



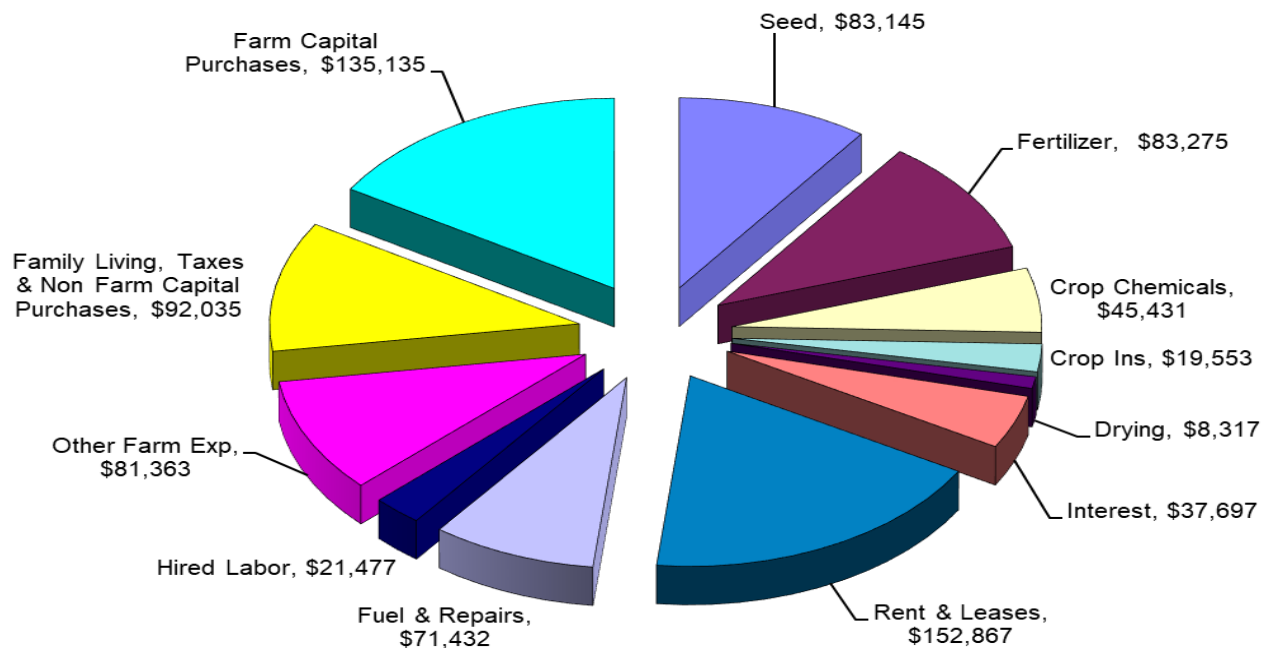
Farm Business Management Program Data

Crop Farm Sort - 2018

*Financial Summary by Gross Farm Income & Crop Acres
Corn & Soybean Enterprise Data
Environmental Practices & Tillage Data*

April, 2019

Average Dollars Spent by a Crop Farm totals \$831,769 in 2018



In cooperation with the Center for Farm Financial Management University of Minnesota
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Farm Business Management Website: agcentric.org or centerofagriculture.org

Brief Overview of 2018 Financial Summary

Minnesota State - Farm Business Management

This special sort report for crops provides summary financial information from 1133 crop producers in the Minnesota State Farm Business Management (FBM) Database, which is a little over half of the 2209 total producers in the state FBM database. Selected data also includes 1233 corn enterprises and 1216 soybean enterprises on rented land.

Based on the graphic on the cover, the average crop farm in Minnesota spent \$831,769 in their greater communities in 2018. At this level over a 40 year farming career each farmer would spend \$33,279,760. Collectively in 2018, the farms in this report spent \$942,394,277 operating their businesses. The majority of this money is spent locally, including businesses and cooperatives; demonstrating the vital importance of farm on the economy of Minnesota.

After three consecutive years of strong crop yields the 2018 growing year did not prove to be as generous for many areas. Most of southern Minnesota saw tough growing conditions throughout the year while western and northwestern Minnesota did continue to have strong crops yields. The Market Facilitation Program payment helped soybean producers show profits in 2018. Without this payment the average return per acre would have dropped to near breakeven levels. This added revenue was needed to offset another year of losses in corn production.

