge	45.09	43.74	50.40
Net return over lbr & mgt	-39.43	-43.65	91.79
<b>Cost of Production</b>			
Total direct expense per bu.	2.95	3.01	2.29
Total dir & ovhd exp per bu.	3.57	3.66	2.82
Less govt & other income	3.28	3.37	2.54
With labor & management	3.56	3.65	2.82
Net value per unit	3.32	3.37	3.35
Machinery cost per acre	146.94	149.16	135.23
Est. labor hours per acre	3.79	3.82	4.54

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Soybeans on Owned Land**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	167	34	34
Acres	195.80	209.12	89.43
Yield per acre (bu.)	38.05	38.74	54.20
Operators share of yield %	100.00	100.00	100.00
Value per bu.	8.33	8.46	8.48
Other product return per acre	0.01	-	0.13
Total product return per acre	316.94	327.71	459.70
Hedging gains/losses per acre	-0.10	-	-
Crop insurance per acre	12.13	11.14	9.20
Other crop income per acre	2.75	1.75	5.05
Gross return per acre	331.72	340.59	473.95
<b>Direct Expenses</b>			
Seed	63.36	63.24	56.36
Fertilizer	31.69	33.90	16.62
Crop chemicals	25.06	23.36	29.50
Crop insurance	14.56	15.28	17.47
Fuel & oil	16.03	16.10	14.18
Repairs	22.21	22.40	24.89
Custom hire	7.04	9.14	2.55
Hired labor	0.54	0.14	2.99
Machinery leases	1.03	0.86	1.57
Hauling and trucking	0.54	0.13	2.13
Marketing	0.60	0.97	0.85
Operating interest	4.15	3.18	3.37
Miscellaneous	1.32	1.32	1.81
Total direct expenses per acre	188.14	190.02	174.30
Return over direct exp per acre	143.58	150.58	299.65
<b>Overhead Expenses</b>			
Hired labor	9.05	6.20	5.25
Machinery leases	1.56	1.91	0.65
Building leases	0.81	0.29	0.75
RE & pers. property taxes	11.90	12.26	20.27
Farm insurance	6.19	5.46	5.23
Utilities	4.54	4.97	4.69
Dues & professional fees	2.36	2.57	1.95
Interest	27.29	22.79	44.07
Mach & bldg depreciation	33.48	31.84	37.69
Miscellaneous	2.82	3.68	2.24
Total overhead expenses per acre	100.00	91.99	122.79
Total dir & ovhd expenses per acre	288.14	282.01	297.08
Net return per acre	43.58	58.59	176.86
Government payments	19.78	19.56	35.37
Net return with govt pmts	63.36	78.14	212.23
Labor & management charge	30.59	33.84	34.01
Net return over lbr & mgt	32.77	44.30	178.22
<b>Cost of Production</b>			
Total direct expense per bu.	4.94	4.91	3.22
Total dir & ovhd exp per bu.	7.57	7.28	5.48
Less govt & other income	6.66	6.44	4.56
With labor & management	7.47	7.32	5.19
Net value per unit	8.33	8.46	8.48
Machinery cost per acre	81.89	82.21	80.38
Est. labor hours per acre	1.81	1.82	2.64

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Soybeans on Cash Rent**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	222	45	45
Acres	315.84	369.28	258.32
Yield per acre (bu.)	40.08	37.44	46.82
Operators share of yield %	100.00	100.00	100.00
Value per bu.	8.37	8.28	8.42
Other product return per acre	0.02	-	0.10
Total product return per acre	335.50	310.22	394.38
Hedging gains/losses per acre	-0.02	-0.37	-
Crop insurance per acre	9.24	8.93	20.60
Other crop income per acre	2.87	3.71	2.01
Gross return per acre	347.59	322.49	416.99
<b>Direct Expenses</b>			
Seed	62.71	65.66	57.93
Fertilizer	29.51	26.14	19.56
Crop chemicals	25.33	24.35	26.14
Crop insurance	14.66	15.30	15.08
Fuel & oil	14.82	15.18	11.50
Repairs	22.02	21.71	20.42
Custom hire	6.43	4.47	5.36
Hired labor	1.21	1.54	1.48
Land rent	78.29	74.88	69.83
Machinery leases	3.12	1.58	3.18
Hauling and trucking	0.57	0.41	0.62
Marketing	0.64	0.91	1.00
Operating interest	4.66	5.46	4.53
Miscellaneous	2.08	1.97	1.57
Total direct expenses per acre	266.05	259.59	238.20
Return over direct exp per acre	81.55	62.90	178.79
<b>Overhead Expenses</b>			
Hired labor	7.31	6.74	5.46
Machinery leases	2.31	2.11	0.66
Building leases	1.31	0.71	1.61
Farm insurance	5.19	4.92	4.56
Utilities	3.66	4.20	2.39
Dues & professional fees	2.01	1.77	1.43
Interest	4.03	2.63	5.51
Mach & bldg depreciation	26.59	23.01	25.87
Miscellaneous	2.46	2.20	1.89
Total overhead expenses per acre	54.87	48.29	49.38
Total dir & ovhd expenses per acre	320.92	307.88	287.57
Net return per acre	26.67	14.61	129.41
Government payments	18.42	13.75	25.29
Net return with govt pmts	45.09	28.36	154.70
Labor & management charge	27.22	29.69	23.50
Net return over lbr & mgt	17.88	-1.33	131.20
<b>Cost of Production</b>			
Total direct expense per bu.	6.64	6.93	5.09
Total dir & ovhd exp per bu.	8.01	8.22	6.14
Less govt & other income	7.25	7.53	5.12
With labor & management	7.92	8.32	5.62
Net value per unit	8.37	8.27	8.42
Machinery cost per acre	77.27	68.50	70.73
Est. labor hours per acre	1.65	1.54	1.83

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Wheat, Spring on Owned Land**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	82	17	17
Acres	247.58	286.59	312.86
Yield per acre (bu.)	65.98	66.70	74.53
Operators share of yield %	100.00	100.00	100.00
Value per bu.	4.96	4.86	5.31
Other product return per acre	0.34	-	0.81
Total product return per acre	327.94	324.08	396.38
Crop insurance per acre	5.88	2.98	5.50
Other crop income per acre	5.92	7.61	9.73
Gross return per acre	339.73	334.66	411.60
<b>Direct Expenses</b>			
Seed	20.52	21.06	18.95
Fertilizer	91.35	88.20	84.38
Crop chemicals	28.72	28.71	24.03
Crop insurance	11.90	12.37	10.93
Drying expense	0.83	1.14	0.31
Fuel & oil	17.41	16.80	18.50
Repairs	20.74	21.00	19.64
Custom hire	9.82	10.86	8.49
Hired labor	0.45	-	1.62
Machinery leases	0.85	0.00	1.19
Hauling and trucking	1.10	0.08	2.72
Marketing	0.67	0.84	0.04
Operating interest	4.42	4.17	3.58
Miscellaneous	1.75	1.41	3.03
Total direct expenses per acre	210.52	206.66	197.42
Return over direct exp per acre	129.22	128.00	214.18
<b>Overhead Expenses</b>			
Custom hire	0.16	0.57	-
Hired labor	10.58	8.24	12.46
Machinery leases	2.00	2.83	0.23
Building leases	0.45	0.79	0.01
RE & pers. property taxes	10.83	9.20	12.54
Farm insurance	5.48	5.05	3.90
Utilities	3.70	3.35	2.94
Dues & professional fees	1.95	1.17	1.59
Interest	18.66	18.61	22.42
Mach & bldg depreciation	32.45	28.83	35.16
Miscellaneous	2.57	2.39	3.13
Total overhead expenses per acre	88.82	81.03	94.38
Total dir & ovhd expenses per acre	299.33	287.70	291.80
Net return per acre	40.40	46.97	119.80
Government payments	17.05	17.21	20.22
Net return with govt pmts	57.45	64.17	140.02
Labor & management charge	26.75	27.38	18.07
Net return over lbr & mgt	30.70	36.79	121.95
<b>Cost of Production</b>			
Total direct expense per bu.	3.19	3.10	2.65
Total dir & ovhd exp per bu.	4.54	4.31	3.92
Less govt & other income	4.09	3.90	3.43
With labor & management	4.50	4.31	3.67
Net value per unit	4.96	4.86	5.31
Machinery cost per acre	84.02	82.29	84.65
Est. labor hours per acre	1.58	1.56	1.58

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Wheat, Spring on Cash Rent**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	112	23	23
Acres	357.97	378.70	355.24
Yield per acre (bu.)	66.25	63.30	71.60
Operators share of yield %	100.00	100.00	100.00
Value per bu.	5.02	4.84	5.44
Other product return per acre	1.10	-	4.99
Total product return per acre	333.86	306.41	394.57
Crop insurance per acre	6.53	9.83	11.04
Other crop income per acre	6.54	3.96	11.27
Gross return per acre	346.93	320.20	416.87
<b>Direct Expenses</b>			
Seed	20.63	20.56	19.82
Fertilizer	95.33	96.34	87.97
Crop chemicals	28.79	31.68	29.91
Crop insurance	10.66	10.89	10.96
Drying expense	0.55	0.76	0.13
Fuel & oil	15.55	15.96	16.11
Repairs	20.85	18.29	20.72
Custom hire	6.25	7.38	3.71
Hired labor	0.58	0.06	0.67
Land rent	68.23	55.34	68.74
Machinery leases	2.44	1.12	3.39
Hauling and trucking	0.53	0.04	1.30
Marketing	1.44	0.17	0.01
Operating interest	4.17	4.22	3.60
Miscellaneous	1.54	1.20	1.52
Total direct expenses per acre	277.53	263.99	268.54
Return over direct exp per acre	69.39	56.21	148.34
<b>Overhead Expenses</b>			
Hired labor	8.95	11.60	7.87
Machinery leases	1.80	1.16	0.10
Building leases	0.93	2.16	0.38
Farm insurance	4.82	4.06	4.00
Utilities	3.39	2.26	2.90
Dues & professional fees	2.01	1.48	2.46
Interest	3.49	5.20	3.75
Mach & bldg depreciation	25.56	28.04	22.55
Miscellaneous	1.98	1.20	2.14
Total overhead expenses per acre	52.93	57.17	46.15
Total dir & ovhd expenses per acre	330.46	321.16	314.69
Net return per acre	16.47	-0.96	102.18
Government payments	12.68	12.85	14.33
Net return with govt pmts	29.14	11.89	116.52
Labor & management charge	27.02	26.93	26.83
Net return over lbr & mgt	2.13	-15.04	89.68
<b>Cost of Production</b>			
Total direct expense per bu.	4.19	4.17	3.75
Total dir & ovhd exp per bu.	4.99	5.07	4.40
Less govt & other income	4.58	4.65	3.81
With labor & management	4.99	5.08	4.19
Net value per unit	5.02	4.84	5.44
Machinery cost per acre	74.41	75.51	68.46
Est. labor hours per acre	1.47	1.44	1.36

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Corn Silage on Owned Land**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	157	32	32
Acres	59.02	74.66	50.48
Yield per acre (ton)	19.51	19.76	23.94
Operators share of yield %	100.00	100.00	100.00
Value per ton	34.46	34.81	35.27
Total product return per acre	672.15	687.64	844.31
Crop insurance per acre	1.95	-	-
Other crop income per acre	0.79	-	1.42
Gross return per acre	674.88	687.64	845.73
<b>Direct Expenses</b>			
Seed	91.00	95.88	85.52
Fertilizer	80.83	84.24	66.48
Crop chemicals	27.51	34.58	21.41
Crop insurance	15.68	15.34	18.58
Packaging and supplies	10.17	7.28	15.42
Fuel & oil	33.76	40.61	34.83
Repairs	60.15	69.24	50.76
Custom hire	49.99	41.15	26.58
Hired labor	1.43	-	0.54
Machinery leases	3.01	3.91	2.15
Operating interest	3.97	3.66	1.25
Miscellaneous	2.18	1.15	0.95
Total direct expenses per acre	379.68	397.03	324.48
Return over direct exp per acre	295.21	290.61	521.24
<b>Overhead Expenses</b>			
Hired labor	25.28	39.63	16.20
Machinery leases	3.28	0.51	8.23
Building leases	0.69	1.33	0.63
RE & pers. property taxes	13.62	13.02	13.23
Farm insurance	9.54	6.94	14.90
Utilities	6.29	6.11	9.60
Dues & professional fees	2.78	2.78	3.31
Interest	52.97	39.44	64.77
Mach & bldg depreciation	55.01	70.30	62.70
Miscellaneous	5.45	4.97	4.73
Total overhead expenses per acre	174.91	185.05	198.31
Total dir & ovhd expenses per acre	554.58	582.07	522.79
Net return per acre	120.30	105.56	322.94
Government payments	30.08	36.58	25.22
Net return with govt pmts	150.38	142.14	348.16
Labor & management charge	50.01	48.98	61.94
Net return over lbr & mgt	100.37	93.17	286.22
<b>Cost of Production</b>			
Total direct expense per ton	19.47	20.10	13.56
Total dir & ovhd exp per ton	28.43	29.46	21.84
Less govt & other income	26.75	27.61	20.73
With labor & management	29.31	30.09	23.32
Net value per unit	34.46	34.81	35.27
Machinery cost per acre	209.02	225.73	190.28
Est. labor hours per acre	4.95	4.16	5.61

