

Red River Valley Farm Financial Performance

2018 Outlook Conference for Agricultural Lenders
Grand Forks – Oct. 29
 Fargo – Nov. 1



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Main Source of Information

North Dakota and Minnesota Farm Business
Management Education Programs



FFSC Recommended Financial Measures

Liquidity

1. Current Ratio
2. Working Capital
3. Working Capital/Gross Revenue Ratio

Solvency

4. Debt/Asset Ratio
5. Equity/Asset Ratio
6. Debt/Equity Ratio

Profitability

7. Rate of Return on Farm Assets
8. Rate of Return on Farm Equity
9. Operating Profit Margin Ratio
10. Net Farm Income
11. EBITDA

Repayment Capacity

12. Capital Debt Repayment Capacity
13. Capital Debt Repayment Margin
14. Replacement Margin
15. Term Debt and Capital Lease Coverage Ratio
16. Replacement Margin Coverage Ratio

Financial Efficiency

17. Asset Turnover Ratio
18. Operating Expense Ratio
19. Depreciation/Amortization Expense Ratio
20. Interest Expense Ratio
21. Net Farm Income from Operations Ratio

Net Farm Income

Cash Income

- Cash Expense
- ± Inventory Change
- Depreciation
- ± Gain/Loss on Capital Sales

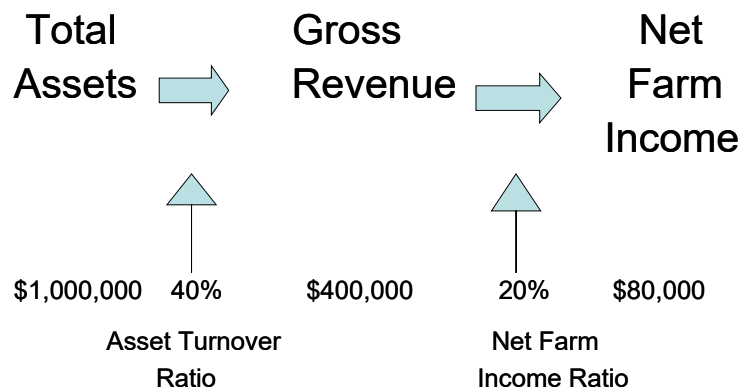
Red River Valley Farm Financial Performance

- What is the main concern?

North Dakota Marketing Year Average Price 2012-2017

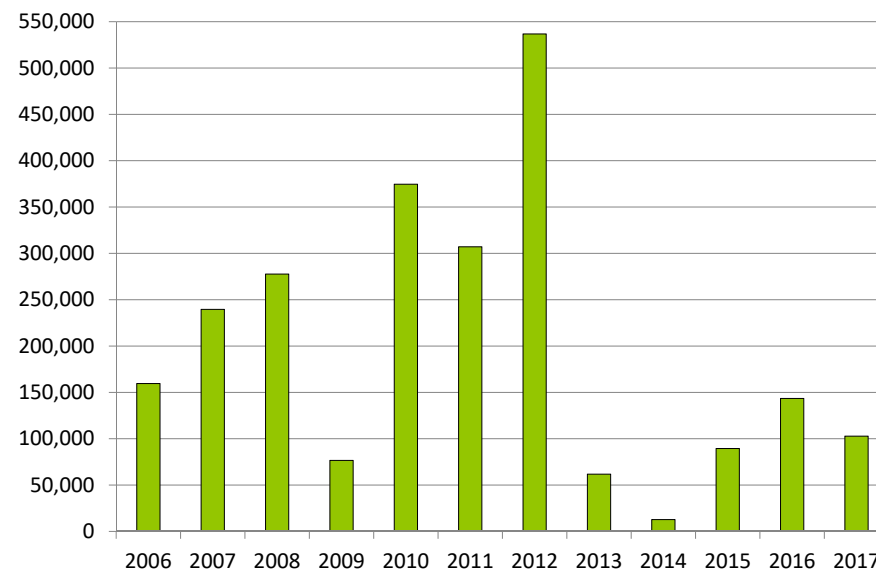
Year	Spring Wheat	Soybean	Corn
2012	8.19	14.00	6.46
2013	-34% 6.50	-32% 12.40	-48% 3.91
2014	5.42	9.49	3.34
2015	4.59	8.49	3.28
2016	4.57	8.97	3.01
2017	5.72	8.88	2.90
2018	?	?	?