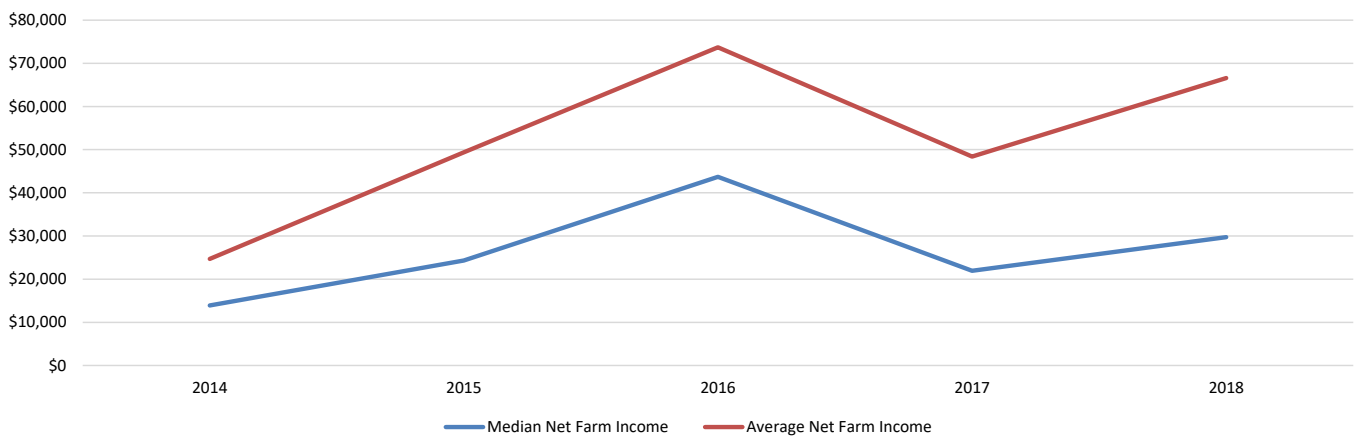
For producers participating in the Minnesota State Farm Business Management program, the average corn yield was 179 bushels per acre, down from last years average of 203 bushels and the 2016 average of 199 bushels. Statewide yield for soybeans was 49 bushels, up from 47 bushels in 2017 but down from the near record levels of 2016.

- The average price received for corn sold by participating producers increased to \$3.33 per bushel in 2018. In 2017 producers received \$3.20 and \$3.31 in 2016.
- The average producer sold soybeans for \$9.02 per bushel in 2018 down from \$9.19 in 2017 and \$9.35 in 2016.
- Wheat yielded 62.5 bushels per acre, down from 73 bushels in 2017 and from 67 bushels in 2016. Wheat sold for \$5.69 per bushel in 2018, down from \$5.94 in 2017 but still higher than \$4.79 in 2016.

The median net farm income for crop producers for the last six years was: \$29,712 (2018) \$21,920 (2017), \$43,705 (2016), \$24,294 (2015); \$13,908 (2014); \$44,124 (2013). Net farm income is the amount of profit made from the operation that must pay for family living expenses, taxes and debt payments.

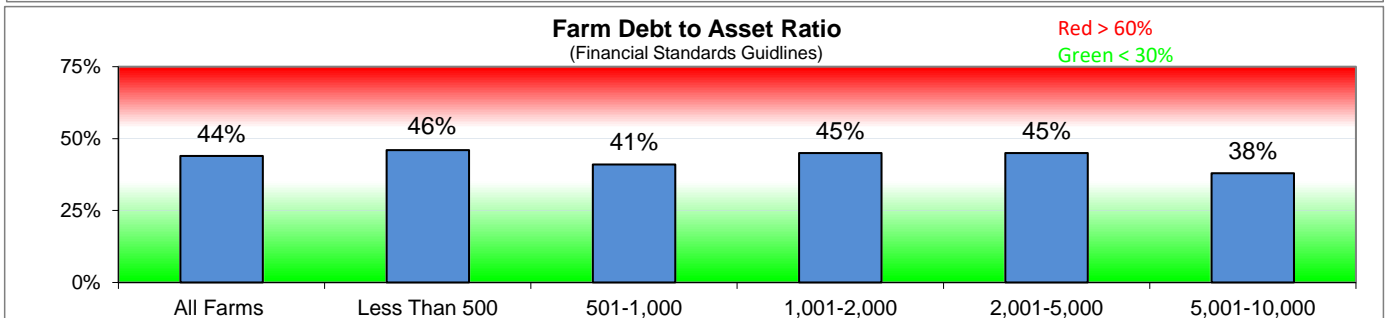
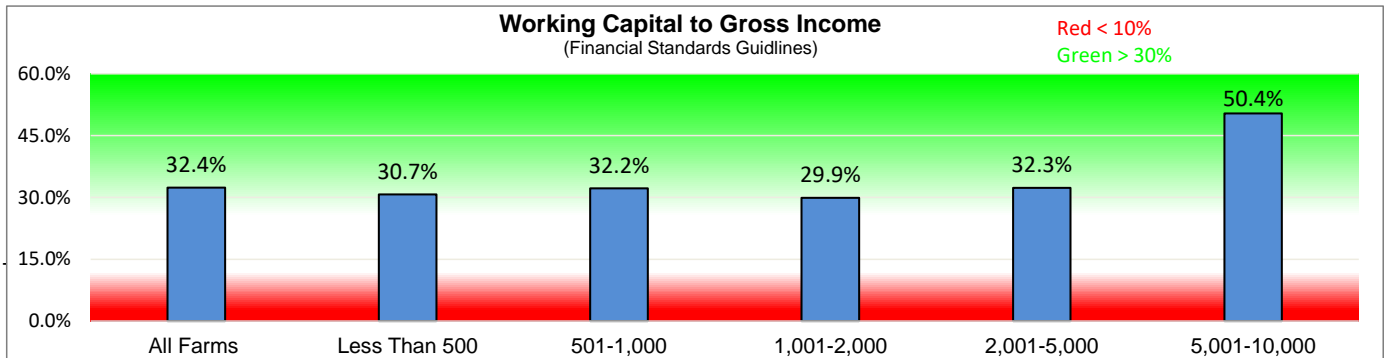
Like any business, every farm has a different cost structure and some farms are doing better than others. The average farm's balance sheet is still strong, but there are obvious signs of financial stress. Working capital, term debt coverage and operating expense ratios are deteriorating or are at concerning levels. Farmer/lender mediation requests are up again in 2018. Many farms have already restructured debt to lengthen terms and free up cash flow. Some farms will have to make major adjustments in the coming year in order to continue farming.

