



MINNESOTA STATE

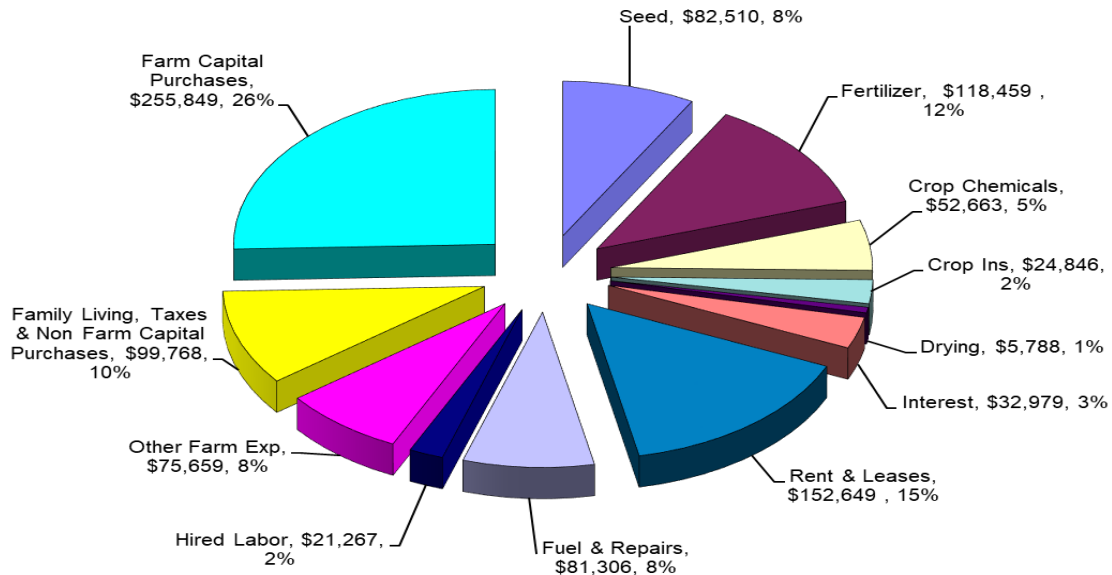
Farm Business Management Program Data

Crop Farm Sort - 2021

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

April, 2022

**Average Dollars Spent by a Crop Farm totals
\$1,003,743 in 2021**



In cooperation with the Center for Farm Financial Management University of Minnesota
Compiled by Aaron Brudelic

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Farm Business Management Website: agcentric.org or centerofagriculture.org

Brief Overview of 2021 Financial Summary

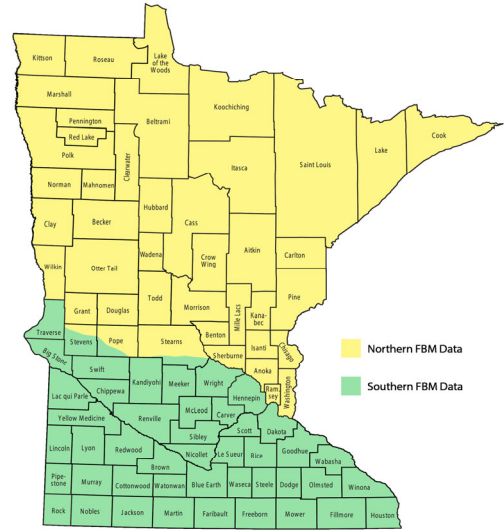
Minnesota State - Farm Business Management

This special report for crops provides summary financial information from 1310 crop producers in the Minnesota State Farm Business Management (FBM) database, which is a little over half of the 2293 total producers in the state FBM database.