Income Needed to Achieve Goals



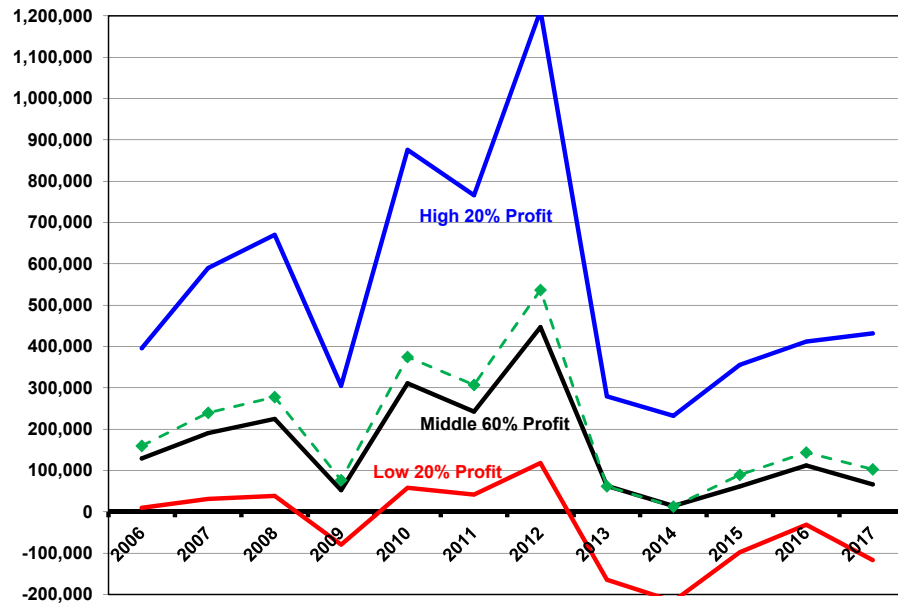
Net Farm Income

MN-ND Farm Business Management, Red River Valley



Average Net Farm Income Red River Valley, 2005-2016

MN-ND Farm Business Management, Red River Valley

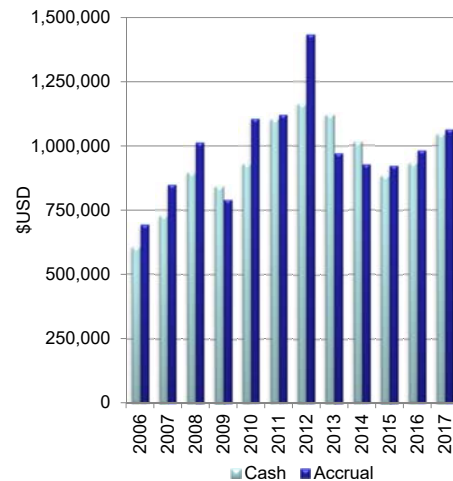


Which NFI Best Describes the Typical Red River Valley Producer?

Year	All Farms		Avg after removing the high and low 20%	High 20% Profit	Low 20% Profit
	Average	Median			
2010	374,642	289,594	310,951	875,947	58,079
2011	307,053	226,111	242,510	766,032	41,702
2012	536,722	425,176	446,761	1,212,181	118,136
2013	61,749	61,939	62,884	279,501	-164,215
2014	12,723	11,596	14,243	232,417	-216,307
2015	89,489	49,382	61,506	355,681	-97,775
2016	143,489	104,932	112,201	411,989	-31,147
2017	102,783	53,694	66,312	431,827	-116,848

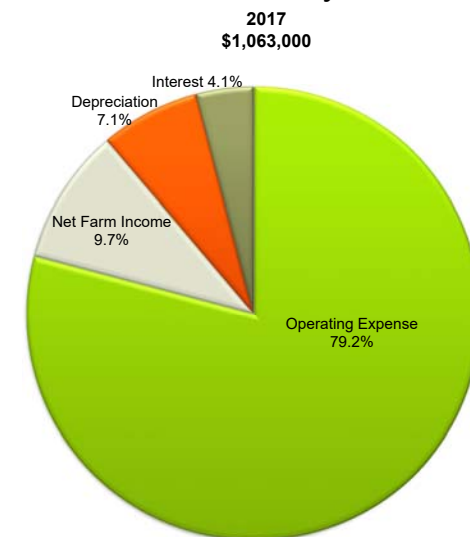
MN-ND Farm Business Mgmt., Red River Valley

Average Gross Revenue



Where Does the Gross Revenue (Accrual) Go?