Net Farm Income Trend



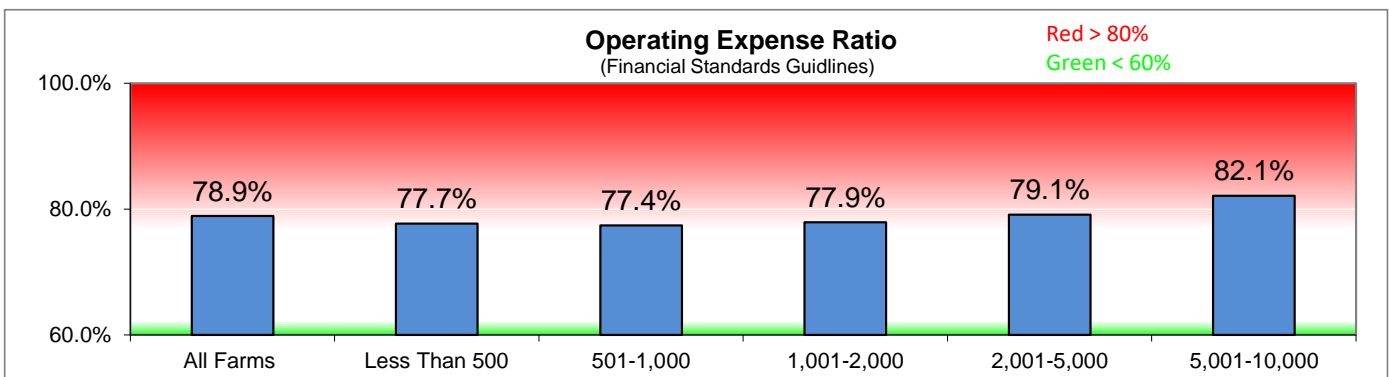
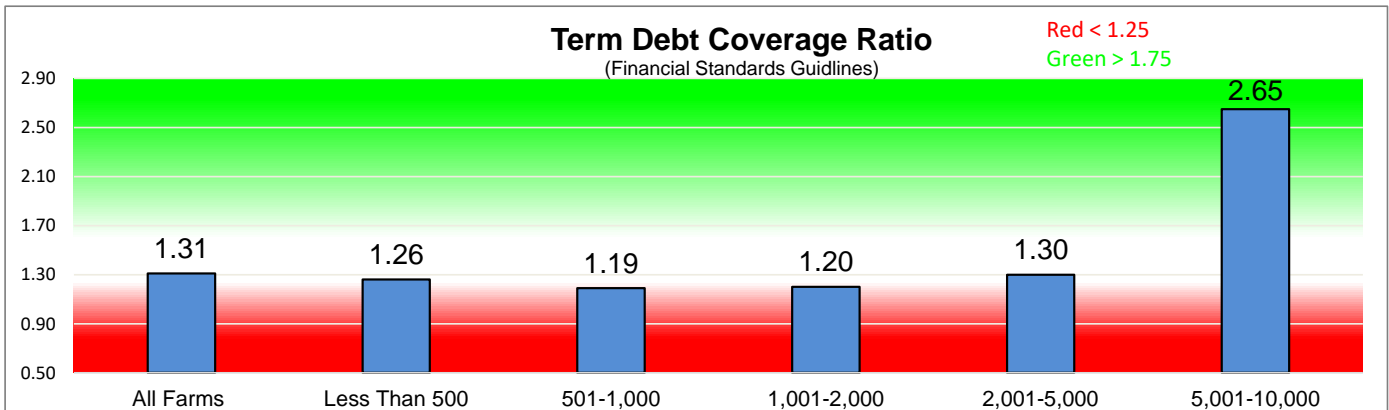
Financial Summary
(Farms Sorted By Total Crop Acres)
Minnesota State - Farm Business Management