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Corn Silage on Cash Rent**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	130	26	26
Acres	87.77	83.59	63.58
Yield per acre (ton)	18.15	19.61	23.03
Operators share of yield %	100.00	100.00	100.00
Value per ton	34.84	34.32	35.20
Other product return per acre	0.14	0.72	-
Total product return per acre	632.56	673.57	810.80
Hedging gains/losses per acre	0.00	-	-
Crop insurance per acre	1.00	-	0.37
Other crop income per acre	1.86	1.29	0.27
Gross return per acre	635.43	674.86	811.44
<b>Direct Expenses</b>			
Seed	93.54	95.30	90.96
Fertilizer	78.19	87.64	61.97
Crop chemicals	28.16	32.36	24.24
Crop insurance	15.85	17.56	11.02
Storage	1.29	-	3.51
Packaging and supplies	10.83	7.45	2.16
Fuel & oil	34.98	30.11	34.80
Repairs	57.36	52.38	53.04
Custom hire	48.82	55.69	23.56
Land rent	87.64	65.82	56.97
Machinery leases	5.62	11.68	2.45
Hauling and trucking	0.51	0.33	0.05
Operating interest	5.12	2.18	3.33
Miscellaneous	4.28	7.19	2.63
Total direct expenses per acre	472.19	465.67	370.67
Return over direct exp per acre	163.23	209.19	440.78
<b>Overhead Expenses</b>			
Hired labor	33.66	34.87	33.11
Machinery leases	6.29	0.84	1.52
Building leases	0.58	0.59	0.76
Farm insurance	6.92	5.26	13.45
Utilities	5.02	4.16	5.63
Dues & professional fees	3.00	1.81	2.94
Interest	11.55	7.22	8.72
Mach & bldg depreciation	48.33	62.38	54.37
Miscellaneous	4.98	5.79	4.53
Total overhead expenses per acre	120.33	122.92	125.04
Total dir & ovhd expenses per acre	592.52	588.59	495.71
Net return per acre	42.90	86.27	315.73
Government payments	28.19	30.11	30.63
Net return with govt pmts	71.09	116.38	346.37
Labor & management charge	37.76	38.81	47.12
Net return over lbr & mgt	33.33	77.56	299.25
<b>Cost of Production</b>			
Total direct expense per ton	26.02	23.75	16.09
Total dir & ovhd exp per ton	32.64	30.02	21.52
Less govt & other income	30.93	28.38	20.16
With labor & management	33.01	30.36	22.21
Net value per unit	34.84	34.32	35.20
Machinery cost per acre	208.09	214.68	171.92
Est. labor hours per acre	4.70	4.12	6.02

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Hay, Alfalfa on Owned Land**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	114	23	23
Acres	53.47	48.87	50.18
Yield per acre (ton)	3.92	3.92	5.65
Operators share of yield %	100.00	100.00	100.00
Value per ton	153.84	168.48	174.95
Other product return per acre	0.09	0.48	-
Total product return per acre	602.43	660.27	989.20
Crop insurance per acre	17.10	0.49	66.22
Other crop income per acre	1.95	2.60	3.31
Gross return per acre	621.48	663.36	1,058.73
<b>Direct Expenses</b>			
Seed	0.41	1.65	-
Fertilizer	34.89	50.67	25.30
Crop chemicals	5.89	2.38	6.85
Non-chemical crop protect	0.43	2.01	-
Crop insurance	3.70	4.24	6.12
Storage	0.66	1.64	0.41
Packaging and supplies	5.29	3.10	5.88
Fuel & oil	31.30	32.93	33.59
Repairs	51.80	70.38	65.72
Custom hire	21.45	48.73	29.68
Hired labor	0.11	0.58	-
Machinery leases	1.49	3.70	1.22
Operating interest	5.11	2.62	2.79
Miscellaneous	2.28	5.52	1.27
Total direct expenses per acre	164.80	230.15	178.84
Return over direct exp per acre	456.68	433.21	879.89
<b>Overhead Expenses</b>			
Hired labor	18.70	14.99	21.50
Machinery leases	4.84	0.53	5.06
RE & pers. property taxes	13.76	14.47	14.61
Farm insurance	10.67	12.37	9.81
Utilities	6.78	7.26	7.64
Dues & professional fees	3.03	2.77	4.09
Interest	48.44	45.07	59.53
Mach & bldg depreciation	50.95	50.24	69.54
Miscellaneous	7.29	9.22	8.03
Total overhead expenses per acre	164.45	156.91	199.79
Total dir & ovhd expenses per acre	329.25	387.06	378.62
Net return per acre	292.23	276.30	680.10
Government payments	27.91	28.04	35.09
Net return with govt pmts	320.15	304.34	715.19
Labor & management charge	55.40	59.60	67.96
Net return over lbr & mgt	264.75	244.74	647.23
<b>Cost of Production</b>			
Total direct expense per ton	42.09	58.77	31.63
Total dir & ovhd exp per ton	84.09	98.84	66.96
Less govt & other income	72.08	90.77	48.46
With labor & management	86.22	105.99	60.48
Net value per unit	153.84	168.48	174.95
Machinery cost per acre	164.47	211.83	204.90
Est. labor hours per acre	5.19	7.25	5.19

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Hay, Alfalfa on Cash Rent**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	126	25	26
Acres	57.73	54.34	61.88
Yield per acre (ton)	3.80	3.47	5.15
Operators share of yield %	100.00	100.00	100.00
Value per ton	153.93	162.41	163.46
Other product return per acre	0.30	1.59	-
Total product return per acre	585.12	565.91	841.10
Crop insurance per acre	12.81	4.69	44.17
Other crop income per acre	2.18	0.06	4.93
Gross return per acre	600.12	570.66	890.19
<b>Direct Expenses</b>			
Seed	0.74	0.37	1.51
Fertilizer	39.57	44.31	38.40
Crop chemicals	7.17	1.14	2.96
Crop insurance	2.92	1.01	4.33
Storage	0.82	0.68	2.23
Packaging and supplies	7.14	1.14	7.91
Fuel & oil	30.46	24.94	27.57
Repairs	48.00	39.68	50.22
Custom hire	17.99	25.88	11.92
Land rent	86.20	112.92	77.79
Machinery leases	2.69	0.50	3.36
Operating interest	4.61	2.79	3.19
Miscellaneous	2.96	6.44	1.09
Total direct expenses per acre	251.29	261.81	232.47
Return over direct exp per acre	348.83	308.85	657.72
<b>Overhead Expenses</b>			
Hired labor	23.33	30.72	29.65
Machinery leases	4.09	0.44	3.28
Building leases	0.37	0.01	0.87
Farm insurance	7.92	8.29	6.60
Utilities	5.72	4.01	6.05
Dues & professional fees	3.59	3.23	3.74
Interest	8.85	5.87	10.32
Mach & bldg depreciation	45.02	45.06	57.94
Miscellaneous	4.03	3.83	4.19
Total overhead expenses per acre	102.90	101.47	122.63
Total dir & ovhd expenses per acre	354.19	363.28	355.09
Net return per acre	245.93	207.39	535.10
Government payments	26.59	31.18	31.09
Net return with govt pmts	272.52	238.57	566.19
Labor & management charge	42.63	38.90	41.47
Net return over lbr & mgt	229.89	199.67	524.72
<b>Cost of Production</b>			
Total direct expense per ton	66.14	75.35	45.18
Total dir & ovhd exp per ton	93.22	104.55	69.01
Less govt & other income	82.20	93.75	53.43
With labor & management	93.42	104.94	61.49
Net value per unit	153.93	162.41	163.46
Machinery cost per acre	151.74	136.74	157.63
Est. labor hours per acre	4.59	4.44	5.36

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Hay, Mixed on Owned Land**

	<u>Avg. Of All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	46	9	10
Acres	56.43	70.51	28.05
Yield per acre (ton)	2.11	2.59	3.31
Operators share of yield %	100.00	100.00	100.00
Value per ton	88.96	79.11	138.91
Total product return per acre	188.08	205.24	459.22
Other crop income per acre	2.03	-	2.55
Gross return per acre	190.11	205.24	461.77
<b>Direct Expenses</b>			
Seed	0.88	0.25	0.71
Fertilizer	24.03	25.30	31.59
Crop insurance	0.57	0.06	2.55
Packaging and supplies	3.84	7.58	0.24
Fuel & oil	19.47	16.44	21.56
Repairs	36.32	39.95	21.53
Custom hire	6.41	0.53	48.61
Hired labor	4.20	-	-
Machinery leases	0.69	-	-
Marketing	0.07	-	0.62
Operating interest	2.85	6.24	2.49
Miscellaneous	2.02	0.28	0.19
Total direct expenses per acre	101.36	96.65	130.10
Return over direct exp per acre	88.75	108.59	331.67
<b>Overhead Expenses</b>			
Hired labor	4.16	8.66	5.02
Machinery leases	0.23	0.52	0.73
RE & pers. property taxes	8.61	7.93	12.23
Farm insurance	5.86	4.51	5.20
Utilities	3.64	5.67	4.00
Dues & professional fees	4.06	2.79	2.84
Interest	21.63	15.90	23.98
Mach & bldg depreciation	23.61	16.14	27.35
Miscellaneous	3.36	1.83	11.43
Total overhead expenses per acre	75.17	63.95	92.79
Total dir & ovhd expenses per acre	176.53	160.59	222.89
Net return per acre	13.58	44.64	238.88
Government payments	14.09	23.12	24.56
Net return with govt pmts	27.67	67.77	263.44
Labor & management charge	34.17	30.90	40.65
Net return over lbr & mgt	-6.50	36.86	222.78
<b>Cost of Production</b>			
Total direct expense per ton	47.94	37.25	39.35
Total dir & ovhd exp per ton	83.49	61.90	67.42
Less govt & other income	75.87	52.99	59.22
With labor & management	92.03	64.90	71.52
Net value per unit	88.96	79.11	138.91
Machinery cost per acre	87.14	72.06	122.97
Est. labor hours per acre	3.40	2.86	3.23

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Hay, Mixed on Cash Rent**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	47	10	10
Acres	79.02	132.78	38.80
Yield per acre (ton)	2.41	1.99	4.19
Operators share of yield %	100.00	100.00	100.00
Value per ton	88.45	68.61	126.63
Total product return per acre	213.28	136.39	530.48
Other crop income per acre	0.55	-	1.84
Gross return per acre	213.82	136.39	532.33
<b>Direct Expenses</b>			
Seed	0.82	-	3.35
Fertilizer	18.39	7.76	43.58
Crop insurance	0.67	-	0.37
Storage	1.51	0.03	1.91
Packaging and supplies	2.70	1.54	4.57
Fuel & oil	18.06	14.02	19.02
Repairs	29.32	19.48	37.52
Custom hire	6.19	0.25	4.77
Hired labor	3.45	-	-
Land rent	38.59	21.97	54.06
Machinery leases	0.79	1.09	-
Operating interest	3.86	5.96	1.73
Miscellaneous	1.54	0.40	0.02
Total direct expenses per acre	125.88	72.50	170.90
Return over direct exp per acre	87.94	63.90	361.43
<b>Overhead Expenses</b>			
Hired labor	7.24	5.43	15.65
Machinery leases	5.24	11.01	0.26
Building leases	0.27	0.04	2.46
Farm insurance	5.70	3.89	9.03
Utilities	2.85	1.55	2.97
Dues & professional fees	2.69	1.46	1.61
Interest	7.14	6.90	8.50
Mach & bldg depreciation	26.40	15.15	53.95
Miscellaneous	2.85	1.89	2.19
Total overhead expenses per acre	60.37	47.32	96.61
Total dir & ovhd expenses per acre	186.25	119.81	267.51
Net return per acre	27.57	16.58	264.82
Government payments	13.01	5.63	24.52
Net return with govt pmts	40.58	22.21	289.34
Labor & management charge	29.37	23.65	32.47
Net return over lbr & mgt	11.21	-1.44	256.87
<b>Cost of Production</b>			
Total direct expense per ton	52.21	36.47	40.79
Total dir & ovhd exp per ton	77.24	60.27	63.86
Less govt & other income	71.62	57.44	57.56
With labor & management	83.80	69.34	65.31
Net value per unit	88.45	68.61	126.63
Machinery cost per acre	91.13	66.84	121.34
Est. labor hours per acre	2.74	2.11	2.67

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**

**Hay, Grass on Cash Rent**

	<u>Avg. Of</u> <u>All Farms</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	79	16	16
Acres	82.76	61.58	38.18
Yield per acre (ton)	1.91	1.82	3.27
Operators share of yield %	100.00	100.00	100.00
Value per ton	70.42	70.21	83.94
Other product return per acre	1.10	-	-
Total product return per acre	135.66	127.43	274.74
Other crop income per acre	0.99	-	0.36
Gross return per acre	136.65	127.43	275.10
<b>Direct Expenses</b>			
Seed	0.06	-	0.66
Fertilizer	16.08	5.68	9.58
Packaging and supplies	2.19	2.12	2.85
Fuel & oil	12.42	20.65	14.37
Repairs	22.34	28.21	21.07
Custom hire	1.63	1.69	1.44
Land rent	28.35	30.52	42.82
Machinery leases	1.24	2.38	-
Operating interest	4.93	2.13	2.19
Miscellaneous	1.06	0.14	0.44
Total direct expenses per acre	90.30	93.53	95.41
Return over direct exp per acre	46.35	33.90	179.68
<b>Overhead Expenses</b>			
Hired labor	7.34	10.89	19.58
Machinery leases	2.04	7.93	0.27
Farm insurance	2.68	3.13	2.30
Utilities	1.76	2.85	3.02
Dues & professional fees	0.74	1.57	1.19
Interest	4.23	3.98	5.49
Mach & bldg depreciation	19.72	20.70	23.42
Miscellaneous	2.41	2.80	1.75
Total overhead expenses per acre	40.90	53.84	57.01
Total dir & ovhd expenses per acre	131.20	147.38	152.42
Net return per acre	5.45	-19.95	122.67
Government payments	5.47	5.86	6.56
Net return with govt pmts	10.92	-14.08	129.23
Labor & management charge	16.82	20.24	16.39
Net return over lbr & mgt	-5.90	-34.32	112.84
<b>Cost of Production</b>			
Total direct expense per ton	47.26	51.53	29.15
Total dir & ovhd exp per ton	68.66	81.20	46.57
Less govt & other income	64.70	77.97	44.46
With labor & management	73.51	89.12	49.46
Net value per unit	70.42	70.21	83.94
Machinery cost per acre	61.94	82.69	63.70
Est. labor hours per acre	2.09	2.40	2.75