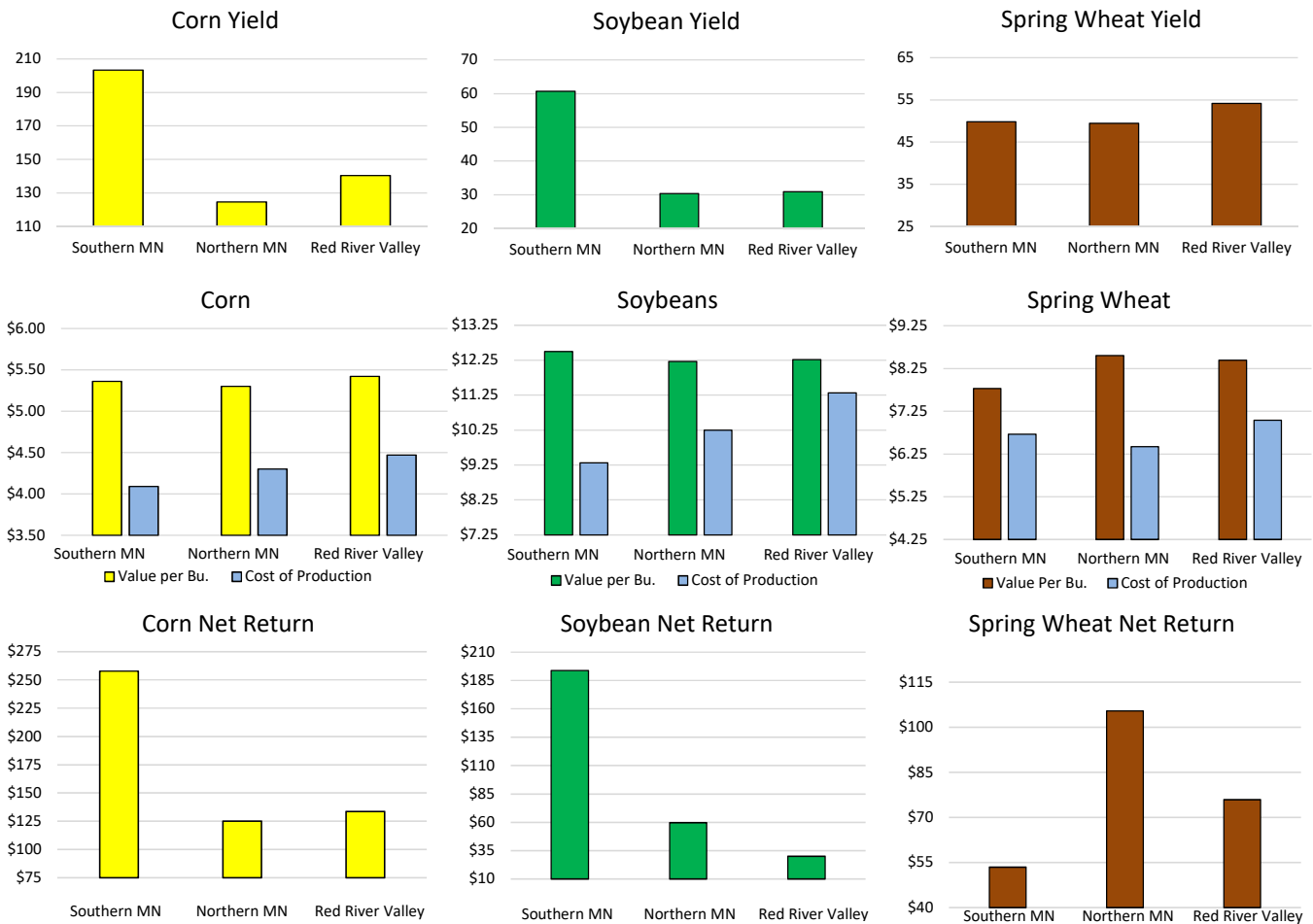
Based on the graphic on the cover, the average crop farm in Minnesota spent \$1,003,743 in their greater communities in 2021. At this level, over a 40 year farming career each farmer would spend \$40,149,720. Collectively in 2021, the farms in this report spent \$1,314,903,330 operating their businesses. The majority of this money is spent locally, including businesses and cooperatives; demonstrating the vital importance of farming on the economy of Minnesota.

This crop report shows data from crop producers split in various ways. Data is reported as Statwide FBM data, Northern Minnesota FBM data, Red River Valley FBM data, and Southern Minnesota FBM data.

The map to the right shows the approximate split between the Northern Minnesota and the Southern Minnesota FBM data. The Red River Valley FBM data runs along the western counties of the top one third of the state of Minnesota. The Red River Valley contains fertile agricultural soils that produce a variety of agricultural commodities in Northwest Minnesota.



Selected data also includes 1255 corn enterprises and 1204 soybean enterprises on rented land analyzing various environmental and tillage practices.

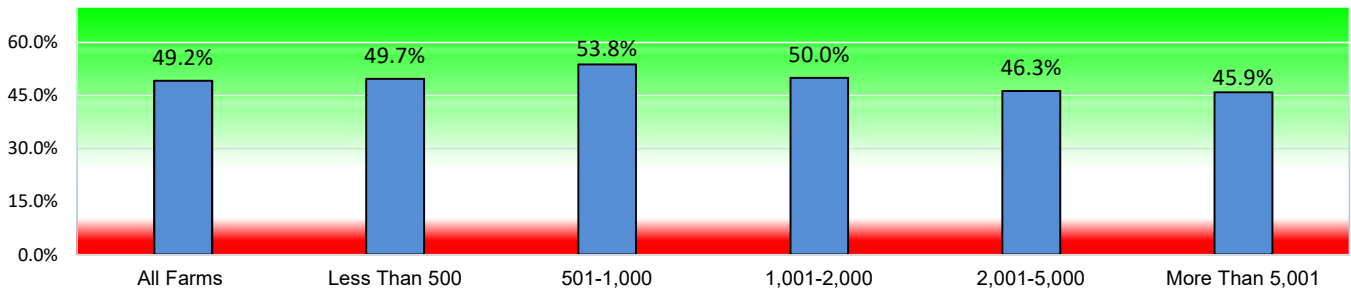


Financial Summary
(Farms Sorted By Total Crop Acres)
Minnesota State - Farm Business Management