	Avg. Of All Farms	Less Than 500	501 - 1,000	1,001 - 2,000	2,001 - 5,000	5,001 - 10,000
Number of farms	1133	411	298	256	149	16
Income Statement						
Gross cash farm income	694,461	178,725	479,130	836,357	1,750,585	4,376,772
Total cash farm expense	604,554	154,347	406,123	723,261	1,541,462	3,833,822
Net cash farm income	89,907	24,377	73,007	113,096	209,123	542,950
Average net farm income	66,590	15,679	41,315	77,220	183,993	520,211
Median net farm income	29,712	11,982	37,610	76,985	142,177	436,945
Profitability (cost)						
Rate of return on assets	2.4%	0.9%	1.7%	2.2%	3.0%	5.0%
Rate of return on equity	0.9%	-2.7%	-0.2%	0.7%	2.1%	5.6%
Operating profit margin	7.1%	3.5%	6.0%	7.1%	8.3%	9.4%
Asset turnover rate	33.6%	26.4%	28.9%	31.8%	36.2%	53.0%
Liquidity & Repayment (end of year)						
Current ratio	1.57	1.55	1.56	1.51	1.54	2.53
Working capital	232,424	55,213	156,313	258,711	590,777	2,321,838
Working capital to gross income	32.4%	30.7%	32.2%	29.9%	32.3%	50.4%
Term debt coverage ratio	1.31	1.26	1.19	1.20	1.30	2.65
Replacement coverage ratio	0.91	0.91	0.79	0.83	0.91	1.81
Term debt to EBITDA	3.59	6.03	3.97	3.59	3.05	1.90
Solvency (end of year at market)						
Total assets	3,239,678	1,242,146	2,750,071	4,080,462	6,984,242	12,058,942
Total liabilities	1,347,478	506,844	1,041,440	1,709,353	3,049,992	4,713,530
Net worth	1,892,199	735,302	1,708,630	2,371,109	3,934,250	7,345,412
Farm debt to asset ratio	44%	46%	41%	45%	45%	38%
Nonfarm Information						
Net nonfarm income	45,286	52,646	39,846	41,699	21,021	-
Farms reporting living expenses	218	82	67	54	17	-
Total family living expense	59,712	47,525	56,949	71,880	92,162	-
Total living, invest, cap. purch	92,035	68,135	101,657	103,002	135,847	-



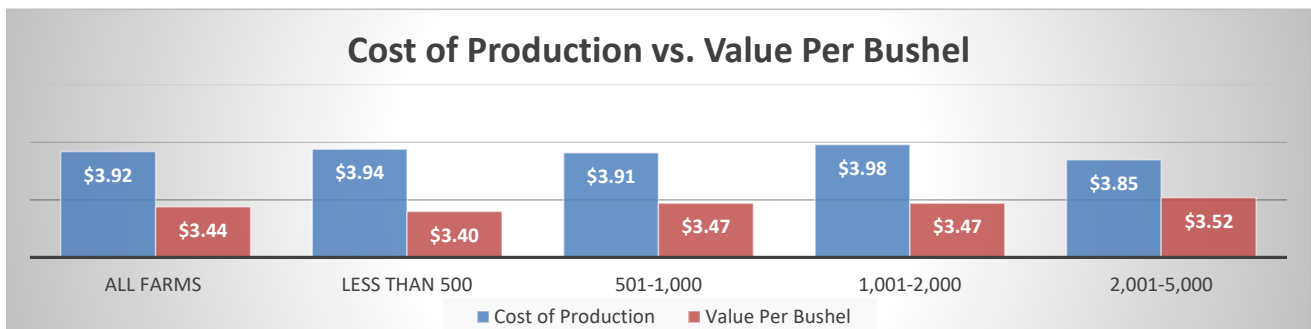
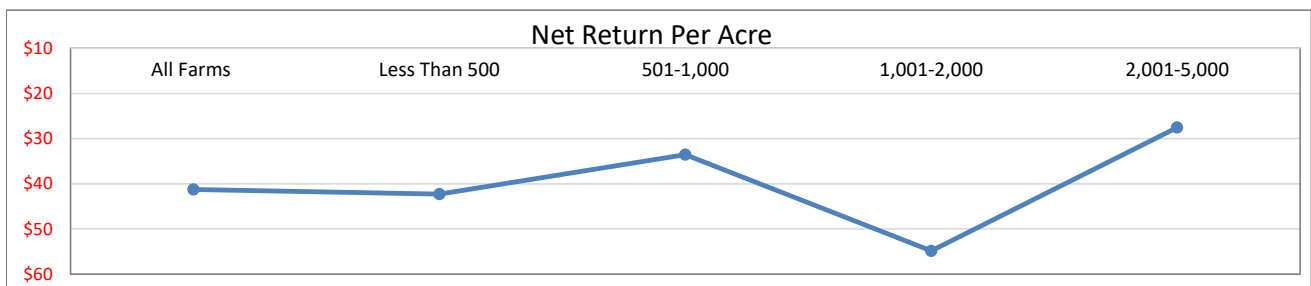
**Financial Standards Measures
(Farms Sorted By Total Crop Acres)
Minnesota State - Farm Business Management**