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**  
**Owned and Rented Acres Combined \***

	<b>Establish Alfalfa Hay</b>	<b>Pasture</b>	<b>Intensive Pasture</b>	<b>Prevented Planting</b>
Number of farms	72	73	8	8
Acres	65.87	221.73	74.15	73.50
Yield per acre	2.80	2.44	4.33	197.45
Operators share of yield %	100.00	100.00	100.00	100.00
Value	138.24	10.64	18.39	1.00
Total product return per acre	387.07	25.97	79.53	197.45
Other crop income per acre	25.76	0.72	-	6.53
Gross return per acre	412.83	26.69	79.53	203.99
<b>Direct Expenses</b>				
Seed	92.25	-	-	-
Fertilizer	65.41	1.93	4.50	98.00
Crop chemicals	5.47	-	-	6.92
Crop insurance	3.99	-	-	7.96
Packaging and supplies	5.67	-	-	-
Fuel & oil	28.15	2.86	7.68	12.69
Repairs	43.20	4.43	14.75	18.41
Custom hire	19.58	-	-	-
Machinery Leases	5.69	-	-	5.18
Land Rent	48.81	10.55	12.41	55.04
Operating interest	5.42	0.78	0.28	4.66
Miscellaneous	3.66	-	1.26	3.09
Total direct expenses per acre	327.29	20.93	40.88	114.95
Return over direct exp per acre	85.54	5.76	38.65	89.04
<b>Overhead Expenses</b>				
Hired labor	20.67	1.72	5.43	3.42
Mach and bldg leases	5.76	0.30	1.03	-
RE & pers. property taxes	4.87	2.33	4.21	2.29
Farm insurance	7.52	0.57	1.98	5.97
Utilities	4.54	0.87	1.59	1.99
Dues & professional fees	2.97	0.51	0.62	0.78
Interest	20.53	6.48	7.80	9.48
Mach & bldg depreciation	45.39	3.57	16.15	24.97
Miscellaneous	4.02	0.51	2.13	4.34
Total overhead expenses per acre	116.26	16.86	40.93	53.23
Total dir & ovhd expenses per acre	443.56	37.79	81.81	168.18
Net return per acre	-30.73	-11.10	-2.27	35.81
Government payments	24.93	1.06	30.66	10.78
Net return with govt pmts	-5.80	-10.04	28.38	46.59
Labor & management charge	46.99	4.26	33.34	21.39
Net return over lbr & mgt	-52.79	-14.30	-4.95	25.20
<b>Cost of Production</b>				
Total direct expense per bu.	116.97	8.57	9.45	0.58
Total dir & ovhd exp per bu.	158.52	15.48	18.91	0.85
Less govt & other income	140.31	14.75	11.82	0.76
With labor & management	157.11	16.50	19.53	0.87
Net value per unit	138.24	10.64	18.39	1.00
Machinery cost per acre	151.80	11.69	39.23	62.57
Est. labor hours per acre	4.10	0.35	1.96	1.66

\* Combined data for rented and owned land. Actual land cost is the sum of: Land Rent, Interest, & RE taxes.

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**  
**Irrigated Crops \***

	<u>Corn</u>	<u>Corn Silage</u>	<u>Hay, Alfalfa</u>	<u>Soybeans</u>
Number of farms	55	15	8	25
Acres	193.00	100.63	75.38	125.71
Yield per acre	186.85	25.42	4.97	52.97
Operators share of yield %	100.00	100.00	100.00	100.00
Value	3.37	34.85	146.90	8.34
Total product return per acre	618.86	885.89	729.93	441.98
Crop insurance per acre	4.76	-	-	12.07
Other crop income per acre	3.10	1.84	0.06	1.37
Gross return per acre	626.72	887.72	729.99	455.43
<b>Direct Expenses</b>				
Seed	98.35	100.70	2.59	54.22
Fertilizer	146.45	114.17	80.29	28.32
Crop chemicals	27.13	33.43	3.12	27.56
Crop insurance	18.04	12.23	0.66	13.20
Marketing	1.19	-	-	1.36
Storage	0.99	-	2.84	0.08
Irrigation energy	25.50	18.57	16.89	22.89
Packaging and supplies	0.43	12.89	17.13	0.34
Fuel & oil	29.23	47.94	34.51	13.74
Repairs	44.98	80.56	56.54	29.40
Custom hire and Trucking	17.40	53.20	48.70	10.47
Hired labor	2.01	-	1.01	3.92
Land Rent	69.98	19.12	73.76	63.78
Operating interest	8.65	6.93	5.02	7.82
Miscellaneous	3.16	7.72	8.36	3.75
Total direct expenses per acre	509.53	507.45	351.42	286.12
Return over direct exp per acre	117.19	380.28	378.58	169.31
<b>Overhead Expenses</b>				
Hired labor	27.08	40.86	22.60	13.64
Mach and bldg leases	10.35	10.62	6.19	2.89
RE & pers. property taxes	8.03	10.81	4.48	7.04
Farm insurance	10.88	13.31	5.91	7.94
Utilities	4.88	8.30	3.29	3.36
Dues & professional fees	4.17	4.13	2.16	1.57
Interest	29.05	53.50	23.40	20.67
Mach & bldg depreciation	67.00	72.18	62.02	32.51
Miscellaneous	6.46	4.29	3.80	4.17
Total overhead expenses per acre	167.91	218.01	133.84	93.80
Total dir & ovhd expenses per acre	677.44	725.46	485.26	379.91
Net return per acre	-50.72	162.27	244.73	75.51
Government payments	38.06	39.27	37.05	40.40
Net return with govt pmts	-12.66	201.54	281.78	115.91
Labor & management charge	51.94	47.35	38.43	31.23
Net return over lbr & mgt	-64.60	154.19	243.35	84.68
<b>Cost of Production</b>				
Total direct expense per bu.	2.73	19.96	70.72	5.40
Total dir & ovhd exp per bu.	3.63	28.54	97.66	7.17
Less govt & other income	3.34	26.92	90.19	6.16
With labor & management	3.62	28.79	97.93	6.75
Net value per unit	3.27	34.85	146.90	8.34
Machinery cost per acre	170.82	269.62	212.74	90.40
Est. labor hours per acre	4.22	4.67	2.81	2.60

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**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**  
**Owned and Rented Acres Combined \***

	<u>Barley</u>	<u>Oats</u>	<u>Rye</u>	<u>Wheat, Winter</u>
Number of farms	24	70	21	15
Acres	229.92	51.17	88.72	132.42
Yield per acre	75.91	82.75	43.60	45.21
Operators share of yield %	100.00	100.00	100.00	100.00
Value	4.99	2.44	5.44	4.37
Other product return per acre	0.54	10.05	40.08	2.89
Total product return per acre	379.58	212.31	277.28	200.64
Crop insurance per acre	6.70	2.63	-	1.92
Other crop income per acre	4.09	32.40	21.87	4.01
Gross return per acre	390.37	247.34	299.14	206.58
<b>Direct Expenses</b>				
Seed	16.33	19.47	17.00	16.94
Fertilizer	69.73	35.42	49.48	72.60
Crop chemicals	23.50	9.64	5.24	18.13
Crop insurance	14.47	6.95	1.35	9.27
Drying expense	-	-	-	0.18
Fuel & oil	17.90	12.74	18.02	14.13
Repairs	26.35	23.52	22.85	18.48
Custom hire	13.84	8.72	7.77	11.45
Hired labor	0.44	0.38	-	1.48
Land Rent	48.98	29.46	60.98	48.14
Hauling and trucking	0.14	1.64	2.82	0.36
Operating interest	8.10	3.66	3.53	5.28
Miscellaneous	4.58	5.08	11.32	4.98
Total direct expenses per acre	244.35	156.67	200.47	221.42
Return over direct exp per acre	146.03	90.66	98.67	-14.84
<b>Overhead Expenses</b>				
Hired labor	7.77	7.29	10.14	7.93
Machinery leases	4.31	1.77	4.20	0.16
Building leases	1.13	0.28	0.15	1.75
RE & pers. property taxes	1.31	6.26	1.90	1.83
Farm insurance	4.76	4.24	5.94	4.67
Utilities	5.28	2.95	2.29	4.28
Dues & professional fees	1.99	1.70	2.65	1.50
Interest	12.55	17.21	3.31	11.29
Mach & bldg depreciation	26.92	20.78	32.10	25.86
Miscellaneous	1.06	2.92	2.98	0.87
Total overhead expenses per acre	68.12	65.39	65.66	60.59
Total dir & ovhd expenses per acre	312.46	222.06	266.13	282.01
Net return per acre	77.91	25.27	33.01	-75.43
Government payments	9.91	23.99	27.83	10.50
Net return with govt pmts	87.82	49.27	60.84	-64.93
Labor & management charge	25.01	22.71	26.19	21.21
Net return over lbr & mgt	62.82	26.56	34.66	-86.14
<b>Cost of Production</b>				
Total direct expense per bu.	3.22	1.89	4.60	4.90
Total dir & ovhd exp per bu.	4.12	2.68	6.10	6.24
Less govt & other income	3.84	1.85	4.04	5.81
With labor & management	4.17	2.12	4.65	6.28
Net value per unit	4.99	2.44	5.44	4.37
Machinery cost per acre	95.85	70.42	90.37	75.57
Est. labor hours per acre	1.52	2.30	2.22	1.37

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**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**  
**Owned and Rented Acres Combined \***

	<b>Soybeans, Seed</b>	<b>Soybeans, Food</b>	<b>Beans, Navy</b>	<b>Sunflowers</b>
Number of farms	8	7	7	11
Acres	203.46	429.14	334.34	279.55
Yield per acre	49.58	30.79	18.66	17.35
Operators share of yield %	100.00	100.00	100.00	100.00
Value	9.25	11.27	26.38	20.14
Total product return per acre	458.55	347.09	492.29	349.34
Crop insurance per acre	0.50	12.28	-	14.16
Other crop income per acre	12.74	8.15	4.60	-
Gross return per acre	471.79	367.52	496.89	363.49
<b>Direct Expenses</b>				
Seed	59.02	27.41	57.00	34.58
Fertilizer	23.80	14.21	42.31	74.87
Crop chemicals	36.60	31.89	82.87	40.26
Crop insurance	10.69	12.89	19.58	14.78
Drying expense	-	-	-	0.49
Fuel & oil	13.25	19.94	30.34	21.33
Repairs	26.73	24.30	40.84	37.38
Custom hire	8.64	3.33	1.65	7.14
Hired labor	-	-	0.70	0.12
Land Rent	54.21	62.08	44.93	46.29
Hauling and trucking	-	-	3.32	0.21
Operating interest	2.19	2.64	6.84	12.43
Miscellaneous	9.41	1.24	7.53	1.91
Total direct expenses per acre	244.55	199.92	337.91	291.78
Return over direct exp per acre	227.23	167.60	158.98	71.72
<b>Overhead Expenses</b>				
Hired labor	2.81	8.63	26.22	14.71
Machinery leases	0.36	4.35	0.41	4.46
Building leases	0.07	-	2.32	-
RE & pers. property taxes	9.14	2.12	9.14	1.32
Farm insurance	4.41	4.06	4.35	8.46
Utilities	3.63	5.81	4.19	4.81
Dues & professional fees	3.06	1.65	2.08	1.87
Interest	22.99	13.34	18.90	7.39
Mach & bldg depreciation	28.88	19.20	36.27	31.57
Miscellaneous	0.86	2.02	4.96	4.42
Total overhead expenses per acre	76.23	61.17	108.84	79.01
Total dir & ovhd expenses per acre	320.78	261.10	446.75	370.79
Net return per acre	151.01	106.42	50.14	-7.30
Government payments	19.98	10.57	-	13.58
Net return with govt pmts	170.99	116.99	50.14	6.28
Labor & management charge	39.77	27.01	17.18	26.02
Net return over lbr & mgt	131.21	89.99	32.97	-19.74
<b>Cost of Production</b>				
Total direct expense per bu.	4.93	6.49	18.10	16.82
Total dir & ovhd exp per bu.	6.47	8.48	23.94	21.38
Less govt & other income	5.80	7.47	23.69	19.78
With labor & management	6.60	8.35	24.61	21.28
Net value per unit	9.50	11.27	26.38	20.14
Machinery cost per acre	82.94	73.89	116.16	109.06
Est. labor hours per acre	1.72	1.64	1.89	1.89

\* Combined data for rented and owned land. Actual land cost is the sum of: Land Rent, Interest, & RE taxes.