Minnesota Statewide Data	Avg. Of All Farms	Less Than 500	501 - 1,000	1,001 - 2,000	2,001 - 5,000	More Than 5,001
Number of farms	1310	516	328	296	152	18
Income Statement						
Gross cash farm income	835,564	255,810	610,926	1,122,826	2,167,793	5,574,755
Total cash farm expense	648,126	193,346	450,398	871,695	1,717,256	4,583,463
Net cash farm income	187,438	62,464	160,527	251,130	450,536	991,292
Average net farm income	314,797	102,896	257,244	419,902	763,922	1,917,002
Median net farm income	197,395	79,962	248,891	392,234	574,001	1,757,564
Profitability (cost)						
Rate of return on assets	12.6%	11.5%	12.4%	12.6%	12.9%	10.1%
Rate of return on equity	19.6%	19.1%	18.6%	19.3%	20.2%	16.2%
Operating profit margin	29.7%	30.9%	32.0%	29.7%	28.4%	24.3%
Asset turnover rate	42.6%	37.1%	38.8%	42.4%	45.3%	41.5%
Liquidity & Repayment						
Current ratio	2.43	2.66	2.65	2.43	2.26	2.32
Working capital	478,675	148,718	386,958	657,115	1,153,108	2,979,158
Working capital to gross income	49.2%	49.7%	53.8%	50.0%	46.3%	45.9%
Term debt coverage ratio	4.60	4.57	4.73	4.44	4.41	5.99
Replacement coverage ratio	3.17	3.32	3.15	3.10	3.03	3.92
Term debt to EBITDA	1.52	2.03	1.49	1.48	1.46	1.15
Solvency						
Total assets	3,550,208	1,486,318	3,055,538	4,692,621	7,767,573	17,329,388
Total liabilities	1,429,327	573,963	1,117,068	1,914,104	3,362,031	7,347,269
Net worth	2,120,881	912,355	1,938,470	2,778,516	4,405,542	9,982,119
Farm debt to asset ratio	43%	44%	40%	43%	45%	43%
Nonfarm Information						
Net nonfarm income	52,263	65,136	51,940	45,155	27,478	15,327
Farms reporting living expenses	230	82	64	56	26	-
Total family living expense	70,088	54,152	65,558	75,081	108,236	-
Total living, invest, cap. purch	113,458	98,324	117,766	111,533	141,137	-

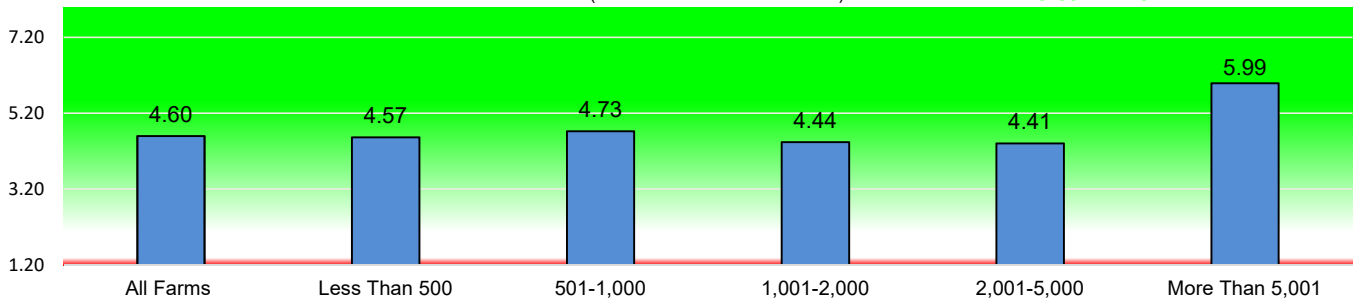
Working Capital to Gross Income
(Financial Standards Guidelines)

Red < 10%
Green > 30%



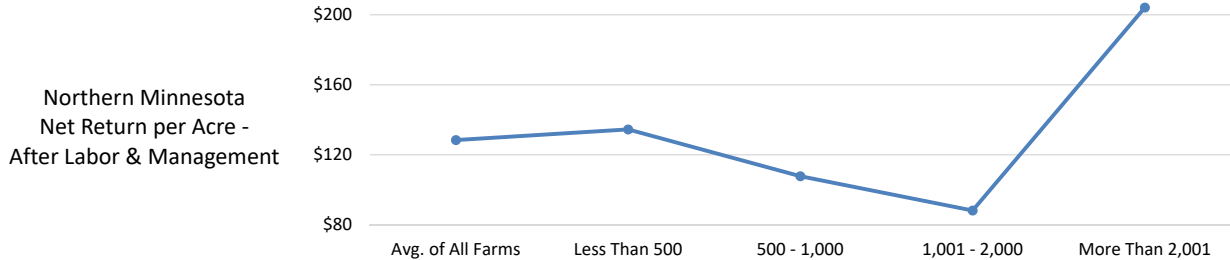
Term Debt Coverage Ratio
(Financial Standards Guidelines)