	Avg. Of All Farms	Less Than 500	501 - 1,000	1,001 2,000	2,001 - 5,000	5,001 - 10,000
Number of farms	1133	411	298	256	149	16
Liquidity						
Current ratio	1.57	1.55	1.56	1.51	1.54	2.53
Working capital	232,424	55,213	156,313	258,711	590,777	2,321,838
Working capital to gross inc	32.4%	30.7%	32.2%	29.9%	32.3%	50.4%
Solvency (market)						
Farm debt to asset ratio	44%	46%	41%	45%	45%	38%
Farm equity to asset ratio	56%	54%	59%	55%	55%	62%
Farm debt to equity ratio	0.79	0.85	0.70	0.81	0.83	0.60
Profitability (cost)						
Rate of return on farm assets	2.4%	0.9%	1.7%	2.2%	3.0%	5.0%
Rate of return on farm equity	0.9%	-2.7%	-0.2%	0.7%	2.1%	5.6%
Operating profit margin	7.1%	3.5%	6.0%	7.1%	8.3%	9.4%
Net farm income	66,590	15,679	41,315	77,220	183,993	520,211
EBITDA	151,029	40,099	109,530	190,858	383,853	824,474
Repayment Capacity						
Capital debt repayment	106,072	36,032	74,625	128,528	241,795	787,689
Capital debt repayment	25,154	7,368	11,883	21,537	55,946	490,301
Replacement margin	-11,005	-3,750	-19,425	-26,571	-25,070	353,173
Term debt coverage ratio	1.31	1.26	1.19	1.20	1.30	2.65
Replacement coverage ratio	0.91	0.91	0.79	0.83	0.91	1.81
Efficiency						
Asset turnover rate (cost)	33.6%	26.4%	28.9%	31.8%	36.2%	53.0%
Operating expense ratio	78.9%	77.7%	77.4%	77.9%	79.1%	82.1%
Depreciation expense ratio	7.1%	7.5%	8.2%	7.9%	7.0%	4.2%
Interest expense ratio	5.5%	8.2%	6.3%	5.7%	5.1%	2.5%
Net farm income ratio	9.3%	8.7%	8.5%	8.9%	10.0%	11.3%



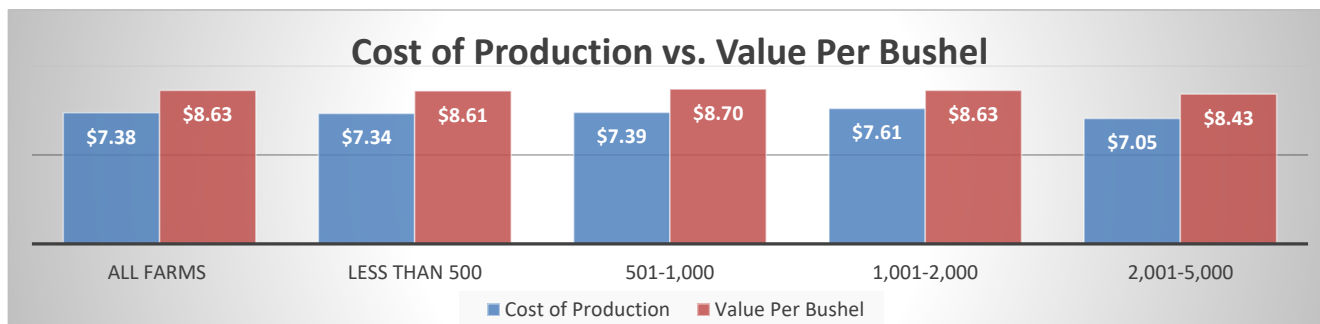
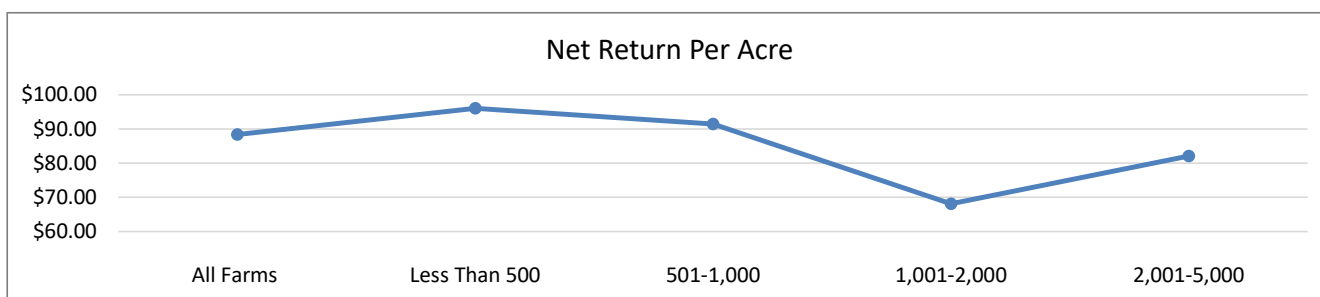
**Crop Enterprise Analysis for Corn on Rented Acres
(Farms Sorted By Total Crop Enterprise Acres)
Farm Business Management Database**