Red River Valley Farms*

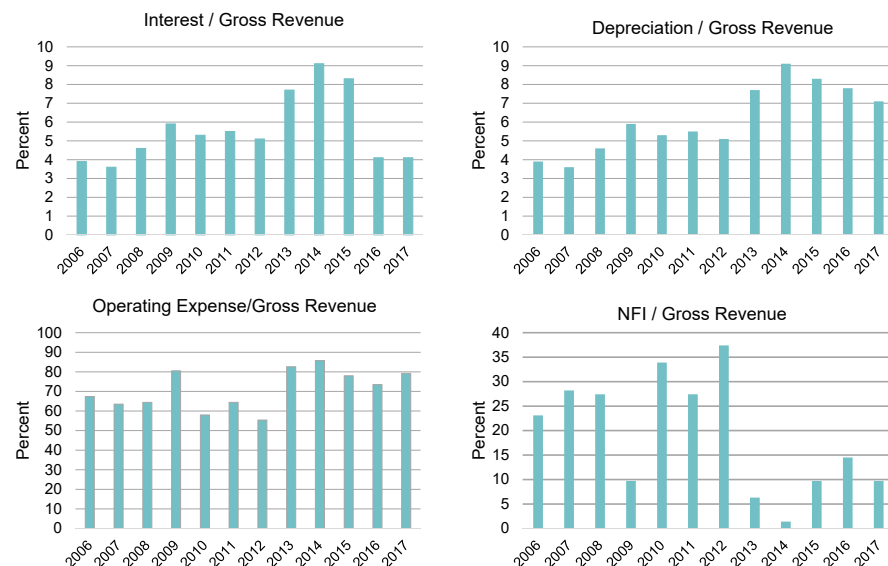


*Source: Minnesota and North Dakota Farm Business Management Education Programs

Farms Sorted By Gross Farm Income, 2017

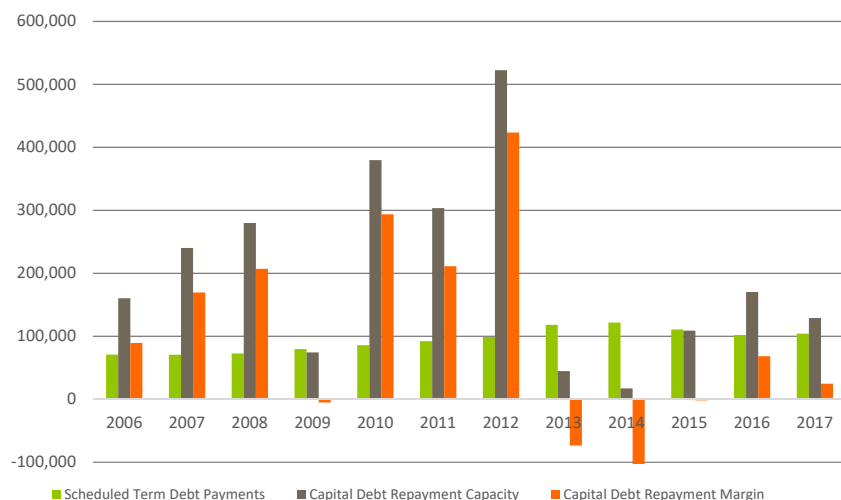
	100,001- 250,000	250,001- 500,000	500,001- 1,000,000	1,000,001- 2,000,000	Over 2,000,000
Number of Farms	23	41	79	59	27
Total Crop Acres	434	776	1,407	2,804	4,767
Average Net Farm Income	\$ 38,452	\$ 32,862	\$ 48,066	\$ 180,722	\$270,213
Current Ratio	1.84	1.59	1.66	1.67	1.53
Farm Debt to Asset Ratio (cost)	45%	38%	39%	38%	45%
Term Debt Coverage Ratio	2.20	1.18	0.85	1.47	1.24
Operating Expense Ratio	73.4%	71.8%	70.6%	75.5%	74.4%
Depreciation Expense Ratio	4.6%	8.8%	8.3%	7.9%	7.1%
Interest Expense Ratio	3.7%	4.0%	4.0%	3.8%	4.6%
Net Farm Income Ratio	18.2%	15.2%	17.0%	12.8%	13.8%

MN-ND Farm Business Mgmt, Red River Valley



Repayment Capacity, per Farm, 2006-2017

MN-ND Farm Business Management, Red River Valley



Capital Debt Repayment Margin, by Profit Group, 2017

MN-ND Farm Business Management, Red River Valley

	Low 20% Profit	High 20% Profit
Net farm income from operations	-116,650	428,452
Depreciation	77,220	123,248
Personal income	36,611	12,374
Family living/owner withdrawals	-67,144	-121,522
Payments on personal debt	-4,555	-6,454
Income taxes paid	-11,993	-51,448
Interest on term debt	33,933	35,511
Capital debt repayment capacity	-52,724	420,257
Scheduled term debt payments	-118,395	-147,565
Capital debt repayment margin	-171,120	272,692

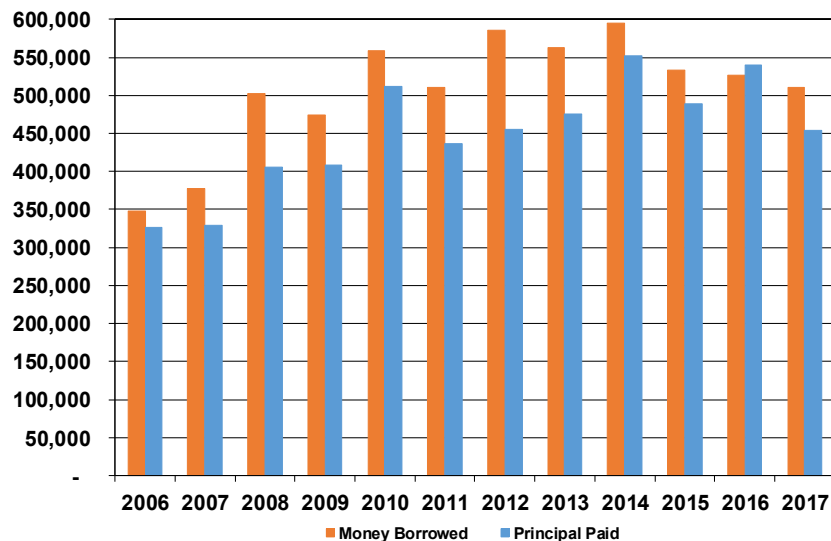
Comparison of High and Low 20% Profit Groups, 2017
MN-ND Farm Business Management, Red River Valley

	Low Profit	High Profit
Age	48.6	49.3
Crop acres	2,113	3,130
Current Ratio	1.10	2.18
Farm Debt to Asset (%)	50.0	32.4
Asset Turnover Ratio (%)	36.4	38.7
Soybean yield	40.2	39.1
Corn yield	181.3	174.6
Wheat yield	71.0	76.0
Soybean sale price	\$8.94	\$9.09
Corn sale price	\$2.94	\$3.09
Wheat sale price	\$5.58	\$5.52