Red < 1.25
Green > 1.75

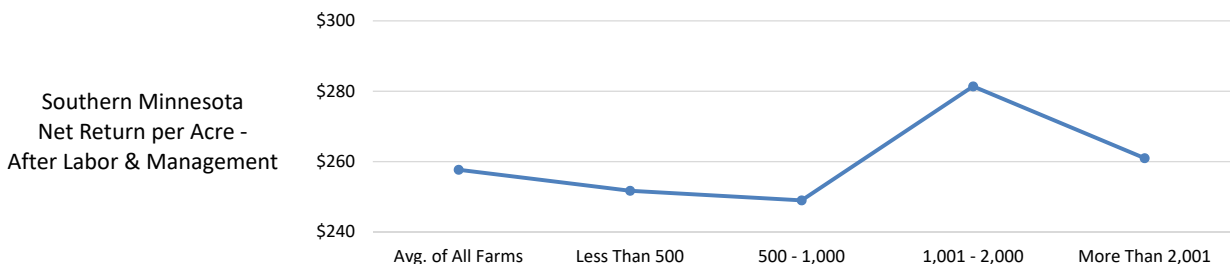


**Crop Enterprise Analysis for Corn on Rented Acres
(Farms Sorted By Total Crop Enterprise Acres)
Farm Business Management Database**

Northern Minnesota Data	Avg. of All Farms	Less Than 500	501 - 1,000	1,001 - 2,000	More Than 2,001
Number of farms	311	247	45	14	5
Yield per acre (bu.)	130.70	130.18	128.34	119.49	150.61
Value per bushel	5.35	5.34	5.27	5.56	5.34
Gross return per acre	774.04	788.98	747.26	711.61	865.24
Seed	91.05	92.87	90.96	91.69	85.52
Fertilizer	124.46	125.71	125.63	119.91	124.08
Crop chemicals	29.11	29.08	28.68	28.56	30.77
Fuel & oil	25.16	26.44	23.84	24.01	25.84
Repairs	52.55	56.30	51.88	47.54	49.80
Land rent	128.32	112.10	130.00	123.39	174.99
Total direct expenses per acre	507.72	501.59	507.59	488.90	547.44
Return over direct expenses per acre	266.33	287.39	239.67	222.71	317.80
Total overhead expenses per acre	94.57	101.75	91.38	93.61	82.83
Total dir & ovhd expenses per acre	602.28	603.33	598.97	582.51	630.27
Net return per acre	128.41	134.48	107.75	88.16	204.12
Cost of Production					
Total direct expense per bu.	3.88	3.85	3.96	4.09	3.63
Total direct and ovhd expense per bu.	4.61	4.63	4.67	4.87	4.18
Less government & other income	4.02	3.89	4.09	4.45	3.77
With labor & management	4.37	4.31	4.43	4.82	3.98
Machinery cost per acre	136.67	154.39	131.62	114.28	125.97