	Avg. of All Farms	Less Than 500	501 - 1,000	1,001 - 2,000	2,001 - 5,000
Number of farms	1233	1007	153	61	11
Yield per acre (bu.)	179.42	175.98	181.03	182.39	181.11
Value Per Bushel	3.44	3.40	3.47	3.47	3.52
Gross return per acre	660.19	639.51	673.26	674.51	693.37
Seed	107.30	108.38	110.09	105.56	101.10
Fertilizer	113.41	109.08	115.45	120.55	114.83
Crop chemicals	33.36	34.26	32.86	34.23	30.18
Crop insurance	18.93	17.94	21.07	19.01	19.12
Drying expense	18.84	18.55	19.79	18.63	14.02
Storage	2.30	2.62	2.02	2.43	1.42
Fuel & oil	27.32	27.36	26.86	28.57	26.23
Repairs	42.31	44.31	41.99	40.88	39.25
Custom hire	11.87	14.45	9.68	6.77	12.92
Hired labor	4.45	2.20	4.14	6.63	11.91
Land rent	196.79	181.79	196.79	213.68	225.56
Machinery leases	4.55	2.69	2.92	9.13	9.75
Utilities	1.52	1.35	1.62	1.33	3.21
Hauling and trucking	1.60	1.56	1.90	1.77	0.57
Marketing	1.79	1.49	1.75	2.48	2.23
Operating interest	15.67	14.57	15.74	17.18	15.52
Miscellaneous	3.22	2.71	3.79	4.02	2.64
Total direct expenses per acre	605.39	585.42	608.45	633.19	630.46
Return over direct exp per acre	54.80	54.09	64.81	41.32	62.90
Total overhead expenses per acre	96.04	96.34	98.39	96.17	90.45
Total dir&ovhd expenses per acre	701.43	681.76	706.84	729.35	720.92
Net return per acre	(41.24)	(42.25)	(33.58)	(54.84)	(27.55)
Cost of Production					
Total direct expense per bu.	3.37	3.33	3.36	3.47	3.48
Total dir & ovhd exp per bu.	3.91	3.87	3.90	4.00	3.98
Less govt & other income	3.66	3.64	3.65	3.76	3.66
With labor & management	3.92	3.94	3.91	3.98	3.85
Net value per unit	3.46	3.41	3.48	3.50	3.57
Machinery cost per acre	135.62	140.34	130.73	133.51	132.42



**Crop Enterprise Analysis for Soybeans on Rented Acres
(Farms Sorted By Total Crop Enterprise Acres)
Minnesota State - Farm Business Management**

	Avg. of All Farms	Less Than 500	501 1,000	1001 - 2,000	2001 - 5,000
Number of farms	1216	979	168	56	13
Yield per acre (bu.)	49.16	50.44	49.81	46.16	46.80
Value Per Bushel	8.63	8.61	8.70	8.63	8.43
Gross return per acre	527.87	539.84	541.97	498.66	481.01
Seed	58.54	57.93	59.69	59.63	55.55
Fertilizer	20.08	20.51	21.30	21.06	11.64
Crop chemicals	40.89	43.53	41.86	37.70	30.66
Crop insurance	18.73	18.74	19.32	18.64	16.87
Storage	0.73	0.99	0.76	-	-
Fuel & oil	16.78	16.17	17.54	18.05	14.60
Repairs	25.14	26.70	24.66	26.17	19.41
Custom hire	8.19	11.92	5.57	3.86	6.86
Hired labor	2.56	1.35	3.81	3.34	2.93
Land rent	170.47	170.84	175.40	163.20	167.70
Machinery leases	3.79	2.80	2.80	4.75	10.28
Utilities	0.93	0.78	1.13	0.83	1.32
Hauling and trucking	0.70	0.87	0.76	0.52	-
Marketing	1.12	1.33	0.91	1.26	-
Operating interest	8.94	8.53	9.90	9.07	7.59
Miscellaneous	2.62	2.44	3.31	2.60	2.63
Total direct expenses per acre	380.48	385.43	388.72	370.70	348.02
Return over direct exp per acre	147.39	154.41	153.25	127.96	132.99
Total overhead expenses per acre	59.00	58.38	61.84	59.84	50.92
Total dir & ovhd expenses per acre	439.49	443.81	450.56	430.54	398.94
Net return per acre	88.39	96.03	91.41	68.12	82.07
Cost of Production					
Total direct expense per bu.	7.74	7.64	7.80	8.03	7.44
Total dir & ovhd exp per bu.	8.94	8.80	9.05	9.33	8.52
Less govt & other income	6.77	6.67	6.81	7.05	6.63
With labor & management	7.38	7.34	7.39	7.61	7.05
Net value per unit	8.68	8.65	8.77	8.68	8.55
Machinery cost per acre	84.66	88.58	82.68	83.02	74.32