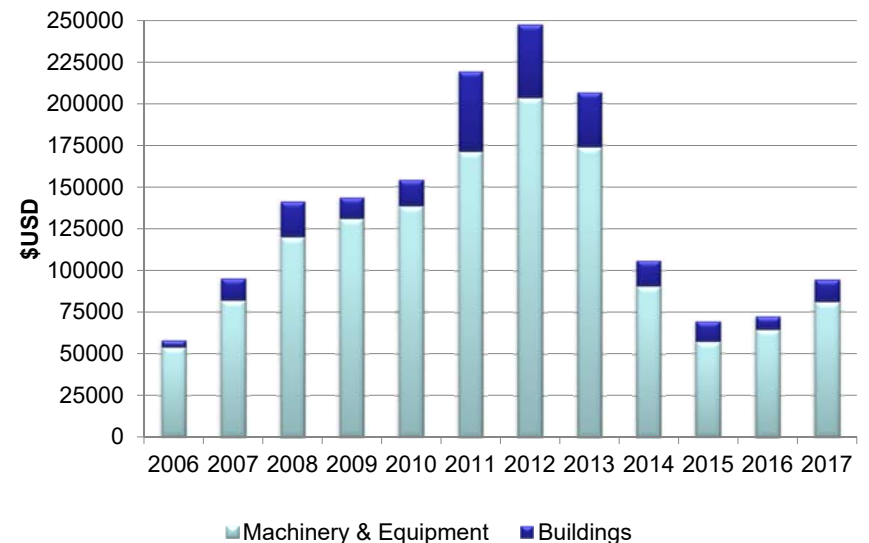
Cash Farm Revenue of High and Low 20% Profit Groups, 2017
MN-ND Farm Business Management, Red River Valley

	Low Profit		High Profit	
	\$	% of Total	\$	% of Total
Corn	405,659	37%	215,965	12%
Soybeans	344,707	31%	407,843	23%
Wheat	100,624	9%	335,188	19%
Sugarbeets	110,219	10%	530,353	29%
All other sources	147,609	13%	317,222	18%
Total	1,108,818	100%	1,806,581	100%

Money Borrowed and Principal Paid, per Farm 2006-2017
MN and ND Farm Business Mgmt. Education, Red River Valley

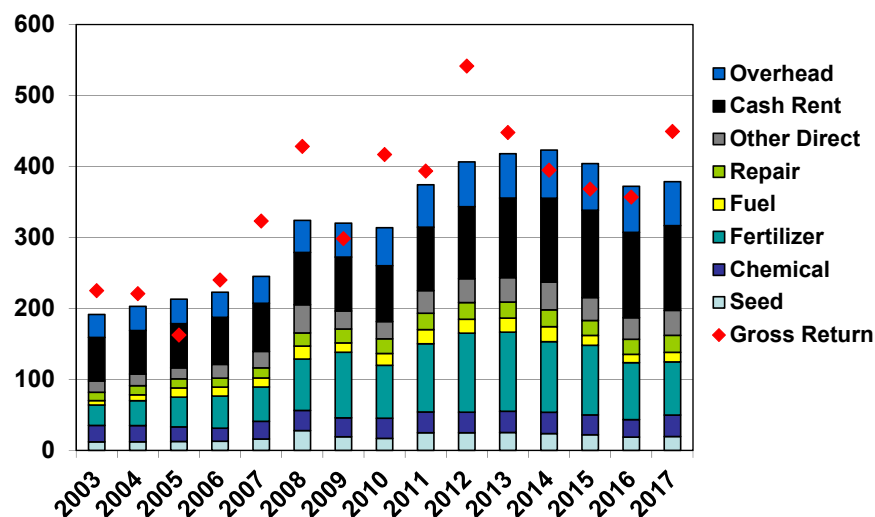


Purchases of Machinery, Equipment, and Buildings, per Farm
MN-ND Farm Business Mgmt, Red River Valley