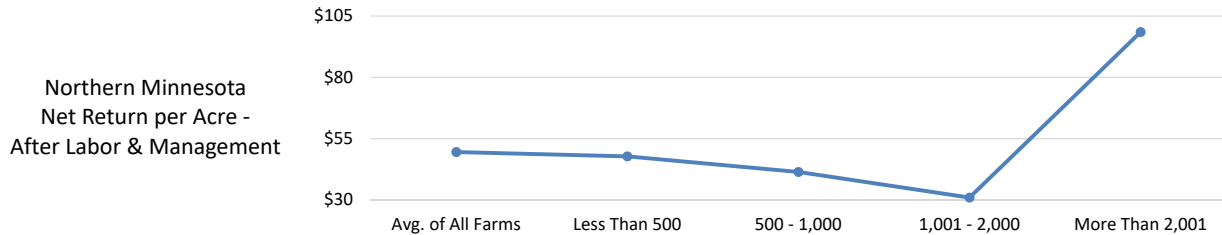


Southern Minnesota Data	Avg. of All Farms	Less Than 500	501 - 1,000	1,001 - 2,000	More Than 2,001
Number of farms	944	752	134	48	10
Yield per acre (bu.)	203.28	197.71	202.97	210.44	215.02
Value per bushel	5.36	5.38	5.38	5.37	5.20
Gross return per acre	1,107.53	1,088.98	1,109.71	1,136.64	1,125.17
Seed	109.58	110.24	111.02	110.22	100.63
Fertilizer	142.20	142.96	149.12	137.84	126.85
Crop chemicals	41.65	42.66	43.02	35.57	45.91
Fuel & oil	26.55	25.66	26.24	27.68	29.21
Repairs	56.20	56.82	58.90	54.85	47.88
Land rent	225.57	215.40	227.41	232.11	253.94
Total direct expenses per acre	685.94	669.50	697.95	688.68	721.10
Return over direct expenses per acre	421.59	419.48	411.76	447.96	404.07
Total overhead expenses per acre	106.01	101.60	104.40	117.29	107.15
Total dir & ovhd expenses per acre	791.94	771.10	802.35	805.97	828.26
Net return per acre	257.70	251.72	248.99	281.39	260.99
Cost of Production					
Total direct expense per bu.	3.37	3.39	3.44	3.27	3.35
Total direct and ovhd expense per bu.	3.90	3.90	3.95	3.83	3.85
Less government & other income	3.81	3.77	3.86	3.79	3.82
With labor & management	4.09	4.11	4.15	4.03	3.99
Machinery cost per acre	153.34	155.81	152.80	156.29	136.74

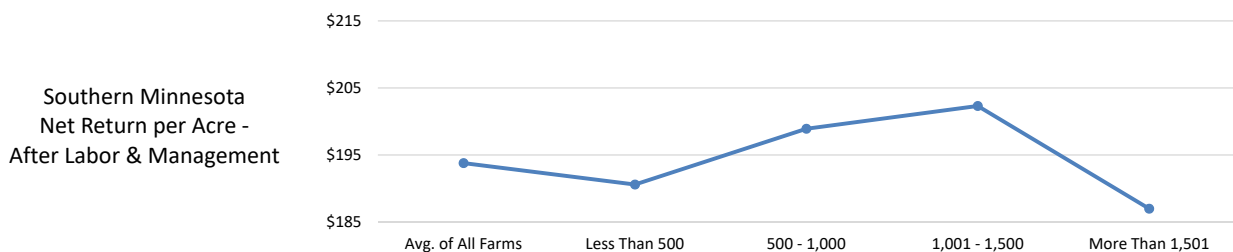


**Crop Enterprise Analysis for Soybeans on Rented Acres
(Farms Sorted By Total Crop Enterprise Acres)
Farm Business Management Database**

Northern Minnesota Data	Avg. of All Farms	Less Than 500	501 - 1,000	1,001 - 2,000	More Than 2,001
Number of farms	344	238	65	31	10
Yield per acre (bu.)	30.55	32.04	29.81	28.21	33.06
Value per bushel	12.23	12.10	12.14	12.29	12.54
Gross return per acre	435.70	448.94	419.40	417.69	470.96
Seed	57.22	56.81	56.99	58.60	56.14
Fertilizer	24.75	27.76	23.60	24.63	21.49
Crop chemicals	35.42	37.99	36.03	32.68	34.12
Fuel & oil	14.18	14.99	13.19	13.73	15.22
Repairs	29.09	31.73	28.60	29.67	24.15
Land rent	111.13	104.05	107.67	117.14	120.52
Total direct expenses per acre	306.51	313.80	299.01	310.38	300.32
Return over direct expenses per acre	129.19	135.14	120.39	107.31	170.64
Total overhead expenses per acre	56.07	58.14	55.48	55.69	53.97
Total dir & ovhd expenses per acre	362.57	371.94	354.49	366.07	354.30
Net return per acre	49.56	47.80	41.43	31.00	98.48
Cost of Production					
Total direct expense per bu.	10.03	9.79	10.03	11.00	9.08
Total direct and ovhd expense per bu.	11.87	11.61	11.89	12.98	10.72
Less government & other income	9.68	9.59	9.78	10.26	8.84
With labor & management	10.61	10.61	10.75	11.19	9.56
Machinery cost per acre	79.09	90.86	75.00	74.91	71.82



Southern Minnesota Data	Avg. of All Farms	Less Than 500	501 - 1,000	1,001 - 1,500	More Than 1,501
Number of farms	860	712	116	19	13
Yield per acre (bu.)	60.74	59.25	60.94	63.40	64.78
Value per bushel	12.50	12.47	12.48	12.57	12.60
Gross return per acre	767.12	747.82	770.65	802.65	816.63
Seed	52.16	52.08	51.72	52.01	53.88
Fertilizer	23.35	23.94	20.52	23.91	28.06
Crop chemicals	54.56	54.87	51.95	53.09	61.73
Fuel & oil	17.10	16.13	17.55	18.26	19.38
Repairs	35.75	36.06	35.41	39.68	31.88
Land rent	224.90	212.69	233.29	235.59	249.05
Total direct expenses per acre	468.33	451.95	467.05	489.73	529.78
Return over direct expenses per acre	298.79	295.86	303.59	312.92	286.85
Total overhead expenses per acre	67.85	64.24	68.44	81.19	71.54
Total dir & ovhd expenses per acre	536.18	516.19	535.50	570.92	601.32
Net return per acre	193.79	190.59	198.91	202.31	186.99
Cost of Production					
Total direct expense per bu.	7.71	7.63	7.66	7.72	8.18
Total direct and ovhd expense per bu.	8.83	8.71	8.79	9.00	9.28
Less government & other income	8.68	8.55	8.61	8.90	9.27
With labor & management	9.31	9.25	9.22	9.38	9.71
Machinery cost per acre	102.22	102.50	99.90	108.20	102.25



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.