Environmental Practices Relating to Economic Viability

Minnesota State - Farm Business Management

Farms use a variety of practices to limit environmental impact while trying to maintain economic viability. Below is a sampling of these practices from the farms in the Minnesota State Farm Management Database.

Auto-Steer: This technology allows farms to reduce overlapping, resulting in reduced fossil fuel usage and maximized efficiency.

Variable Rate Fertilizer: Fertilizer applied by grids of the field to apply only where needed and minimize over application.

Variable Rate Seeding: Seed is sown at differing rates across fields to match soil types to minimize over population.

Side-Dress Fertilizer: Fertilizer applied multiple times during the growing season to better align application with crop nutrient needs. This limits unused fertilizer from contaminating the environment.

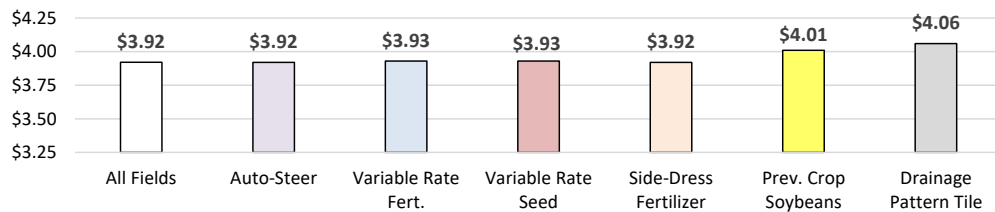
Crop Rotation: A traditional practice alternating crops planted in a field to minimize fertilizer needs and improve soil quality.

Drainage Tile: Traditional practice promoting plant health through improved water absorption, resulting in reduced water runoff and maximized nutrient usage.

Corn Enterprise

Sort	All Fields	Auto-Steer	Variable Rate Fert.	Variable Rate Seed	Side-Dress Fertilizer	Prev. Crop Soybeans	Drainage Pattern Tile
Number of Farms	1233	336	141	102	38	467	108
Yield	179.42	183.12	186.95	185.95	177.85	176.91	189.95
Seed	\$107.30	\$107.74	\$106.71	\$103.95	\$101.95	\$110.63	\$110.01
Fertilizer	\$113.41	\$115.16	\$112.34	\$115.42	\$115.13	\$112.68	\$120.62
Chemical	\$33.36	\$35.35	\$34.94	\$34.88	\$29.12	\$34.13	\$39.71
Fuel & Oil	\$27.32	\$27.15	\$27.56	\$26.49	\$24.18	\$27.61	\$27.04
Repairs	\$42.31	\$44.41	\$48.52	\$46.62	\$37.24	\$44.26	\$48.28
Rent	\$196.79	\$200.93	\$206.82	\$198.54	\$212.53	\$202.90	\$217.30
Interest	\$22.34	\$23.18	\$25.24	\$25.23	\$15.56	\$23.29	\$20.01
Mach and Bldg Depreciation	\$46.06	\$50.42	\$51.87	\$52.80	\$42.07	\$52.05	\$50.40
Net Return	-\$41.24	-\$39.99	-\$42.32	-\$40.67	-\$32.50	-\$50.89	-\$63.22
Cost of Prod - w/ Labor & Mgt	\$3.92	\$3.92	\$3.93	\$3.93	\$3.92	\$4.01	\$4.06
Mach Cost/Ac	\$135.62	\$137.39	\$141.77	\$141.93	\$121.51	\$136.70	\$142.10

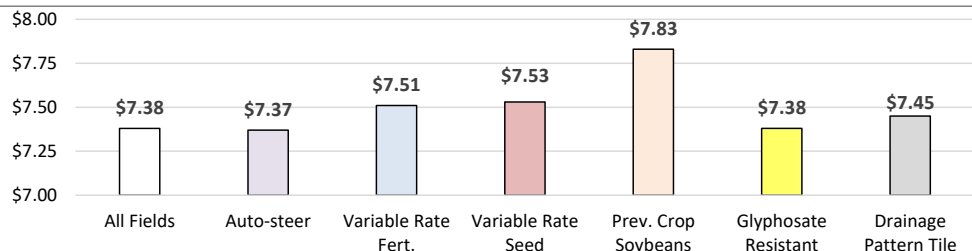
Cost of Production -
with Labor & Management
on Rented Corn