**Crop Enterprise Analysis**  
**Northern Minnesota Farm Business Management Data**  
**(Farms Sorted By Return to Overhead)**  
**Owned and Rented Acres Combined \***

	<u>Perennial</u> <u>Rye Grass</u>	<u>Canola</u>	<u>Irrigated</u> <u>Pumpkins</u>	<u>Irrigated</u> <u>Strawberries</u>
Number of farms	11	6	5	7
Acres	438.45	215.58	12.18	2.61
Yield per acre	693.06	14.60	617.44	6868.69
Operators share of yield %	100.00	100.00	100.00	100.00
Value	0.70	15.39	3.15	2.14
Total product return per acre	485.88	224.72	1947.65	14713.24
Crop insurance per acre	17.05	23.32	-	-
Other crop income per acre	2.39	1.30	-	-
Gross return per acre	505.32	249.34	1947.65	14713.24
<b>Direct Expenses</b>				
Seed	17.30	50.84	89.00	-
Fertilizer	114.23	93.97	352.04	334.90
Crop chemicals	50.87	13.62	86.31	334.06
Crop insurance	10.12	12.45	-	54.64
Drying expense	1.35	-	-	-
Irrigation Energy	-	-	24.78	67.21
Packaging and Supplies	-	-	41.20	409.40
Fuel & oil	23.06	16.54	67.53	228.98
Repairs	28.88	17.56	75.30	453.43
Custom hire and Trucking	7.81	10.24	180.62	564.75
Hired labor	-	2.06	124.33	2526.12
Land Rent	38.56	34.07	35.27	2.61
Operating interest	4.46	3.75	12.98	7.53
Miscellaneous	0.16	0.01	66.91	1325.63
Total direct expenses per acre	299.67	257.78	1156.29	6513.36
Return over direct exp per acre	205.65	-8.44	791.37	8199.88
<b>Overhead Expenses</b>				
Hired labor	13.45	14.57	81.39	662.63
Mach and bldg leases	2.84	1.62	3.89	223.03
RE & pers. property taxes	3.10	1.84	8.68	115.86
Farm insurance	8.06	4.22	31.22	155.74
Utilities	4.94	4.18	5.75	204.10
Dues & professional fees	3.55	3.55	42.49	370.32
Interest	6.57	4.35	3.69	459.92
Mach & bldg depreciation	43.72	30.81	174.21	587.37
Miscellaneous	3.23	1.08	53.03	283.68
Total overhead expenses per acre	89.47	66.23	404.37	2858.54
Total dir & ovhd expenses per acre	389.14	324.01	1560.65	9371.90
Net return per acre	116.18	-74.67	387.00	5341.34
Government payments	13.21	14.75	-	-
Net return with govt pmts	129.39	-59.92	387.00	5341.34
Labor & management charge	38.61	28.73	264.70	2418.15
Net return over lbr & mgt	90.77	-88.64	123.76	2923.18
<b>Cost of Production</b>				
Total direct expense per bu.	0.43	17.66	1.87	0.95
Total dir & ovhd exp per bu.	0.56	22.19	2.53	1.36
Less govt & other income	0.51	19.50	2.53	1.36
With labor & management	0.57	21.46	2.95	1.72
Net value per unit	0.70	15.39	3.15	2.14
Machinery cost per acre	109.16	78.33	483.43	1202.28
Est. labor hours per acre	1.69	1.43	78.49	432.98

\* Combined data for rented and owned land. Actual land cost is the sum of: Land Rent, Interest, & RE taxes.

**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**  
**\*\*\*\* Dairy -- Average Per Cwt. Of Milk \*\*\*\***  
**Excluding Organic & Organic Transition**

	<u>Avg. Of All Farms</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	361		72		73	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms						
Milk sold (hd)	99.21	17.61	99.12	17.51	99.46	18.15
Dairy Calves sold (hd)	0.00	0.59	0.00	0.69	0.00	0.53
Transferred out (hd)	0.00	0.20	0.00	0.15	0.00	0.26
Cull sales (hd)	0.00	1.48	0.00	1.47	0.00	1.52
Other income		0.21		0.19		0.17
Purchased (hd)	0.00	-0.11	0.00	-0.07	0.00	-0.03
Transferred in (hd)	0.00	-0.37	0.00	-0.13	0.00	-0.68
Inventory change (hd)	0.00	0.20	0.00	0.18	0.00	0.26
Dairy repl net cost		-2.38		-2.72		-1.67
Gross margin		17.42		17.26		18.51
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	14.37	3.26	12.02	2.86	15.49	3.18
Complete Ration (lb.)	6.63	1.24	8.48	2.01	6.52	0.72
Corn (bu.)	0.28	1.00	0.27	0.96	0.29	1.00
Corn Silage (lb.)	78.54	1.38	79.98	1.41	77.24	1.39
Hay, Alfalfa (lb.)	11.08	0.79	11.74	0.83	9.17	0.64
Haylage, Alfalfa (lb.)	16.98	0.59	18.94	0.64	17.21	0.58
Other feed stuffs (lb)	11.14	0.52	7.91	0.34	10.73	0.66
Breeding fees		0.22		0.21		0.20
Veterinary		0.45		0.44		0.43
BST		0.21		0.15		0.23
Supplies		1.06		0.97		0.99
Fuel & oil		0.30		0.26		0.31
Repairs		0.65		0.62		0.62
Custom hire		0.26		0.23		0.29
Hired labor		0.92		1.10		0.34
Marketing		0.19		0.22		0.18
Bedding		0.33		0.40		0.31
Total direct expenses		13.37		13.64		12.07
Return over direct expense		4.05		3.61		6.44
<b>Overhead Expenses</b>						
Hired labor		0.87		0.47		1.52
Building leases		0.21		0.13		0.24
Utilities		0.30		0.32		0.28
Interest		0.33		0.38		0.28
Mach & bldg depreciation		0.71		0.71		0.85
Miscellaneous		0.43		0.44		0.40
Total overhead expenses		2.85		2.45		3.57
Total dir & ovhd expenses		16.22		16.09		15.64
Net return		1.20		1.17		2.87
Labor & management charge		0.90		0.88		0.97
Net return over lbr & mgt		0.31		0.29		1.90
<b>Cost of Production Per Cwt. Of Milk</b>						
Total direct expense per unit		13.37		13.64		12.07
Total dir & ovhd expense per unit		16.22		16.09		15.64
With other revenue adjustments		16.52		16.46		15.37
With labor and management		17.42		17.34		16.34
Est. labor hours per unit		0.17		0.17		0.16
<b>Other Information</b>						
Number of cows		189.6		163.7		258.4
Milk produced per cow		24,034		23,703		26,173
Total milk sold		4,521,665		3,847,052		6,726,171
Lb. of milk sold per FTE		1,618,202		1,661,967		1,764,852
Culling percentage		30.5		29.3		33.3
Turnover rate		37.5		36.7		39.1
Cow death loss percent		6.5		6.8		5.6
Percent of barn capacity		111.2		110.5		112.7
Feed cost per day		5.77		5.88		5.86
Feed cost per cwt. of milk		8.77		9.05		8.17
Feed cost per cow		2,107.76		2,145.55		2,139.07
Avg. milk price per cwt.		17.75		17.67		18.24
Milk price / feed margin		8.98		8.62		10.07

**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**  
**\*\*\*\* Dairy -- Average Per Cow \*\*\*\***  
**Excluding Organic & Organic Transition**

	<u>Avg. Of All Farms</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	361		72		73	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms						
Milk sold (hd)	23,844.5	4,231.96	23,494.1	4,150.66	26,031.5	4,749.25
Dairy Calves sold (hd)	0.3	140.90	0.4	162.53	0.3	137.85
Transferred out (hd)	0.6	47.26	0.6	34.97	0.6	68.23
Cull sales (hd)	0.3	355.40	0.3	347.93	0.3	398.13
Other income		49.68		44.02		45.53
Purchased (hd)	0.0	-26.73	0.0	-17.61	0.0	-8.83
Transferred in (hd)	0.4	-88.83	0.4	-30.29	0.4	-176.95
Inventory change (hd)	0.0	48.48	0.0	43.64	0.0	69.09
Dairy repl net cost		-572.12		-645.55		-438.23
Gross margin		4,186.66		4,090.95		4,844.06
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	3,453.0	782.64	2,848.8	677.05	4,055.5	833.27
Complete Ration (lb.)	1,592.9	297.32	2,011.0	476.54	1,705.5	188.40
Corn (bu.)	68.2	239.17	63.6	228.38	75.3	260.60
Corn Silage (lb.)	18,876.3	332.46	18,957.7	334.95	20,214.9	363.88
Hay, Alfalfa (lb.)	2,663.3	188.85	2,782.9	196.19	2,400.5	168.34
Haylage, Alfalfa (lb.)	4,080.7	141.27	4,489.3	151.32	4,504.3	152.29
Other feed stuffs (lb)	2,676.6	126.05	1,874.6	81.11	2,807.5	172.29
Breeding fees		53.40		50.17		53.10
Veterinary		109.20		104.02		111.48
BST		49.95		35.71		59.59
Supplies		255.35		230.06		260.11
Fuel & oil		72.39		60.60		81.63
Repairs		156.98		146.85		163.39
Custom hire		61.29		53.99		74.83
Hired labor		221.17		260.75		87.80
Marketing		46.63		51.60		47.55
Bedding		78.58		94.84		80.74
Total direct expenses		3,212.70		3,234.14		3,159.28
Return over direct expense		973.96		856.81		1,684.78
<b>Overhead Expenses</b>						
Hired labor		208.98		111.70		398.94
Building leases		50.19		30.09		62.28
Utilities		71.98		76.41		73.67
Interest		79.86		90.48		72.87
Mach & bldg depreciation		170.63		167.22		223.18
Miscellaneous		102.85		104.16		103.59
Total overhead expenses		684.48		580.06		934.52
Total dir & ovhd expenses		3,897.18		3,814.20		4,093.80
Net return		289.48		276.74		750.26
Labor & management charge		215.66		208.85		253.44
Net return over lbr & mgt		73.82		67.90		496.82
<b>Cost of Production Per Cwt. Of Milk</b>						
Total direct expense per unit		13.37		13.64		12.07
Total dir & ovhd expense per unit		16.22		16.09		15.64
With other revenue adjustments		16.52		16.46		15.37
With labor and management		17.42		17.34		16.34
Est. labor hours per unit		41.26		39.58		41.30
<b>Other Information</b>						
Number of cows		189.6		163.7		258.4
Milk produced per cow		24,034		23,703		26,173
Total milk sold		4,521,665		3,847,052		6,726,171
Lb. of milk sold per FTE		1,618,202		1,661,967		1,764,852
Culling percentage		30.5		29.3		33.3
Turnover rate		37.5		36.7		39.1
Cow death loss percent		6.5		6.8		5.6
Percent of barn capacity		111.2		110.5		112.7
Feed cost per day		5.77		5.88		5.86
Feed cost per cwt. of milk		8.77		9.05		8.17
Feed cost per cow		2,107.76		2,145.55		2,139.07
Avg. milk price per cwt.		17.75		17.67		18.24
Milk price / feed margin		8.98		8.62		10.07