CSP/EQIP Gov. Conservation: Farm Service Agency programs which incentivize environmentally friendly farming practices.

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.

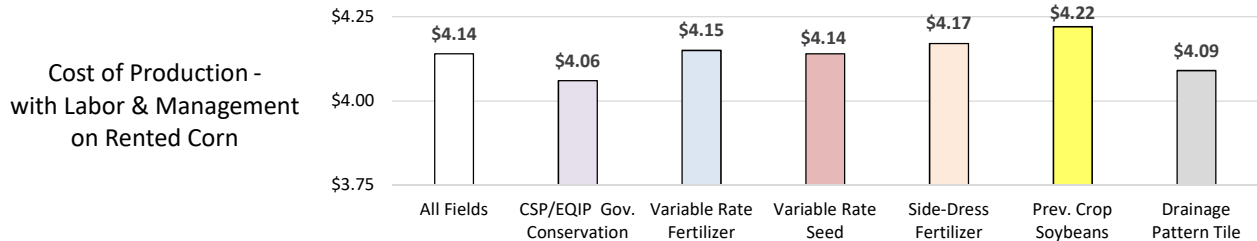
Side-Dress Fertilizer: Fertilizer applied multiple times during the growing season to better align fertilizer application with crop nutrient needs. This limits unused fertilizer from contaminating the environment.

Crop Rotation: A traditional practice of 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.

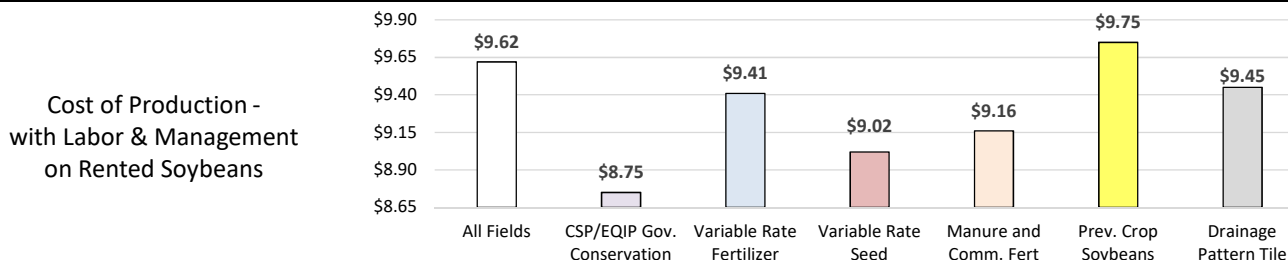
Corn Enterprise

Minnesota Statewide Data	All Fields	CSP/EQIP Gov. Conservation	Variable Rate Fertilizer	Variable Rate Seed	Side-Dress Fertilizer	Prev. Crop Soybeans	Drainage Pattern Tile
Number of farms	1255	37	161	130	80	440	126
Yield	185.33	168.32	188.44	183.00	183.07	187.69	206.05
Seed	\$105.00	\$99.72	\$104.77	\$103.57	\$104.60	\$106.19	\$107.60
Fertilizer	\$137.81	\$135.62	\$145.95	\$142.80	\$144.77	\$144.45	\$148.17
Chemical	\$38.55	\$41.11	\$37.52	\$38.37	\$40.73	\$38.72	\$47.05
Fuel & oil	\$26.20	\$22.18	\$25.73	\$25.22	\$24.07	\$26.21	\$25.85
Repairs	\$55.30	\$53.14	\$56.76	\$53.24	\$50.02	\$58.26	\$58.69
Rent	\$201.52	\$184.85	\$202.16	\$196.02	\$208.36	\$202.77	\$223.06
Interest	\$14.54	\$15.87	\$18.74	\$17.54	\$16.84	\$15.05	\$15.14
Mach and bldg depreciation	\$48.67	\$48.54	\$51.69	\$49.97	\$44.84	\$55.66	\$57.14
Net return	\$225.73	\$202.92	\$234.04	\$219.01	\$209.80	\$218.13	\$259.68
Cost of prod - w/ labor & mgt	\$4.14	\$4.06	\$4.15	\$4.14	\$4.17	\$4.22	\$4.09
Machinery cost / acre	\$149.22	\$143.97	\$147.57	\$145.28	\$142.14	\$154.86	\$159.89