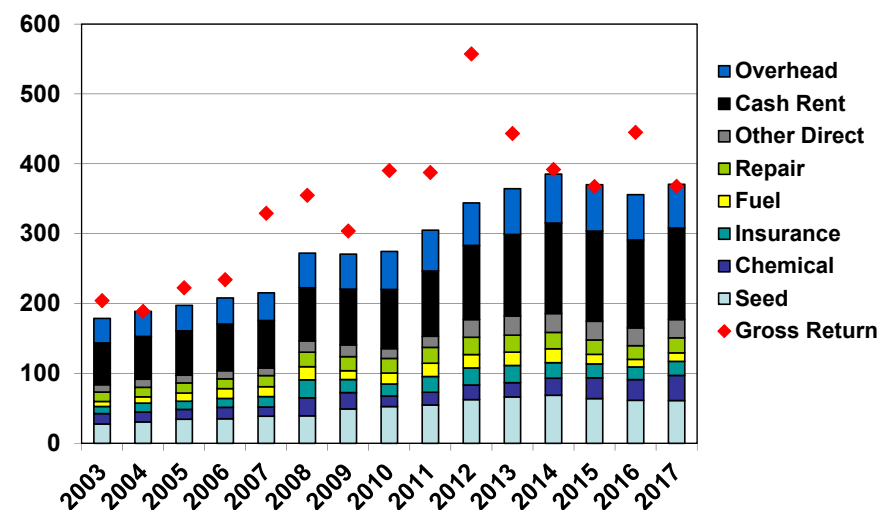
Spring Wheat Costs per Acre

Red River Valley, MN and ND Farm Management Education, 2003-2017



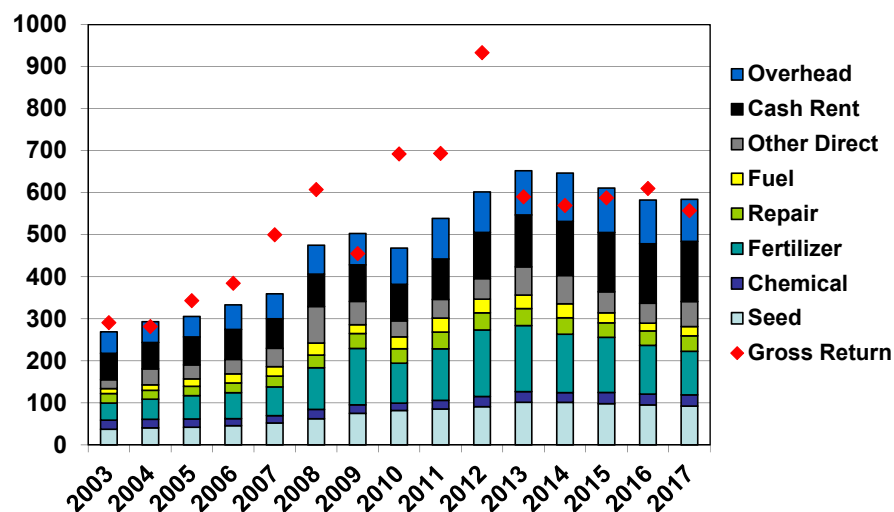
Soybean Costs per Acre

Red River Valley, MN and ND Farm Management Education, 2003-2017



Corn Costs per Acre

Red River Valley, MN and ND Farm Management Education, 2003-2017



Spring Wheat Enterprise Analysis, 2015-2017, and Projections for 2018-2019

MN-ND Red River Valley Farm Business Management

	2015	2016	2017	2018 est.	2019 est.
Yield	72.01	68.44	74.33	72.00	70.00
Price	4.98	5.00	5.96	5.40	5.65
Misc. Inc.	9.58	14.65	6.44	15.00	10.00
Gross	368.19	356.85	449.45	403.80	405.50
Seed	22.00	18.71	19.50	22.04	21.37
Fertilizer	98.06	80.21	74.94	77.19	81.82
Chemical	27.96	24.64	30.24	30.54	30.85
Insurance	14.24	13.49	13.83	14.94	15.53
Fuel & Lube	14.02	11.79	13.50	14.85	14.85
Repair	20.91	21.22	23.92	24.16	24.40
Other Direct	18.19	16.84	21.31	21.52	21.74
Cash Rent	122.99	120.27	119.37	118.18	116.40
Overhead	65.75	64.86	62.01	62.32	62.63
Listed Costs	404.12	372.03	378.62	385.73	389.60
Net Return	-35.93	-15.18	70.83	18.07	15.90
B/E Price	5.48	5.22	5.01	5.15	5.42

Estimates: A. Swenson, NDSU, 10/25/18

Soybean Enterprise Analysis, 2015-2017, and Projections for 2018-2019

MN-ND Red River Valley Farm Business Management

	2015	2016	2017	2018 est.	2019 est.
Yield	42.01	46.89	39.02	47.00	42.00
Price	8.47	9.23	9.06	7.65	8.25
Misc. Inc.	11.62	12.19	14.21	52.00	13.00
Gross	367.44	444.98	367.73	411.55	359.50
Seed	64.00	61.51	61.21	60.60	59.99
Fertilizer	14.00	11.75	10.39	10.70	11.34
Chemical	29.71	29.67	35.98	36.34	36.70
Insurance	19.90	18.08	20.07	19.57	18.39
Fuel & Lube	13.76	10.85	12.21	13.43	13.43
Repair	20.54	19.59	21.50	21.72	21.93
Other Direct	12.77	13.69	15.68	15.84	16.00
Cash Rent	129.12	125.85	131.05	129.74	127.79
Overhead	66.33	64.92	62.63	62.94	63.26
Listed Costs	370.13	355.91	370.72	370.87	368.84
Net Return	-2.69	89.07	-2.99	40.68	-9.34
B/E Price	8.53	7.33	9.14	6.78	8.47