**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**

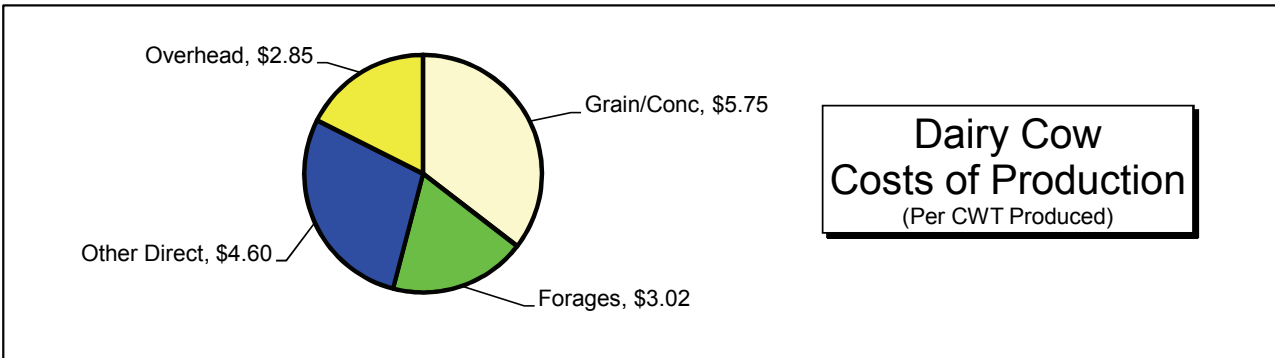
**Organic Dairy -- Average Per Cow**

	<u>Avg. Of All Farms</u>		<u>33 - 66%</u>		<u>High 34%</u>	
	13		4		5	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms						
Milk sold (hd)	13,916.8	4,797.07	12,347.2	4,197.13	17,439.4	6,019.60
Dairy Calves sold (hd)	0.1	45.18	0.2	87.73	0.1	34.01
Transferred out (hd)	0.9	64.34	0.8	83.47	0.9	54.94
Cull sales (hd)	0.2	288.89	0.2	200.06	0.2	385.98
Other income		143.88		150.59		106.17
Purchased (hd)	0.0	-14.06	-	-	0.0	-28.55
Transferred in (hd)	0.3	-81.94	0.3	-	0.4	-166.36
Inventory change (hd)	0.1	91.21	0.1	90.11	0.1	81.17
Dairy repl net cost		-564.98		-635.92		-423.55
Gross margin		4,779.43		4,173.18		6,063.41
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	776.2	309.56	778.6	204.04	891.1	431.85
Corn (bu.)	23.4	234.47	-	-	47.6	476.04
Hay, Grass (lb.)	640.0	37.48	-	-	1,299.4	76.10
Haylage, Alfalfa (lb.)	3,583.2	134.37	-	-	7,274.7	272.80
Corn, Organic (bu.)	23.4	237.79	29.7	302.62	31.2	307.85
Corn Silage, Organic (lb.)	8,417.5	206.95	10,703.4	251.41	9,981.5	219.98
Hay, Alfalfa, Organic (lb.)	3,820.3	292.47	8,836.3	662.27	1,861.1	151.88
Pasture, Organic (aum)	2.6	92.57	4.6	158.54	1.7	55.56
Other feed stuffs (lb)	6,173.8	366.61	2,704.0	170.83	4,435.8	313.53
Veterinary		38.21		27.37		56.35
Supplies		269.46		211.61		326.05
Fuel & oil		68.81		77.23		68.20
Repairs		174.55		199.70		215.09
Custom hire		67.12		18.79		80.32
Hired labor		65.37		35.66		115.74
Utilities		28.12		-		54.01
Bedding		87.60		47.71		137.10
Total direct expenses		2,711.54		2,367.79		3,358.45
Return over direct expense		2,067.89		1,805.39		2,704.96
<b>Overhead Expenses</b>						
Hired labor		202.90		189.98		254.97
Utilities		68.10		98.31		45.95
Interest		66.46		43.57		50.82
Mach & bldg depreciation		134.96		115.70		156.85
Miscellaneous		143.66		156.71		168.14
Total overhead expenses		616.08		604.28		676.73
Total dir & ovhd expenses		3,327.62		2,972.07		4,035.18
Net return		1,451.81		1,201.12		2,028.23
Labor & management charge		262.04		308.55		271.13
Net return over lbr & mgt		1,189.77		892.56		1,757.10
<b>Cost of Production Per Cwt. Of Milk</b>						
Total direct expense per unit		18.84		18.33		18.94
Total dir & ovhd expense per unit		23.13		23.01		22.76
With other revenue adjustments		24.18		24.36		23.06
With labor and management		26.00		26.75		24.58
Est. labor hours per unit		35.54		40.56		41.45
<b>Other Information</b>						
Number of cows		101.2		77.1		129.6
Milk produced per cow		14,389		12,918		17,731
Total milk sold		1,408,384		952,277		2,260,146
Lb. of milk sold per FTE		1,096,297		852,339		1,178,165
Culling percentage		20.8		18.5		24.1
Turnover rate		25.6		23.0		28.4
Cow death loss percent		3.8		4.2		3.4
Percent of barn capacity		104.2		112.2		112.1
Feed cost per day		5.24		4.79		6.32
Feed cost per cwt. of milk		13.29		13.54		13.00
Feed cost per cow		1,912.28		1,749.72		2,305.58
Avg. milk price per cwt.		34.47		33.99		34.52
Milk price / feed margin		21.18		20.45		21.51

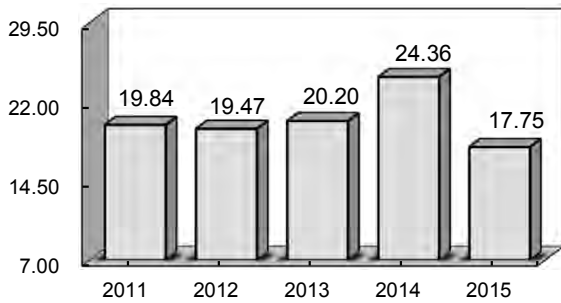
**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Enterprise Size)**  
**\*\*Dairy -- Average Per Cow -- By Herd Size\*\***  
**Excluding Organic & Organic Transition**

	<u>Up to</u> <u>50</u>		<u>50</u> <u>100</u>		<u>100</u> <u>200</u>		<u>200</u> <u>500</u>		<u>Over</u> <u>500</u>	
Number of farms	43		128		101		66		23	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Milk sold (hd)	17,425.3	3,043.81	20,889.0	3,625.27	22,354.3	3,914.48	24,135.3	4,283.25	26,275.2	4,736.26
Dairy Calves sold (hd)	0.2	89.70	0.3	115.61	0.3	114.04	0.3	124.94	0.4	187.71
Transferred out (hd)	0.7	56.03	0.7	69.70	0.6	47.55	0.7	76.86	0.5	9.34
Cull sales (hd)	0.3	276.78	0.3	343.54	0.3	329.73	0.3	344.04	0.3	393.61
Other income		21.77		39.53		26.09		69.55		52.82
Purchased (hd)	0.1	-82.54	0.0	-56.08	0.0	-46.16	0.0	-21.50	0.0	-2.39
Transferred in (hd)	0.3	-65.55	0.4	-54.36	0.4	-58.32	0.4	-102.86	0.4	-111.76
Inventory change (hd)	0.1	110.48	0.0	44.81	0.1	70.31	0.0	48.41	0.0	31.21
Dairy repl net cost		-496.24		-577.57		-594.41		-553.13		-579.01
Gross margin		2,954.24		3,550.44		3,803.75		4,271.09		4,718.14
<b>Direct Expenses</b>										
Protein Vit Minerals (lb.)	2,061.1	471.17	2,615.0	637.96	2,755.0	630.07	2,988.1	792.24	4,797.4	957.12
Complete Ration (lb.)	1,506.0	248.02	1,343.6	223.52	3,252.5	376.76	1,497.2	370.54	722.7	212.67
Corn (bu.)	62.3	212.27	61.8	212.23	63.1	213.78	66.7	235.94	76.2	271.99
Corn Silage (lb.)	15,098.7	260.92	17,241.0	288.49	17,999.1	293.43	18,921.1	325.38	20,381.0	388.30
Hay, Alfalfa (lb.)	4,279.2	312.40	4,281.3	320.96	3,574.9	243.13	2,500.7	165.86	1,420.2	110.07
Haylage, Alfalfa (lb.)	3,392.5	139.76	2,938.8	113.64	3,221.9	116.61	4,859.0	157.49	4,443.3	153.82
Other feed stuffs (lb)	1,130.2	78.28	2,179.8	94.36	3,605.4	113.83	2,261.4	169.79	2,792.7	110.19
Breeding fees		34.13		50.67		46.78		53.26		60.45
Veterinary		71.85		98.87		107.41		127.03		100.97
BST		4.99		13.59		18.84		57.85		81.45
Supplies		239.64		258.32		235.90		255.71		281.77
Fuel & oil		58.63		57.43		71.10		74.80		78.33
Repairs		101.02		132.19		142.13		160.29		178.24
Custom hire		18.78		41.41		51.89		58.32		81.79
Hired labor		9.05		50.12		138.05		294.05		295.27
Hauling and trucking		74.66		61.83		51.33		29.99		36.32
Bedding		33.96		57.44		81.57		88.70		79.55
Total direct expenses		2,369.53		2,713.04		2,932.61		3,417.24		3,478.29
Return over direct expense		584.71		837.41		871.14		853.85		1,239.85
<b>Overhead Expenses</b>										
Hired labor		49.62		86.81		123.10		218.26		319.50
Building leases		22.54		14.54		45.29		53.74		67.19
Utilities		97.07		94.51		74.66		66.40		64.01
Interest		63.60		86.30		98.61		90.73		56.18
Mach & bldg depreciation		115.63		163.70		185.33		168.56		170.23
Miscellaneous		110.38		119.71		106.01		107.91		88.41
Total overhead expenses		458.83		565.58		633.00		705.60		765.52
Total dir & ovhd expenses		2,828.36		3,278.62		3,565.60		4,122.84		4,243.80
Net return		125.88		271.82		238.15		148.25		474.34
Labor & management charge		422.57		334.86		264.83		172.34		158.13
Net return over lbr & mgt		-296.70		-63.04		-26.69		-24.09		316.20
<b>Cost of Production Per Cwt. Of Milk</b>										
Total direct expense per unit		13.54		12.90		13.06		13.98		13.16
Total dir& ovhd expense per unit		16.16		15.59		15.87		16.86		16.06
With other revenue adjustments		16.73		16.05		16.44		17.10		16.21
With labor and management		19.15		17.64		17.62		17.81		16.81
Est. labor hours per unit		48.59		39.14		34.98		41.58		45.34
<b>Other Information</b>										
Number of cows		39.9		73.2		142.2		314.4		967.6
Milk produced per cow		17,504		21,034		22,462		24,452		26,425
Total milk sold		695,603		1,529,977		3,178,785		7,587,702		25,422,931
Lb. of milk sold per FTE		1,004,196		1,494,500		1,789,273		1,625,254		1,622,724
Culling percentage		25.1		29.2		28.2		29.9		33.6
Turnover rate		33.7		36.6		34.8		37.2		40.2
Cow death loss percent		7.2		6.4		6.0		6.8		6.6
Percent of barn capacity		91.4		105.7		108.5		117.1		112.2
Feed cost per day		4.72		5.18		5.45		6.07		6.04
Feed cost per cwt. of milk		9.84		8.99		8.85		9.07		8.34
Feed cost per cow		1,722.82		1,891.17		1,987.62		2,217.24		2,204.16
Avg. milk price per cwt.		17.47		17.35		17.51		17.75		18.03
Milk price / feed margin		7.63		8.36		8.66		8.68		9.68

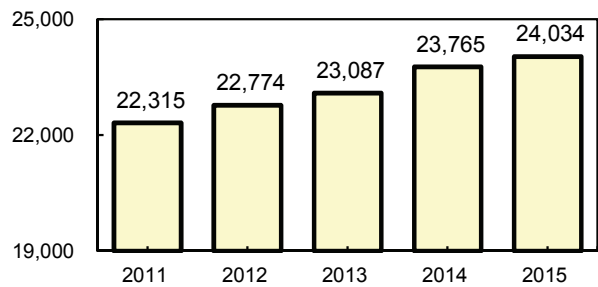
## Summary of Selected Dairy Enterprise Factors



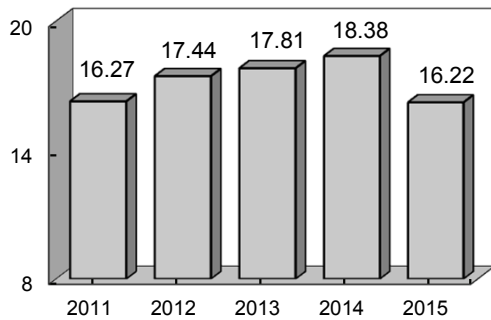
**Ave Milk Price Recv'd**



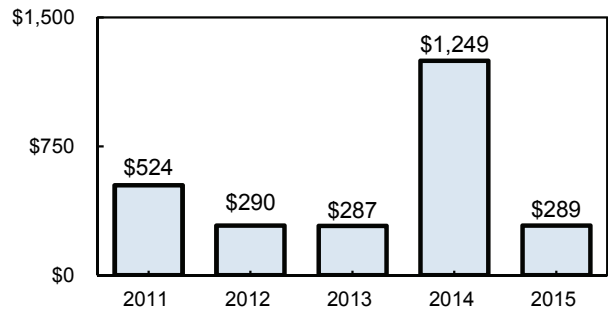
**Milk Production per Cow**



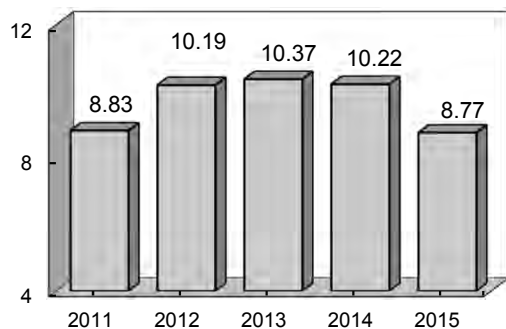
**Dir & Ovhd Exp per CWT**



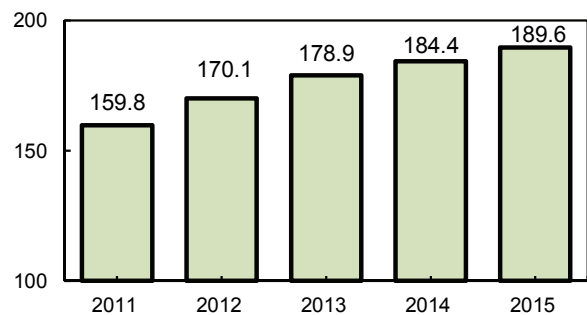
**Net Return per Cow**



**Feed Cost per CWT**



**Ave. Number of Cows**



**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**  
**\*Dairy and Repl Heifers -- Average Per Cow\***  
**Excluding Organic & Organic Transition**