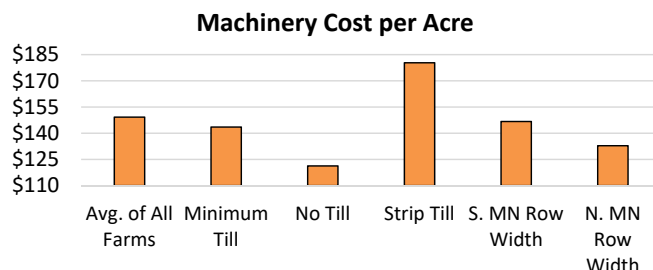
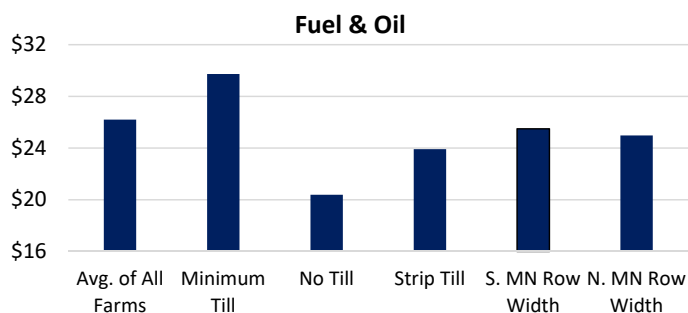
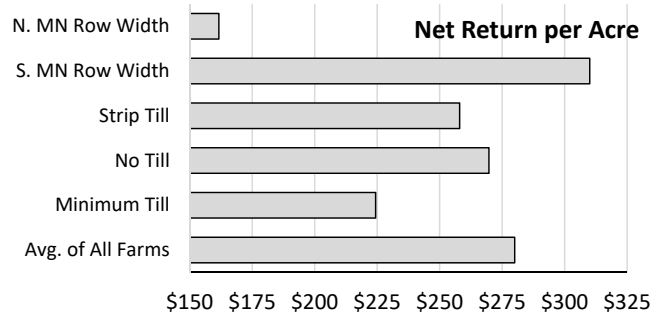
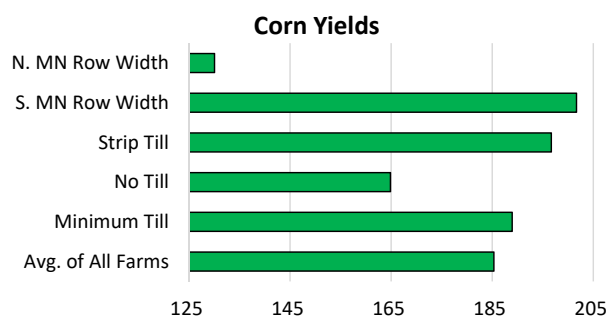
Soybean Enterprise

Minnesota Statewide Data	All Fields	CSP/EQIP Gov. Conservation	Variable Rate Fertilizer	Variable Rate Seed	Manure and Comm. Fert	Prev. Crop Soybeans	Drainage Pattern Tile
Number of farms	1204	32	90	78	226	95	121
Yield	49.16	51.86	55.17	56.54	59.05	49.85	58.76
Seed	\$54.10	\$54.93	\$50.91	\$52.29	\$58.14	\$56.68	\$51.62
Fertilizer	\$23.89	\$21.05	\$29.83	\$24.72	\$30.16	\$20.69	\$21.36
Chemical	\$47.22	\$54.18	\$52.11	\$49.96	\$60.32	\$46.71	\$56.39
Fuel & oil	\$15.98	\$13.81	\$14.59	\$15.46	\$19.51	\$15.98	\$15.77
Repairs	\$33.20	\$30.38	\$34.56	\$31.17	\$40.19	\$33.97	\$33.14
Rent	\$181.27	\$188.87	\$204.09	\$198.47	\$241.69	\$188.43	\$225.95
Interest	\$9.23	\$10.26	\$9.45	\$12.24	\$9.58	\$8.55	\$9.45
Mach and bldg depreciation	\$29.39	\$21.23	\$31.22	\$28.12	\$34.27	\$33.16	\$35.10
Net return	\$138.48	\$182.90	\$166.40	\$192.40	\$196.44	\$144.88	\$172.97
Cost of prod - w/ labor & mgt	\$9.62	\$8.75	\$9.41	\$9.02	\$9.16	\$9.75	\$9.45
Machinery cost / acre	\$93.35	\$86.98	\$93.55	\$92.94	\$100.94	\$92.04	\$97.01