Estimates: A. Swenson, NDSU, 10/25/18

Corn Enterprise Analysis, 2015-2017, and Projections for 2018-2019

MN-ND Red River Valley Farm Business Management

	2015	2016	2017	2018 est.	2019 est.
Yield	166.72	189.71	176.63	192.00	175.00
Price	3.44	3.14	3.09	3.10	3.30
Misc. Inc.	14.52	14.58	11.59	15.00	15.00
Gross	588.04	610.27	557.38	610.20	592.50
Seed	98.07	95.26	92.39	91.47	90.55
Fertilizer	131.29	115.87	103.74	106.85	113.26
Chemical	26.68	25.73	26.65	26.92	27.19
Insurance	22.04	19.28	21.10	21.10	21.31
Fuel & Lube	23.93	18.37	21.94	24.13	24.13
Repair	34.36	34.43	36.84	37.21	37.58
Other Direct	27.87	28.16	38.44	38.82	39.21
Cash Rent	141.21	141.60	143.35	141.92	139.79
Overhead	105.69	103.99	99.84	100.34	100.84
Listed Costs	611.14	582.69	584.29	588.76	593.87
Net Return	-23.10	27.58	-26.91	21.44	-1.37
B/E Price	3.58	2.99	3.24	2.99	3.31

Estimates: A. Swenson, NDSU, 10/25/18

2017 Projected and Actual MN-ND Farm Business Management Education Program Crop Enterprise Analysis on Cash Rented Land (Red River Valley)

	Wheat		Soybeans		Corn	
	Projected	Actual	Projected	Actual	Projected	Actual
Yield	67.00	74.33	38.00	39.02	150.00	176.63
Price	5.95	5.96	8.90	9.06	3.00	3.09
Misc	10.00	6.44	10.00	14.21	25.00	11.59
Gross	408.65	449.45	348.20	367.73	475.00	557.38
Listed Cost	363.49	378.62	356.29	370.72	568.76	584.29
Net Return	45.16	70.83	-8.09	-2.99	-93.76	-26.91
B/E Price	5.28	5.01	9.11	9.14	3.63	3.24



Sugar Beet Economics in the Red River Valley

U.S. Sugar Program

Main Purpose

Maintain minimum market price for U.S. producers.

Main Policy Tools

- Loan program
- Import restriction
- Production allotments

Loan Rates:

\$0.1875/lb. for cane sugar, raw value

\$0.2409/lb. for beet sugar, refined

MN-ND Red River Valley Farm Business Mgmt Sugar Beet Enterprise Analysis, 2008-2017, on Cash Rented Land and Stock Joint Venture

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Yield	20.98	21.14	27.54	18.11	26.35	24.62	23.09	26.69	31.90	30.38
Price (updated*)	48.58	49.87	69.02	55.67	65.41	43.23	42.01	45.77	38.95	48.85
Misc inc	59.73	42.25	4.67	106.87	3.79	50.43	39.30	7.01	23.05	32.82
Gross	1,078.94	1,096.50	1,905.48	1,115.05	1,727.34	1,114.75	1,009.31	1,228.61	1,265.56	1,516.88
Seed	93.61	135.17	158.47	159.05	173.38	199.54	206.46	218.05	224.34	224.67
Fertilizer	75.53	98.43	80.53	96.93	119.17	106.56	106.53	100.61	88.11	76.38
Chemical	89.94	55.03	63.36	82.64	91.08	78.80	65.16	75.92	85.92	103.37
Crop Ins.	21.77	20.89	22.13	26.20	32.68	34.06	24.41	24.53	29.38	32.46
Fuel & Oil	75.05	55.16	65.03	78.70	82.48	82.86	73.83	53.87	46.66	52.54
Repair	80.69	78.41	92.87	94.96	103.16	96.53	78.02	77.98	78.27	85.98
Other Direct	79.22	64.49	74.28	62.41	89.29	73.33	73.33	85.94	93.21	101.88
Cash Rent	86.61	90.12	96.20	106.42	124.49	131.89	128.23	132.50	137.90	135.78
Stock Joint Vent.	216.11	213.19	258.26	277.82	328.36	265.55	61.74	154.43	143.42	165.40
Overhead	150.21	147.94	179.22	192.38	217.23	212.09	224.24	220.74	222.02	198.37
Listed Costs	968.75	958.84	1,090.35	1,177.51	1,361.32	1,281.21	1,042.11	1,144.56	1,149.23	1,176.75
Net Return	110.19	137.66	815.13	-62.46	366.02	-166.14	-32.80	84.05	116.33	340.13

*Final American Crystal net payment per ton is used

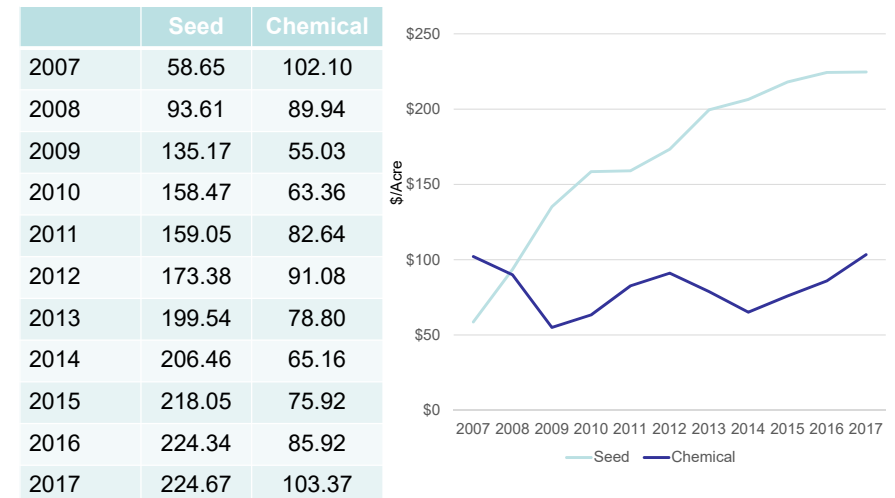
Red River Valley Sugar Beet Enterprises, 2017 Minnesota and North Dakota Farm Business Management Programs