	<u>Avg. Of All Farms</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	309		62		62	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms						
Milk sold (hd)	23,865.7	4,228.74	23,080.2	4,045.97	25,736.1	4,650.79
Dairy Calves sold (hd)	-	202.01	-	233.67	-	236.08
Transferred out (hd)	-	31.00	-	24.83	-	35.18
Cull sales (hd)	-	362.66	-	354.06	-	416.22
Other income	-	53.47	-	46.80	-	59.68
Purchased (hd)	-	-49.27	-	-36.31	-	-25.22
Transferred in (hd)	-	-16.31	-	-6.77	-	-0.59
Inventory change (hd)	-	72.56	-	61.24	-	75.70
Gross margin		4,885.65		4,724.24		5,447.84
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	3,835.4	849.28	2,764.6	701.56	4,233.3	943.76
Complete Ration (lb.)	1,668.4	374.18	2,026.7	511.51	955.4	232.09
Corn (bu.)	71.6	253.50	73.3	263.91	73.4	258.43
Corn Silage (lb.)	22,919.4	400.62	23,116.6	377.27	23,660.0	416.56
Hay, Alfalfa (lb.)	3,460.8	239.16	3,442.7	231.28	3,791.4	254.91
Haylage, Alfalfa (lb.)	4,579.0	155.12	5,353.4	168.73	4,040.6	137.83
Other feed stuffs (lb)	4,008.2	203.61	3,646.1	173.22	4,443.6	239.92
Breeding fees		70.70		56.31		69.82
Veterinary		128.99		116.40		145.58
Supplies		350.61		324.29		293.65
Contract production exp.		116.12		99.79		69.03
Fuel & oil		81.04		65.64		91.26
Repairs		184.29		171.85		200.35
Custom hire		64.73		51.85		79.85
Hired labor		260.25		317.24		160.33
Bedding		96.89		114.68		91.45
Total direct expenses		3,829.10		3,745.55		3,684.83
Return over direct expense		1,056.55		978.70		1,763.01
<b>Overhead Expenses</b>						
Hired labor		212.53		88.83		354.53
Building leases		60.21		42.69		116.82
Utilities		85.66		80.41		94.76
Interest		91.31		107.37		84.80
Mach & bldg depreciation		195.48		190.58		265.22
Miscellaneous		115.25		121.76		115.21
Total overhead expenses		760.44		631.64		1,031.35
Total dir & ovhd expenses		4,589.54		4,377.19		4,716.18
Net return		296.11		347.05		731.67
Labor & management charge		249.84		242.70		314.49
Net return over lbr & mgt		46.27		104.35		417.18
<b>Cost of Production Per Cwt. Of Milk</b>						
Total direct expense per unit		15.92		16.08		14.23
Total dir & ovhd expense per unit		19.08		18.79		18.21
With other revenue adjustments		16.47		16.01		15.24
With labor and management		17.51		17.06		16.46
Est. labor hours per unit		48.26		45.57		46.52
<b>Other Information</b>						
Number of cows		188.9		168.5		246.6
Milk produced per cow		24,051		23,292		25,900
Total milk sold		4,507,845		3,888,738		6,346,097
Lb. of milk sold per FTE		1,384,602		1,418,057		1,548,949
Culling percentage		30.3		28.9		32.8
Turnover rate		37.2		36.4		38.4
Cow death loss percent		6.4		6.9		5.4
Percent of barn capacity		111.7		110.1		115.2
Feed cost per day		6.78		6.65		6.80
Feed cost per cwt. of milk		10.29		10.42		9.59
Feed cost per cow		2,475.48		2,427.49		2,483.50
Avg. milk price per cwt.		17.72		17.53		18.07
Milk price / feed margin		7.43		7.11		8.48

**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**

**Dairy Replacement Heifers -- Average Per Head**

	<u>Avg. Of All Farms</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	346		69		70	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms						
Replacements sold (hd)	0.1	61.52	0.1	69.11	0.1	67.19
Transferred out (hd)	0.5	640.32	0.4	630.18	0.4	763.60
Cull sales (hd)	0.0	5.71	0.0	3.57	0.0	11.60
Other income		1.47		1.00		2.50
Purchased (hd)	0.0	-28.18	0.0	-0.16	0.0	-46.12
Transferred in (hd)	0.6	-161.31	0.6	-142.69	0.6	-155.26
Inventory change (hd)	0.0	24.60	0.0	-2.00	0.1	88.86
Gross margin		544.14		559.00		732.37
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	500.1	73.32	300.0	75.67	227.5	49.25
Milk Replacer (lb.)	10.4	13.32	14.7	15.79	9.5	11.54
Milk (lb.)	138.9	22.03	177.4	24.00	188.5	33.95
Complete Ration (lb.)	321.3	61.00	273.2	50.61	519.4	72.73
Corn (bu.)	4.9	16.94	2.8	10.08	5.2	18.61
Corn Silage (lb.)	4,231.1	72.84	4,000.0	70.39	2,831.9	47.96
Hay, Alfalfa (lb.)	807.8	52.12	855.1	57.60	611.9	38.76
Hay, Grass (lb.)	671.0	29.42	676.3	28.48	512.4	21.87
Haylage, Alfalfa (lb.)	1,017.0	32.00	1,915.5	57.90	582.4	20.03
DDGS, wet (lb.)	356.8	16.35	1,266.5	60.71	226.6	7.02
Other feed stuffs (lb)	1,191.9	33.56	1,627.5	44.62	1,526.6	26.83
Breeding fees		16.14		15.09		14.42
Veterinary		16.69		11.48		17.29
Supplies		20.77		18.45		16.71
Contract production exp.		106.63		63.18		31.91
Fuel & oil		12.45		11.33		12.08
Repairs		26.82		20.74		28.99
Hired labor		24.09		28.41		9.31
Bedding		18.49		19.29		14.54
Total direct expenses		664.97		683.83		493.81
Return over direct expense		-120.83		-124.83		238.56
<b>Overhead Expenses</b>						
Hired labor		35.10		35.05		35.95
Utilities		12.69		10.28		16.63
Interest		13.74		13.92		17.20
Mach & bldg depreciation		27.81		25.69		33.73
Miscellaneous		26.51		23.33		31.26
Total overhead expenses		115.85		108.26		134.78
Total dir & ovhd expenses		780.82		792.09		628.59
Net return		-236.68		-233.09		103.78
Labor & management charge		35.90		29.82		43.87
Net return over lbr & mgt		-272.58		-262.91		59.91
<b>Cost of Production Per Head Per Day</b>						
Total direct expense per unit		2.25		2.26		1.62
Total dir & ovhd expense per unit		2.57		2.55		1.99
With other revenue adjustments		2.57		2.55		1.99
With labor and management		2.67		2.64		2.11
Est. labor hours per unit		7.05		6.47		6.55
<b>Other Information</b>						
No. purchased or trans in		108		123		89
Number sold or trans out		95		109		78
Average number of head		171		212		147
Percentage death loss		7.5		6.5		5.7
Feed cost per average head		422.90		495.85		348.56
Feed cost/head sold/trans		764.20		962.41		652.54
Total cost/head sold/trans		1,760.81		1,867.54		1,443.16
Feed cost per head per day		1.16		1.36		0.95



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**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**

**Dairy Feeder -- Average Per Cwt. Produced**

	<u>Avg. Of All Farms</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	26		5		6	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms						
Dairy Feeder sold (lb)	132.41	246.02	125.66	251.85	99.82	181.89
Transferred out (lb)	1.88	2.49	-	-	-	-
Other income		0.74		-		0.91
Purchased (lb)	-36.29	-125.47	-3.13	-12.06	-1.45	-0.82
Transferred in (lb)	-9.82	-19.24	-28.00	-83.63	-27.30	-28.97
Inventory change (lb)	11.17	3.11	5.47	4.39	28.13	18.86
Gross margin		107.96		160.54		171.88
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	93.30	16.60	13.00	3.44	32.72	7.60
Milk Replacer (lb.)	3.74	3.56	3.78	5.10	0.31	0.34
Milk (lb.)	13.85	2.21	97.99	16.26	-	-
Creep / Starter (lb.)	23.47	3.75	-	-	18.16	5.45
Complete Ration (lb.)	45.67	8.07	247.52	53.21	19.86	3.18
Corn (bu.)	6.62	22.81	1.62	5.59	9.99	34.84
Hay, Alfalfa (lb.)	37.34	2.75	75.63	5.67	77.46	6.50
Other feed stuffs (lb)	103.72	3.19	111.01	3.31	71.76	2.30
Veterinary		6.21		7.94		0.96
Supplies		3.92		2.07		1.70
Fuel & oil		1.33		0.93		1.37
Repairs		1.93		2.16		1.93
Bedding		4.07		8.02		2.14
Total direct expenses		80.39		113.70		68.32
Return over direct expense		27.57		46.84		103.56
<b>Overhead Expenses</b>						
Hired labor		2.70		1.73		8.01
Building leases		0.46		1.42		1.51
RE & pers. property taxes		1.30		0.15		0.20
Farm insurance		1.04		0.47		0.56
Utilities		1.35		1.33		0.58
Interest		1.58		1.46		1.12
Mach & bldg depreciation		3.93		2.32		1.51
Miscellaneous		1.40		0.40		2.06
Total overhead expenses		13.77		9.29		15.55
Total dir & ovhd expenses		94.16		122.99		83.87
Net return		13.79		37.55		88.01
Labor & management charge		5.74		2.46		2.27
Net return over lbr & mgt		8.05		35.10		85.75
<b>Cost of Production Per Cwt. Produced</b>						
Total direct expense per unit		164.77		163.15		78.47
Total dir & ovhd expense per unit		175.03		170.54		94.05
With other revenue adjustments		175.03		170.54		94.05
With labor and management		179.30		172.49		96.32
Est. labor hours per unit		0.79		0.57		0.83
<b>Other Information</b>						
No. purchased or trans in		65		51		161
Number sold or trans out		149		46		135
Percentage death loss		11.2		3.7		3.1
Avg. daily gain (lb.)		2.03		1.62		1.99
Lb. of conc / lb. of gain		5.40		3.59		6.38
Lb. of feed / lb. of gain		6.53		5.99		7.49
Feed cost per cwt. of gain		62.93		92.58		60.21
Feed cost per head		207.57		268.16		290.45
Avg wgt / Dairy Feeder sold		507		433		435
Avg sales price / cwt.		185.81		200.42		182.22

**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**

**Dairy Finishing -- Average Per Cwt. Produced**

	<u>Avg. Of All Farms</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	102		21		21	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms						
Dairy Finish sold (lb)	117.43	159.12	117.88	160.27	94.37	128.32
Transferred out (lb)	0.13	0.18	0.08	0.10	-	-
Cull sales (lb)	0.09	0.22	-	-	0.77	1.75
Other income		2.14		2.68		1.34
Purchased (lb)	-28.35	-65.02	-39.89	-90.74	-4.45	-13.32
Transferred in (lb)	-2.06	-4.60	-0.65	-1.40	-5.58	-12.14
Inventory change (lb)	11.46	-3.84	21.41	13.78	13.84	13.60
Gross margin		88.19		84.69		119.55
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	58.96	12.40	45.62	11.21	78.78	9.66
Complete Ration (lb.)	77.02	7.11	97.52	5.17	47.18	5.74
Corn (bu.)	9.66	32.72	9.19	30.90	9.27	31.42
Corn Silage (lb.)	183.51	3.19	239.83	4.52	87.28	1.57
Hay, Grass (lb.)	29.53	1.17	30.77	1.30	51.30	2.29
DDGS, dry (lb.)	33.55	2.21	34.53	2.12	-	-
Other feed stuffs (lb)	125.59	4.47	155.55	3.44	73.90	4.57
Veterinary		2.34		2.05		1.30
Supplies		3.63		1.96		3.51
Fuel & oil		1.48		1.77		0.98
Repairs		2.50		3.04		2.78
Hauling and trucking		1.14		1.17		0.73
Bedding		1.45		0.89		1.36
Operating interest		1.85		3.02		0.08
Total direct expenses		77.67		72.56		66.00
Return over direct expense		10.52		12.13		53.55
<b>Overhead Expenses</b>						
Hired labor		1.39		0.57		2.37
Farm insurance		1.24		1.49		1.07
Utilities		1.03		0.83		1.38
Interest		2.09		3.73		2.42
Mach & bldg depreciation		3.63		4.23		2.95
Miscellaneous		2.31		1.55		1.38
Total overhead expenses		11.68		12.40		11.57
Total dir & ovhd expenses		89.34		84.95		77.57
Net return		-1.16		-0.27		41.99
Labor & management charge		4.84		5.06		4.72
Net return over lbr & mgt		-6.00		-5.33		37.26
<b>Cost of Production Per Cwt. Produced</b>						
Total direct expense per unit		126.87		126.40		79.23
Total dir & ovhd expense per unit		136.81		136.91		91.48
With other revenue adjustments		136.50		136.18		91.48
With labor and management		140.61		140.47		96.49
Est. labor hours per unit		0.48		0.40		0.60
<b>Other Information</b>						
No. purchased or trans in		174		304		100
Number sold or trans out		146		243		71
Percentage death loss		2.7		1.9		3.0
Avg. daily gain (lb.)		2.57		2.88		2.51
Lb. of conc / lb. of gain		7.89		8.26		6.50
Lb. of feed / lb. of gain		9.15		9.57		7.88
Feed cost per cwt. of gain		63.28		58.66		55.24
Feed cost per head		681.52		595.81		661.87
Average purchase weight		362		400		128
Avg wgt / Dairy Finish sold		1,433		1,438		1,418
Avg purch price / head		829.28		910.93		381.92
Avg sales price / cwt.		135.50		135.96		135.98