**Environmental Practices - Tillage Alternatives
Corn on Rented Acres
Minnesota State - Farm Business Management**

Minnesota Statewide Data	Avg. of All Farms	Minimum Till	No Till	Strip Till	Southern MN	Northern MN
					Row Width 19 - 25"	Row Width 19 - 25"
Number of farms	1255	56	17	23	78	81
Yield per acre (bu.)	185.33	188.95	164.86	196.70	201.68	130.05
Value per bu.	5.36	5.06	5.46	5.17	5.32	5.43
Gross return per acre	1,025.08	990.49	919.29	1,052.65	1,102.58	767.18
Seed	105.00	112.20	90.06	95.84	108.03	90.79
Fertilizer	137.81	142.91	147.34	147.57	134.85	121.40
Crop chemicals	38.55	41.98	34.57	38.06	34.94	29.31
Crop insurance	27.30	28.44	27.20	26.92	32.88	23.11
Drying expense	13.20	15.63	11.46	17.19	20.14	4.69
Storage	1.61	1.98	1.80	1.37	2.29	0.36
Fuel & oil	26.20	29.73	20.39	23.92	25.49	24.98
Repairs	55.30	58.18	44.26	78.08	48.80	54.10
Custom hire	13.13	25.62	11.34	14.55	11.65	6.03
Hired labor	3.94	6.75	0.35	0.40	5.23	4.43
Land rent	201.52	222.09	157.63	207.34	231.03	136.55
Machinery leases	4.52	10.03	6.04	5.14	4.25	1.07
Utilities	1.03	1.98	1.33	0.78	0.67	-
Hauling and trucking	1.95	4.14	12.41	1.48	3.07	0.20
Marketing	1.37	5.77	2.03	3.83	1.03	0.86
Operating interest	9.50	16.22	5.90	9.96	8.12	8.92
Miscellaneous	2.51	3.45	1.54	2.46	2.13	4.13
Total direct expenses per acre	641.87	664.46	575.74	674.90	674.62	510.94
Return over direct exp per acre	383.20	326.03	343.55	377.76	427.97	256.24
Total overhead expenses per acre	103.18	101.64	73.83	119.75	117.91	94.59
Total dir & ovhd expenses per acre	745.05	224.39	649.57	794.65	792.53	605.52
Net return per acre before labor & mgmt	280.03	224.39	269.71	258.01	310.05	161.66
Cost of Production						
Total direct expense per bu.	3.46	3.24	3.49	3.43	3.34	3.93
Total direct and ovhd expense per bu.	4.02	3.74	3.94	4.04	3.93	4.66
Less government & other income	3.84	3.34	3.82	3.84	3.78	4.17
With labor & management	4.14	3.59	4.16	4.19	4.06	4.58
Machinery cost per acre	149.22	143.54	121.27	180.33	146.70	132.85



**Environmental Practices - Tillage Alternatives
Soybeans on Rented Acres
Minnesota State - Farm Business Management**

Minnesota Statewide Data	Avg. of All Farms	Minimum Till	No Till	Strip Till	Southern MN Row Width 19 - 25"	Northern MN Row Width 19 - 25"
Number of farms	1204	58	42	15	78	73
Yield per acre (bu.)	49.16	48.59	55.09	47.38	63.07	31.60
Value per bu.	12.44	12.29	12.29	12.27	12.27	12.18
Gross return per acre	640.04	627.33	694.46	629.00	777.65	449.40
Seed	54.10	54.45	50.54	46.13	50.15	59.25
Fertilizer	23.89	29.85	39.50	36.65	22.17	18.63
Crop chemicals	47.22	48.66	49.04	44.47	52.35	36.16
Crop insurance	24.42	20.70	23.77	24.22	27.57	20.29
Storage	0.59	0.74	1.08	0.62	0.23	0.26
Fuel & oil	15.98	16.06	15.17	20.18	17.41	13.29
Repairs	33.20	32.95	28.96	54.86	31.44	27.98
Custom hire	9.56	13.72	13.61	7.73	11.99	4.27
Hired labor	2.54	4.24	0.66	-	3.85	1.35
Land rent	181.27	175.89	191.02	186.35	221.65	133.96
Machinery leases	3.61	3.36	4.89	4.44	3.75	1.03
Utilities	0.65	0.69	0.87	0.27	0.28	-
Hauling and trucking	0.84	2.25	1.70	2.42	1.31	0.27
Marketing	1.10	1.24	1.79	4.13	1.17	0.63
Operating interest	5.86	7.50	4.32	9.14	6.39	4.89
Miscellaneous	2.27	2.31	2.04	2.49	2.52	2.24
Total direct expenses per acre	406.28	414.59	429.03	444.08	454.84	324.51
Return over direct exp per acre	233.76	212.73	265.42	184.92	322.81	124.89
Total overhead expenses per acre	63.33	65.48	58.30	78.45	70.22	56.97
Total dir & ovhd expenses per acre	469.61	480.08	487.12	522.53	525.06	381.48
Net return per acre before labor & mgmt	170.43	147.25	207.12	106.47	252.59	67.92
Cost of Production						
Total direct expense per bu.	8.26	8.53	7.79	9.37	7.21	10.27
Total direct and ovhd expense per bu.	9.55	9.88	8.85	11.03	8.33	12.07
Less government & other income	8.92	9.21	8.49	9.94	8.26	9.88
With labor & management	9.62	9.98	9.23	10.80	8.81	10.81
Machinery cost per acre	93.35	100.27	93.75	127.82	98.33	76.17