	Own Stock		Joint Venture	
	Owned Land	Cash Rent	Owned Land	Cash Rent
# of Farms Reporting	36	55	19	43
Gross Revenue*	\$1,430	\$1,545	\$1,567	\$1,517
Direct Cost	658	653	697	677
Land Rent	--	135	--	136
Joint Venture	--	--	144	165
Overhead Cost	301	214	265	199
Total Listed Costs	959	1,002	1,106	1,177
Net Return	\$471	\$543	\$461	\$340

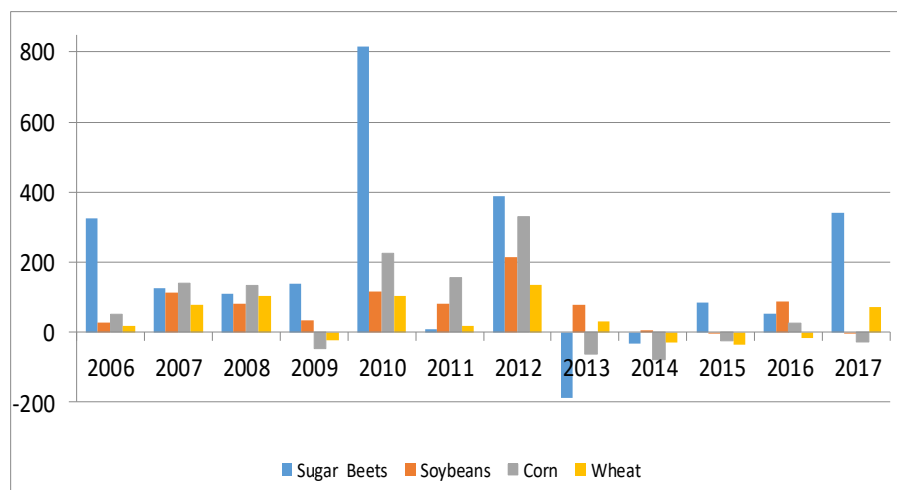
*Net price of \$48.85/ton was used.

Seed and Chemical Cost Per Acre

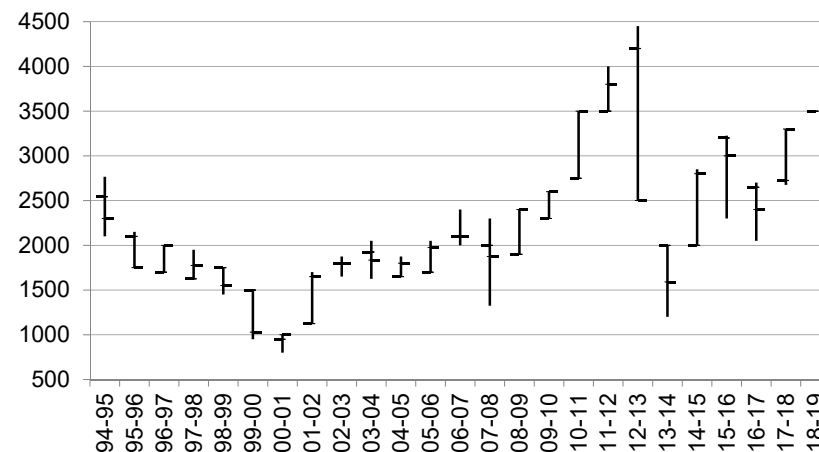
MN-ND Red River Valley Farm Business Mgmt Sugar Beet Enterprise Analysis, 2007-2017, on Cash Rented Land and Stock Joint Venture



Red River Valley Net Income per Acre, on Cash Rented Land,
of Sugar Beets (joint venture), Soybeans, Corn and Wheat
MN-ND Farm Business Mgt.



American Crystal Sugar Co. Stock Price Range
and Beginning and Ending Price, 1994-2017,
Shares Traded at www.fncagstock.com

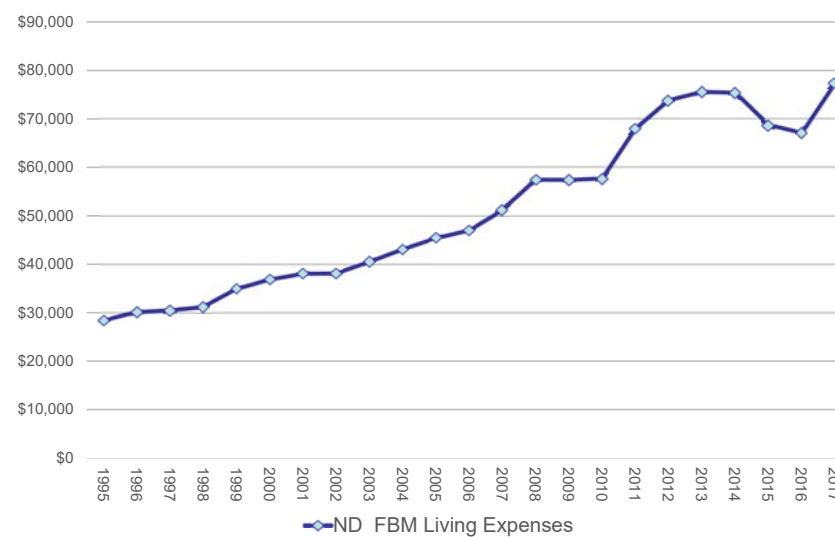


Recent Sales and Available Listings of American Crystal Sugar Co. Stock
at FNC Ag Stock, LLC (www.fncagstock.com)