**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**

**Beef Finishing -- Average Per Cwt. Produced**

	<u>Avg. Of All Farms</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	60		12		12	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms		60		12		12
Finish Beef sold (lb)	193.29	286.56	216.60	326.22	151.76	225.03
Transferred out (lb)	0.55	1.27	1.30	1.63	0.86	5.30
Cull sales (lb)	0.10	0.18	-	-	-	-
Other income		2.72		5.31		3.16
Purchased (lb)	-81.86	-178.72	-84.82	-158.64	-36.63	-76.08
Transferred in (lb)	-6.58	-12.31	-4.03	-7.66	-30.66	-57.68
Inventory change (lb)	-6.79	-57.53	-29.94	-134.04	13.16	0.10
Gross margin		42.16		32.82		99.82
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	32.95	7.63	22.26	7.04	30.38	5.89
Complete Ration (lb.)	12.61	0.95	0.33	0.20	38.66	4.46
Corn (bu.)	7.75	26.09	5.84	19.26	9.08	31.43
Corn Silage (lb.)	412.76	6.36	810.59	11.41	362.01	5.81
Corn, Ear (lb.)	26.05	1.32	41.02	2.34	5.80	0.23
Hay, Alfalfa (lb.)	26.20	1.43	33.09	1.60	31.90	1.66
Hay, Grass (lb.)	51.33	1.98	13.93	0.62	97.65	3.50
DDGS, dry (lb.)	72.04	4.48	148.92	9.90	28.33	1.42
DDGS, wet (lb.)	80.88	1.98	75.41	2.83	-	-
Other feed stuffs (lb)	63.03	2.20	28.61	1.04	177.32	1.91
Veterinary		2.06		1.06		1.30
Supplies		4.06		1.88		4.54
Fuel & oil		1.87		1.91		1.37
Repairs		3.49		6.89		2.26
Hired labor		0.70		0.19		1.46
Hauling and trucking		0.93		3.22		0.32
Operating interest		2.67		2.44		1.12
Total direct expenses		70.21		73.84		68.69
Return over direct expense		-28.04		-41.02		31.14
<b>Overhead Expenses</b>						
Hired labor		2.83		0.74		0.01
Farm insurance		1.50		1.41		1.66
Interest		1.15		1.66		1.00
Mach & bldg depreciation		6.19		8.30		3.07
Miscellaneous		2.51		2.67		1.71
Total overhead expenses		14.19		14.79		7.45
Total dir & ovhd expenses		84.40		88.62		76.13
Net return		-42.23		-55.81		23.69
Labor & management charge		5.59		5.57		5.72
Net return over lbr & mgt		-47.82		-61.38		17.97
<b>Cost of Production Per Cwt. Produced</b>						
Total direct expense per unit		163.42		171.23		131.16
Total dir & ovhd expense per unit		170.74		178.02		136.04
With other revenue adjustments		170.27		176.06		135.39
With labor and management		173.15		178.62		139.14
Est. labor hours per unit		0.51		0.39		0.79
<b>Other Information</b>						
No. purchased or trans in		221		175		154
Number sold or trans out		231		233		131
Percentage death loss		1.0		1.2		1.0
Avg. daily gain (lb.)		2.49		2.03		2.00
Lb. of conc / lb. of gain		6.79		6.22		6.28
Lb. of feed / lb. of gain		9.15		9.55		9.33
Feed cost per cwt. of gain		54.42		56.25		56.32
Feed cost per head		373.10		278.01		446.47
Average purchase weight		690		714		527
Avg wgt / Finish Beef sold		1,413		1,296		1,390
Avg purch price / cwt.		218.32		187.03		207.73
Avg sales price / cwt.		148.25		150.61		148.28

**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**

**Beef Cow-Calf -- Average Per Cow**

	<u>Avg. Of All Farms</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	113		22		23	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms						
Beef Calves sold (lb)	198.7	410.23	182.8	381.47	258.1	494.89
Transferred out (lb)	234.0	449.10	229.8	425.32	279.8	638.44
Cull sales (lb)	56.9	146.47	22.0	114.72	81.5	216.61
Other income		7.84		6.32		3.50
Purchased (lb)	-21.3	-231.89	-0.6	-241.47	-2.0	-392.40
Transferred in (lb)	-34.6	-71.36	-9.5	-77.44	-66.3	-89.83
Inventory change (lb)	52.8	153.57	-1.8	198.46	-20.1	265.17
Gross margin		863.96		807.37		1,136.38
<b>Direct Expenses</b>						
Beet Pulp (dry) (lb.)	523.7	5.78	207.2	3.63	1,530.5	15.77
Protein Vit Minerals (lb.)	256.3	49.19	198.1	42.14	141.1	37.53
Corn (bu.)	2.8	9.39	0.3	1.05	5.3	17.89
Corn Silage (lb.)	4,796.4	79.18	5,661.6	92.53	2,449.3	45.45
Hay, Alfalfa (lb.)	1,075.8	58.41	730.6	41.02	1,245.5	70.18
Hay, Grass (lb.)	3,664.9	139.05	2,941.8	115.16	3,031.0	96.12
Pasture (aum)	4.6	56.44	7.0	78.05	3.6	44.61
Other feed stuffs (lb)	1,527.8	41.45	2,202.1	53.46	1,306.9	38.93
Veterinary		30.05		30.13		33.40
Supplies		44.71		42.49		53.22
Fuel & oil		25.91		25.90		26.10
Repairs		43.65		40.34		34.95
Custom hire		5.67		3.14		10.41
Operating interest		11.05		16.21		12.11
Total direct expenses		599.93		585.25		536.66
Return over direct expense		264.03		222.12		599.71
<b>Overhead Expenses</b>						
Hired labor		9.72		9.35		7.27
Farm insurance		14.54		17.05		11.18
Utilities		13.31		14.85		7.78
Dues & professional fees		6.87		4.54		9.86
Interest		28.51		40.92		19.61
Mach & bldg depreciation		52.78		43.98		46.01
Miscellaneous		21.06		18.02		31.37
Total overhead expenses		146.80		148.71		133.08
Total dir & ovhd expenses		746.72		733.96		669.74
Net return		117.23		73.41		466.64
Labor & management charge		96.88		79.76		105.88
Net return over lbr & mgt		20.35		-6.35		360.75
<b>Cost of Production Per Cwt. Produced</b>						
Total direct expense per unit		122.04		138.09		100.62
Total dir & ovhd expense per unit		151.90		173.18		125.57
With other revenue adjustments		141.64		165.25		92.83
With labor and management		161.34		184.06		112.68
Est. labor hours per unit		9.46		9.30		9.72
<b>Other Information</b>						
Number of cows		69.9		107.5		76.4
Pregnancy percentage		96.1		97.6		96.2
Pregnancy loss percentage		2.4		2.6		1.4
Culling percentage		10.5		9.0		14.1
Calving percentage		93.8		95.0		94.9
Weaning percentage		89.9		90.7		92.3
Calves sold per cow		0.80		0.76		1.01
Calf death loss percent		4.5		5.3		2.4
Cow death loss percent		2.0		2.3		1.6
Cows per FTE		296.1		301.2		288.2
Average weaning weight		510		534		474
Lb. weaned/exposed female		459		485		438
Feed cost per cow		438.89		427.04		366.48
Avg wgt/ Beef Calves sold		573		554		591
Avg price / cwt.		206.46		208.66		191.74

**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Enterprise Size)**

**Beef Cow-Calf -- Average Per Cow**

	<u>Up to 50</u>		<u>50 100</u>		<u>100 200</u>		<u>200 500</u>	
Number of farms	57		32		17		7	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Beef Calves sold (lb)	179.8	363.71	252.5	538.23	153.7	336.57	198.2	374.96
Transferred out (lb)	199.2	385.76	186.5	343.07	278.8	492.02	263.7	565.82
Cull sales (lb)	57.3	133.42	39.8	93.82	107.9	126.99	22.4	234.92
Other income		11.07		7.20		10.59		3.51
Purchased (lb)	-29.4	-185.14	-9.0	-81.67	-5.5	-218.60	-46.3	-446.21
Transferred in (lb)	-29.2	-114.33	-7.2	-18.59	-47.1	-109.27	-55.8	-61.98
Inventory change (lb)	132.7	226.68	57.3	-71.53	51.1	245.17	-4.2	261.27
Gross margin		821.17		810.54		883.48		932.28
<b>Direct Expenses</b>								
Protein Vit Minerals (lb.)	302.2	64.30	240.5	48.07	358.8	61.36	135.6	27.50
Complete Ration (lb.)	60.4	8.48	169.7	17.04	0.5	0.09	-	-
Corn (bu.)	5.6	18.91	1.9	5.91	2.5	8.11	2.4	8.25
Corn Silage (lb.)	3,833.3	60.00	3,969.1	65.74	6,304.7	102.19	4,789.8	83.01
Hay, Alfalfa (lb.)	2,308.0	111.60	1,356.9	76.15	1,010.2	60.98	-	-
Hay, Grass (lb.)	4,077.7	152.92	4,279.5	145.33	2,762.9	99.29	3,643.8	164.44
Pasture (aum)	2.5	34.06	3.0	51.55	6.3	52.82	5.9	80.78
Straw (lb.)	201.2	2.49	259.8	2.60	38.0	1.03	608.6	15.79
Other feed stuffs (lb)	818.7	24.79	2,040.4	20.50	2,030.9	49.19	1,606.7	43.87
Veterinary		33.39		25.87		34.79		27.51
Supplies		46.47		47.70		45.03		41.97
Fuel & oil		29.02		27.34		20.52		27.86
Repairs		52.28		51.77		29.95		43.11
Bedding		7.74		1.71		11.73		0.24
Operating interest		8.93		5.11		11.89		18.29
Total direct expenses		655.37		592.39		588.96		582.63
Return over direct expense		165.79		218.15		294.52		349.65
<b>Overhead Expenses</b>								
Hired labor		6.49		10.52		11.64		8.96
RE & pers. property taxes		12.31		11.35		3.90		3.49
Farm insurance		17.73		16.06		12.41		12.92
Utilities		22.23		10.19		17.51		6.42
Interest		38.25		25.17		12.15		42.91
Mach & bldg depreciation		61.60		54.22		26.71		72.63
Miscellaneous		33.53		15.45		24.40		13.29
Total overhead expenses		192.14		142.97		108.72		160.61
Total dir & ovhd expenses		847.51		735.36		697.68		743.24
Net return		-26.34		75.18		185.80		189.04
Labor & management charge		137.27		102.12		62.82		99.61
Net return over lbr & mgt		-163.61		-26.94		122.98		89.44
<b>Cost of Production Per Cwt. Produced</b>								
Total direct expense per unit		126.35		113.06		107.63		153.93
Total dir & ovhd expense per unit		163.39		140.34		127.49		196.37
With other revenue adjustments		155.61		137.17		128.82		155.18
With labor and management		182.07		156.66		140.30		181.49
Est. labor hours per unit		13.18		8.97		7.77		9.27
<b>Other Information</b>								
Number of cows		24.2		72.2		126.9		293.4
Pregnancy percentage		94.6		95.7		96.0		97.6
Pregnancy loss percentage		2.1		3.1		1.8		2.3
Culling percentage		10.5		6.7		9.4		16.1
Calving percentage		92.6		92.8		94.3		95.4
Weaning percentage		88.7		88.1		91.5		91.2
Calves sold per cow		0.72		0.78		0.77		0.91
Calf death loss percent		4.9		5.2		4.0		4.0
Cow death loss percent		2.8		2.2		2.0		1.3
Cows per FTE		212.5		312.0		360.6		302.0
Average weaning weight		512		523		510		496
Lb. weaned/exposed female		454		461		466		453
Feed cost per cow		477.54		432.90		435.06		423.64
Avg wgt/ Beef Calves sold		516		602		550		590
Avg price / cwt.		202.34		213.19		218.92		189.18

**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**

**Hogs, Finish Feeder Pigs -- Average Per Cwt. Carcass Sold**

	<u>Avg. Of All Farms</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	29		6		6	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms						
Finish Hogs sold (lb)	135.47	74.27	134.57	69.93	135.06	79.05
Transferred out (lb)	0.00	0.00	0.00	0.00	-	-
Cull sales (lb)	0.24	0.10	-	-	-	-
Other income		2.16		2.13		0.02
Purchased (lb)	-19.54	-25.34	-13.18	-16.80	-20.78	-28.18
Transferred in (lb)	-4.86	-4.84	-13.64	-11.47	-	-
Inventory change (lb)	0.91	-2.98	11.42	-0.88	0.54	0.09
Gross margin		43.37		42.91		50.99
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	47.16	7.29	34.27	6.53	52.44	10.57
Complete Ration (lb.)	158.78	16.45	206.80	21.36	98.03	9.52
Corn (bu.)	2.18	7.95	1.75	6.40	2.60	9.46
Other feed stuffs (lb)	3.58	0.30	3.24	0.30	7.65	0.57
Veterinary		0.72		1.29		0.28
Supplies		0.72		1.26		0.88
Contract production exp.		0.78		-		-
Fuel & oil		0.39		0.14		0.42
Repairs		0.65		0.46		1.06
Custom hire		0.58		0.16		0.69
Hired labor		0.59		0.25		0.24
Livestock leases		0.40		-		-
Utilities		0.24		0.12		0.40
Hauling and trucking		0.51		1.23		0.66
Operating interest		0.75		0.63		1.07
Total direct expenses		38.33		40.14		35.84
Return over direct expense		5.04		2.77		15.15
<b>Overhead Expenses</b>						
Hired labor		0.36		0.58		0.39
Building leases		2.21		2.88		2.09
Farm insurance		0.46		0.79		0.40
Utilities		0.37		0.76		0.26
Interest		0.41		0.18		1.04
Mach & bldg depreciation		1.12		0.65		2.30
Miscellaneous		0.54		0.36		0.70
Total overhead expenses		5.47		6.20		7.17
Total dir & ovhd expenses		43.80		46.34		43.01
Net return		-0.43		-3.44		7.98
Labor & management charge		1.69		1.96		2.39
Net return over lbr & mgt		-2.12		-5.40		5.58
<b>Cost of Production/Cwt. Carcass Sold</b>						
Total direct expense per unit		71.36		69.28		63.90
Total dir & ovhd expense per unit		76.83		75.49		71.08
With other revenue adjustments		74.70		73.37		71.08
With labor and management		76.39		75.33		73.47
Est. labor hours per unit		0.13		0.11		0.11
<b>Other Information</b>						
No. purchased or trans in		9,930		9,762		9,015
Number sold or trans out		9,544		8,605		8,672
Percentage death loss		2.8		2.5		3.1
Percent substandard hogs		1		1		1
Avg. daily gain (lb.)		1.71		1.76		1.84
Lb. of feed / lb. of gain		2.95		2.87		2.64
Feed cost per cwt. of gain		28.49		29.02		26.23
Feed cost per head		67.00		68.89		64.19
Average purchase weight		46		42		42
Avg wgt / Finish Hogs sold		272		282		281
Avg purch price / head		59.36		53.89		56.40
Avg sales price / cwt.		54.82		51.96		58.53
Average carcass weight		203		212		211
Average price / cwt. carcass		73.67		69.22		78.04