Soybean Enterprise

Sort	All Fields	Auto-steer	Variable Rate Fert.	Variable Rate Seed	Prev. Crop Soybeans	Glyphosate Resistant	Drainage Pattern Tile
Number of Farms	1216	316	101	66	100	125	94
Yield	49.16	50.92	52.88	50.44	47.90	50.20	56.90
Seed	\$58.54	\$59.47	\$55.31	\$56.91	\$56.91	\$58.37	\$57.92
Fertilizer	\$20.08	\$21.81	\$23.34	\$22.97	\$24.33	\$19.76	\$27.74
Chemical	\$40.89	\$44.08	\$48.27	\$49.11	\$43.99	\$43.69	\$51.92
Fuel & Oil	\$16.78	\$15.94	\$15.91	\$15.19	\$17.39	\$16.12	\$16.77
Repairs	\$25.40	\$25.10	\$26.88	\$25.78	\$28.46	\$26.71	\$27.80
Rent	\$170.47	\$182.83	\$202.42	\$184.97	\$159.75	\$182.55	\$206.18
Interest	\$13.00	\$13.38	\$14.91	\$16.11	\$12.95	\$12.76	\$11.54
Mach and Bldg Depreciation	\$27.87	\$29.28	\$29.62	\$27.87	\$28.93	\$29.31	\$29.28
Net Return	\$88.39	\$87.24	\$88.06	\$84.52	\$59.89	\$84.40	\$107.07
Cost of Prod - w/ Labor & Mgt	\$7.38	\$7.37	\$7.51	\$7.53	\$7.83	\$7.38	\$7.45
Mach Cost/Ac	\$84.66	\$82.41	\$86.89	\$84.96	\$87.45	\$82.51	\$85.35

Cost of Production -
with Labor & Management
on Rented Soybeans



Environmental Practices - Tillage Alternatives

Minnesota State - Farm Business Management

	Avg. of All Farms	Chisel / Reduced Till	No Till	Strip Till	Southern MN Row Width 19-25"	Northern MN Row Width 19- 25"
Number of farms	1233	817	18	22	71	23
Yield per acre (bu.)	179.42	179.22	177.04	176.44	188.80	170.55
Value per bu.	3.44	3.45	3.48	3.41	3.44	3.37
Gross return per acre	60.19	665.92	648.30	652.34	695.73	623.03
Seed	107.30	109.54	95.09	106.37	113.14	87.26
Fertilizer	113.41	113.32	144.70	114.75	109.09	95.79
Crop chemicals	33.36	34.45	27.97	32.40	35.63	30.85
Crop insurance	18.93	19.52	16.38	18.85	23.74	20.02
Drying expense	18.84	18.78	20.35	16.58	23.70	23.29
Storage	2.30	2.59	1.12	-	3.00	2.78
Fuel & oil	27.32	27.11	19.39	23.48	26.66	27.36
Repairs	42.31	42.63	38.53	46.71	45.83	47.64
Custom hire	11.87	10.53	25.29	8.20	8.27	11.15
Hired labor	4.45	5.03	0.93	-	6.86	1.25
Land rent	196.79	204.07	196.00	175.00	219.01	125.85
Machinery leases	4.55	4.43	5.76	3.09	3.98	2.88
Utilities	1.52	1.80	0.52	1.77	0.54	0.22
Hauling and trucking	1.60	1.23	2.47	-	0.43	0.22
Marketing	1.79	2.01	1.09	-	1.08	3.21
Operating interest	15.67	16.16	15.19	13.19	17.12	14.09
Miscellaneous	3.22	3.29	1.26	4.04	5.29	1.05
Total direct expenses per acre	605.39	616.49	613.71	568.25	643.42	495.11
Return over direct exp per acre	54.80	49.43	34.60	84.10	52.31	127.92
Total overhead expenses per acre	96.04	95.89	62.83	110.53	105.61	107.65
Total dir & ovhd expenses per acre	701.43	712.37	676.54	678.78	749.03	602.76
Net return per acre	(41.24)	(46.45)	(28.24)	(26.44)	(53.30)	20.27
Cost of Production						
Total direct expense per bu.	3.37	3.44	3.47	3.22	3.41	2.90
Total dir & ovhd exp per bu.	3.91	3.97	3.82	3.85	3.97	3.53
Less govt & other income	3.66	3.70	3.63	3.55	3.72	3.22
With labor & management	3.92	3.97	3.91	3.83	3.97	3.50
Net value per unit	3.46	3.47	3.50	3.50	3.45	3.37
Machinery cost per acre	135.62	134.15	124.09	140.17	139.46	144.93