Date	Shares Purchased	Price
10/19/2018	50	\$3,475.00
10/18/2018	10	\$3,475.00
09/27/2018	17	\$3,600.00
09/25/2018	35	\$3,500.00

Recent Listing			Recent Offers	
Asking Price	Shares Available	Expiration Date	Offering Price	Number of Shares
\$3,475.00	200	12/31/2018	\$3,301.00	10
\$3,500.00	99	12/31/2018	\$3,300.00	80
\$3,590.00	25	12/31/2018	\$3,200.00	10
\$3,600.00	108	12/31/2018	\$3,005.00	17
\$3,600.00	150	01/31/2019	\$3,000.00	5

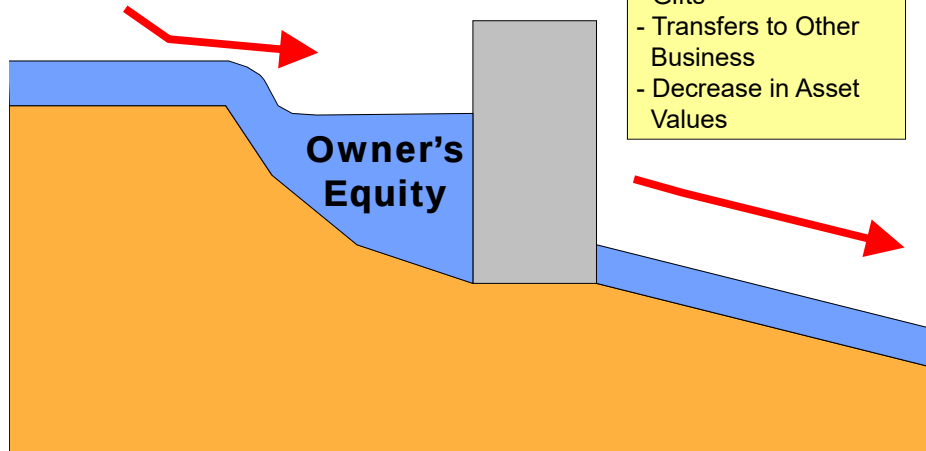
N. D. Farm Family Household Living Expenses



+ Net Farm Income

- + Gifts and Inheritances
- + Transfer from Other Businesses
- + Increase in Asset Values

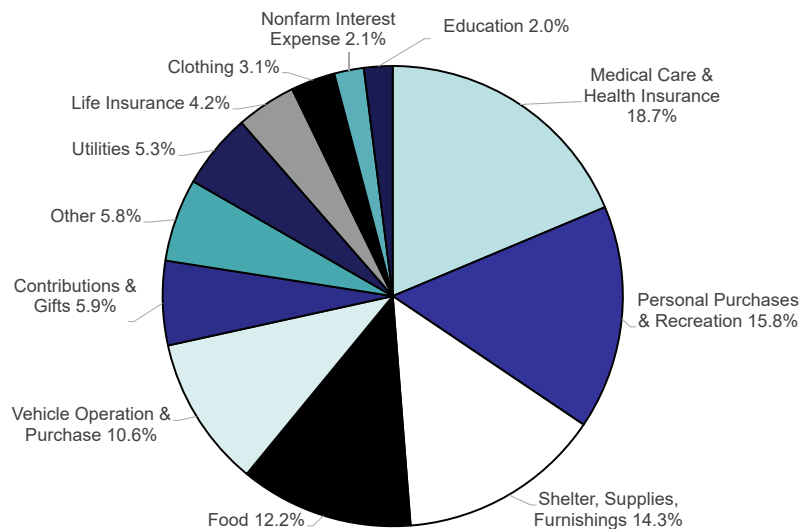
- Family Living
- Income & SE Taxes
- Gifts
- Transfers to Other Business
- Decrease in Asset Values



2017 Average Family Living Expenses N.D. Farm Business Mgmt Program

Family Living Expenses		Percent of Total Expense
Food	\$8,806	11
Shelter, supplies, furnishings	10,363	13
Clothing	2,222	3
Medical care and health insurance	14,910	19
Vehicle operation and purchase	9,612	12
Utilities	4,042	5
Education	1,201	2
Contributions and gifts	4,562	6
Personal purchase and recreation	10,734	14
Life and other personal insurance	3,806	5
Non-farm interest expense	1,707	2
Other	5,431	7
Total	77,396	100

2013-2017 Five Year Average Farm Family Living Expenses N.D. Farm Business Management Education Program



Shelter, Supplies, Furnishings

- Household Supplies
- Household Repairs
- Furnishings and Appliance Purchases
- Dwelling Rent
- Household RE Taxes
- Personal Property Insurance