**Livestock Enterprise Analysis**  
**Farm Business Management Statewide Data**  
**(Farms Sorted By Return to Overhead)**

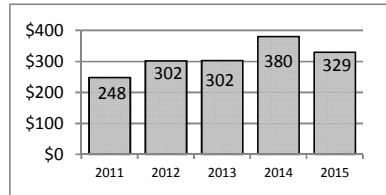
**Hogs, Weaning to Finish -- Average Per Head**

	<u>Avg. Of All Farms</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	35		7		7	
	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms						
Wean-Fin Pig sold (lb)	282.7	155.23	276.9	148.81	289.3	165.20
Transferred out (lb)	0.6	0.47	0.4	0.36	1.0	0.94
Cull sales (lb)	1.4	0.40	-	-	2.7	0.74
Other income		7.76		9.22		10.33
Purchased (lb)	-17.2	-44.29	-13.2	-43.18	-22.4	-46.35
Transferred in (lb)	-0.8	-2.24	-1.1	-3.19	-0.3	-0.91
Inventory change (lb)	-3.9	-13.38	-6.8	-15.27	-6.2	-2.85
Gross margin		103.99		96.75		127.10
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	135.4	26.14	156.0	32.95	166.4	22.78
Complete Ration (lb.)	137.8	16.95	17.2	6.98	196.4	21.92
Corn (bu.)	7.1	25.53	8.4	31.13	5.4	19.87
DDGS, dry (lb.)	35.1	2.53	-	-	85.2	6.22
Other feed stuffs (lb)	4.3	2.05	7.0	0.51	0.3	0.21
Veterinary		3.35		2.42		3.93
Supplies		2.32		2.79		2.04
Contract production exp.		4.92		1.57		6.97
Repairs		1.47		1.62		1.25
Custom hire		1.84		0.37		2.58
Hired labor		1.01		1.09		1.48
Livestock leases		0.96		1.29		-
Utilities		0.42		0.95		0.37
Hauling and trucking		1.16		0.53		1.45
Marketing		0.69		1.10		0.52
Total direct expenses		91.35		85.29		91.60
Return over direct expense		12.64		11.46		35.50
<b>Overhead Expenses</b>						
Hired labor		1.45		0.05		1.03
Building leases		6.10		9.34		4.61
Farm insurance		0.83		0.87		0.59
Dues & professional fees		0.45		0.17		0.97
Interest		0.77		0.88		0.83
Mach & bldg depreciation		2.11		1.48		1.63
Miscellaneous		1.28		0.44		1.81
Total overhead expenses		12.98		13.23		11.47
Total dir & ovhd expenses		104.34		98.52		103.07
Net return		-0.35		-1.77		24.03
Labor & management charge		3.06		5.92		1.99
Net return over lbr & mgt		-3.41		-7.69		22.05
<b>Cost of Production/Cwt. Carcass Sold</b>						
Total direct expense per unit		72.07		71.60		65.68
Total dir & ovhd expense per unit		78.27		78.05		71.02
With other revenue adjustments		74.60		73.57		66.21
With labor and management		76.06		76.46		67.14
Est. labor hours per unit		0.24		0.20		0.27
<b>Other Information</b>						
No. purchased or trans in		16,502		15,137		21,815
Number sold or trans out		15,997		14,663		21,136
Percentage death loss		4.1		5.0		4.2
Percent substandard hogs		2		2		1
Avg. daily gain (lb.)		1.42		1.57		1.42
Lb. of feed / lb. of gain		2.73		2.54		2.84
Feed cost per cwt. of gain		27.83		27.93		26.88
Feed cost per head		73.20		71.56		71.00
Average purchase weight		17		13		20
Avg wgt / Wean-Fin Pig sold		270		269		264
Avg purch price / head		42.78		43.73		40.53
Avg sales price / cwt.		54.90		53.74		57.11
Average carcass weight		203		203		198
Average price / cwt. carcass		73.69		71.82		76.61

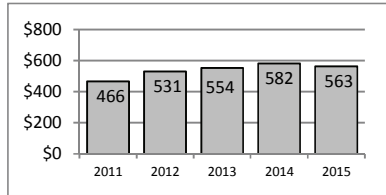
**Selected Crop & Livestock Enterprise Trend Summary**  
**Northern Minnesota Farm Business Management Data**

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
<b><u>Alfalfa Hay</u></b>					
Yield per Acre	3.6	3.3	3.3	4.0	3.9
Value per Ton	\$89.32	\$131.79	\$153.38	\$176.49	\$153.84
Fuel, Oil, Repairs per Acre	\$83.79	\$95.25	\$91.09	\$114.57	\$83.10
Total Dir & Ovhd Exp per Acre	\$247.68	\$302.02	\$302.28	\$379.84	\$329.25
Net Return per Acre	\$74.89	\$150.49	\$218.54	\$337.71	\$292.23
Total Direct Expenses per Ton	\$37.68	\$50.72	\$51.79	\$48.66	\$42.09
Total Dir & Ovhd Exp per Ton	\$69.17	\$91.87	\$91.64	\$94.13	\$84.09

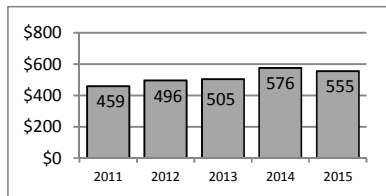
**Total Dir&Ovhd Expense**



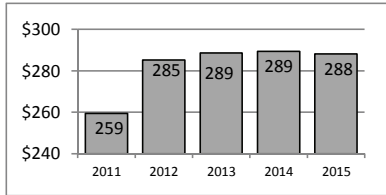
<b><u>Corn</u></b>					
Yield per Acre	121.7	128.9	108.5	118.8	164.2
Value per Bushel	\$5.72	\$6.49	\$4.02	\$3.42	\$3.30
Fuel, Oil, Repairs per Acre	\$87.13	\$88.45	\$88.78	\$87.92	\$80.80
Total Dir & Ovhd Exp per Acre	\$465.97	\$530.74	\$553.77	\$581.67	\$562.75
Net Return per Acre	\$248.53	\$320.53	-\$44.10	-\$75.40	-\$0.05
Total Direct Expenses per Bu.	\$2.77	\$2.97	\$3.71	\$3.43	\$2.40
Total Dir & Ovhd Exp per Bushel	\$3.83	\$3.91	\$5.11	\$4.90	\$3.43



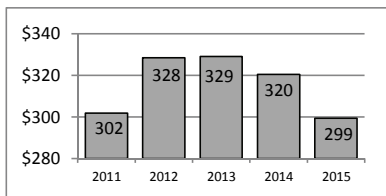
<b><u>Corn Silage</u></b>					
Yield per Acre	15.2	15.1	11.7	14.3	19.5
Value per Ton	\$39.05	\$50.65	\$40.01	\$35.05	\$34.46
Fuel, Oil, Repairs per Acre	\$98.93	\$103.50	\$100.48	\$122.88	\$93.91
Total Dir & Ovhd Exp per Acre	\$458.64	\$495.91	\$504.52	\$576.47	\$554.58
Net Return per Acre	\$157.19	\$285.57	\$155.90	\$9.68	\$120.30
Total Direct Expenses per Ton	\$21.60	\$22.91	\$31.22	\$27.70	\$19.47
Total Dir & Ovhd Exp per Ton	\$30.09	\$32.86	\$43.05	\$40.28	\$28.43



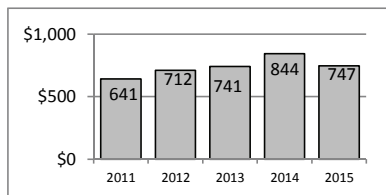
<b><u>Soybeans</u></b>					
Yield per Acre	31.5	37.8	33.4	33.0	38.1
Value per Bushel	\$11.41	\$13.87	\$12.52	\$9.73	\$8.33
Fuel, Oil, Repairs per Acre	\$49.03	\$49.01	\$45.26	\$46.04	\$38.24
Total Dir & Ovhd Exp per Acre	\$259.44	\$285.21	\$288.53	\$289.37	\$288.14
Net Return per Acre	\$112.02	\$243.72	\$139.81	\$52.87	\$43.58
Total Direct Expenses per Bu.	\$5.53	\$5.15	\$5.76	\$5.81	\$4.94
Total Dir & Ovhd Exp per Bushel	\$8.23	\$7.55	\$8.65	\$8.76	\$7.57



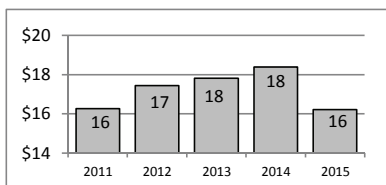
<b><u>Spring Wheat</u></b>					
Yield per Acre	48.0	60.8	66.5	60.2	66.0
Value per Bushel	\$7.99	\$8.30	\$6.24	\$5.62	\$4.96
Fuel, Oil, Repairs per Acre	\$44.65	\$50.14	\$44.21	\$43.17	\$38.15
Total Dir & Ovhd Exp per Acre	\$301.89	\$328.49	\$329.01	\$320.40	\$299.33
Net Return per Acre	\$97.69	\$182.39	\$95.54	\$32.83	\$40.40
Total Direct Expenses per Bu.	\$4.63	\$4.01	\$3.56	\$3.77	\$3.19
Total Dir & Ovhd Exp per Bushel	\$6.29	\$5.40	\$4.95	\$5.32	\$4.54



<b><u>Beef Cow Calf</u></b>					
Price Recv'd/Cwt Calf Sold	\$132.13	\$146.91	\$152.83	\$212.33	\$206.46
Total Feed Cost/Cow	\$388.03	\$445.53	\$479.03	\$508.48	\$438.89
Return over Feed/Cow	\$380.97	\$354.44	\$298.68	\$786.66	\$425.07
Net Return/Cow	\$127.61	\$88.27	\$36.61	\$451.63	\$117.23
Total Direct & Ovhd Expenses	\$641.39	\$711.70	\$741.10	\$843.51	\$746.72



<b><u>Dairy Cows</u></b>					
Production/Cow	22,343	22,774	23,087	23,765	24,034
Price Recv'd/Cwt Milk	\$19.84	\$19.47	\$20.20	\$24.36	\$17.75
Total Feed Cost/Cwt Milk	\$8.82	\$10.19	\$10.37	\$10.22	\$8.77
Return over Feed/Cwt Milk	\$9.79	\$8.53	\$8.69	\$13.42	\$8.65
Net Return/Cwt Milk	\$2.35	\$1.27	\$1.24	\$5.26	\$1.20
Total Direct & Ovhd Expenses	\$16.27	\$17.44	\$17.81	\$18.38	\$16.22



# **Minnesota Farm Business Management Education**

## **Vision:**

*To provide educational opportunities for students to be successful in a competitive agricultural environment.*

## **Mission:**

*To deliver management education for decision-making that achieves an individual's business goals.*

## **Guiding Principles:**

- 1. Improved Quality of Life in Rural Communities*
  - 2. Achievement of Student Goals*
  - 3. Awareness of the Global Importance of Agriculture*
  - 4. Integrity in Student Interaction*
  - 5. Timely and Student-Focused Programming*
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## **MnSCU and Participating College Websites:**

State FBM Website: [fbm.mnscu.edu](http://fbm.mnscu.edu)

Alexandria Technical and Community College: [alextech.edu](http://alextech.edu)

Central Lakes College Website: [clcmn.edu](http://clcmn.edu)

Minnesota West Community & Technical College: [mnwest.edu](http://mnwest.edu)

Northland Community & Technical College Website: [northlandcollege.edu](http://northlandcollege.edu)

Ridgewater College: [ridgewater.edu](http://ridgewater.edu)

Riverland Community & Technical College: [riverland.edu](http://riverland.edu)

South Central College: [southcentral.edu](http://southcentral.edu)

St. Cloud Technical and Community College: [sctcc.edu](http://sctcc.edu)

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# MyFarm Financial Scorecard

Year:

Name:

	This Year	5-Year Ave	Strong	Vulnerable
<b>Liquidity</b>				
Current ratio	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	1.7	1.1
Working capital	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>		
Working cap to gross revenue	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	25%	10%
<b>Solvency (market)</b>	Note: These solvency ratios include deferred liabilities			
Farm debt/asset ratio	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	30%	60%
Farm equity/asset ratio	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	70%	40%
Farm debt/equity ratio	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	0.43	1.50
<b>Profitability (Cost)</b>				
Rate of return on farm assets	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	8%	4%
Rate of return on farm equity	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	10%	3%
Operating profit margin	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	25%	15%
Net farm income	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>		
EBITDA	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>		
<b>Repayment Capacity (Accrual)</b>				
Capital debt repay capacity	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>		
Capital debt repay margin	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>		
Replacement margin	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>		
Term-debt coverage ratio	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	1.50	1.20
Replacement margin ratio	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	1.40	1.10
<b>Financial Efficiency</b>				
Asset-turnover rate (market)	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	45%	30%
Operating-expense ratio	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	60%	80%
Depreciation-expense ratio	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	5%	15%
Interest-expense ratio	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	5%	10%
Net farm income ratio	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	20%	10%