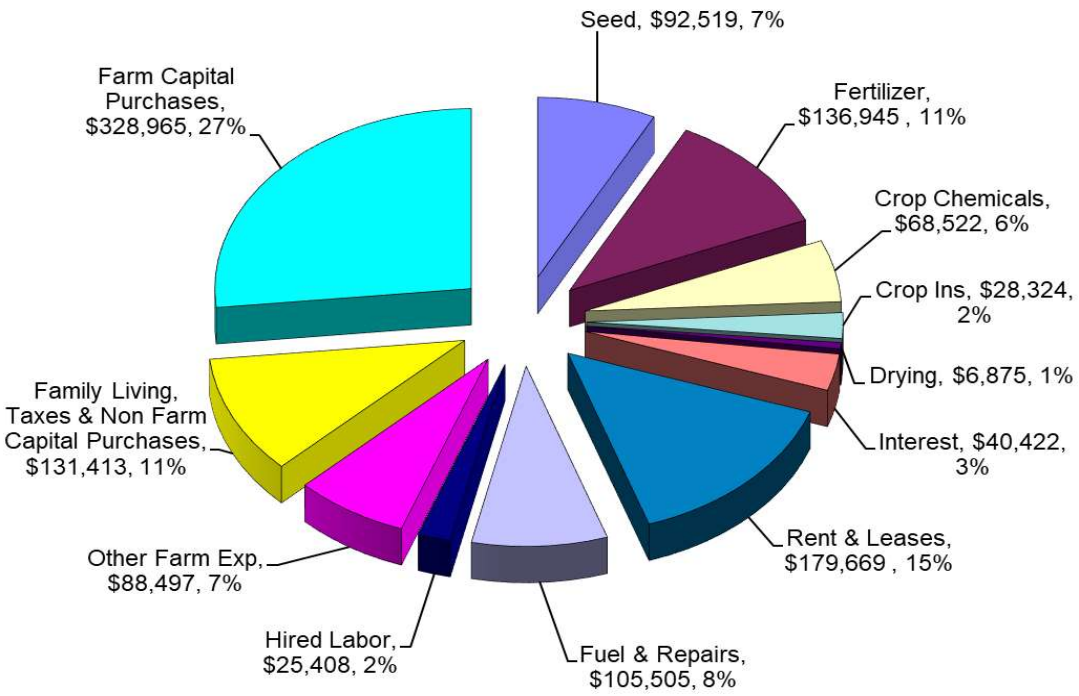
MINNESOTA STATE

Farm Business Management Program Data

Crop Farm Sort - 2023

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

Average Dollars Spent by a Crop Farm totals $1,233,064 in 2023



ALEXANDRIA Technical & Community COLLEGE · CLC CENTRAL LAKES COLLEGE · Minnesota West COMMUNITY & TECHNICAL COLLEGE · NORTHLAND COMMUNITY & TECHNICAL COLLEGE · FBM EST 1953 FARM BUSINESS MANAGEMENT MINNESOTA STATE Farm Business Management · RIVERLAND Community College · South Central COLLEGE · ST. CLOUD TECHNICAL & COMMUNITY COLLEGE

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

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

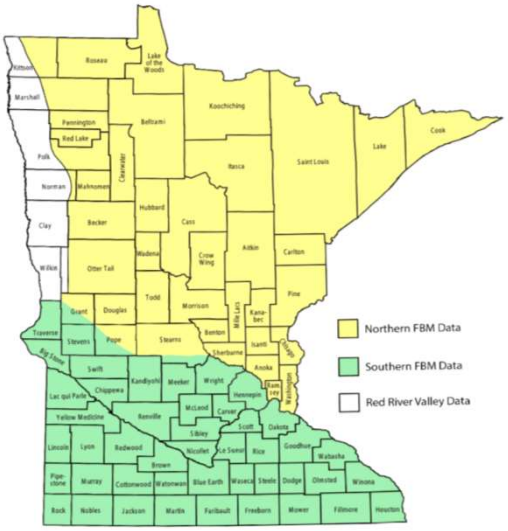
Brief Overview of 2023 Financial Summary
Minnesota State - Farm Business Management

This special report for crops provides summary financial information from 1,371 crop producers in the Minnesota State Farm Business Management (FBM) database, which is over half of the 2,317 total producers in the state FBM database.

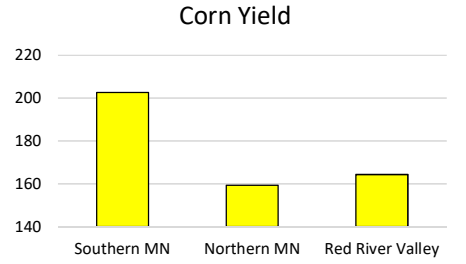
Based on the graphic on the cover, the average crop farm in Minnesota spent $1,233,064 in their greater communities in 2023. At this level, over a 40 year farming career each farmer would spend $49,322,560. Collectively in 2023, the farms in this report spent $1,690,530,744 operating their businesses. The majority of this money is spent locally, including businesses and cooperatives; demonstrating the vital importance of farming on the economy of Minnesota.

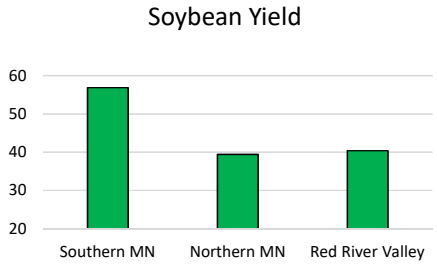
This crop report shows data from crop producers split in various ways. Data is reported as Statwide FBM data, Northern Minnesota FBM data, Red River Valley FBM data, and Southern Minnesota FBM data.

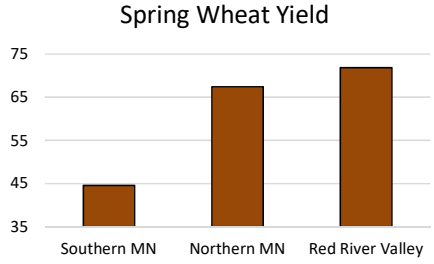
The map to the right shows the approximate split between the Northern Minnesota and the Southern Minnesota FBM data. The Red River Valley FBM data runs along the western counties of the top one third of the state of Minnesota. The Red River Valley contains fertile agricultural soils that produce a variety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

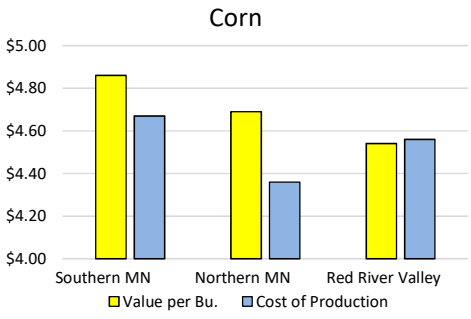


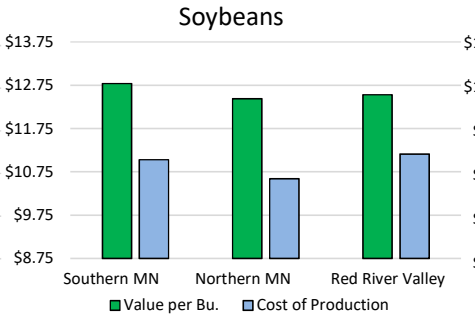
Selected data also includes 1,361 corn enterprises and 1,287 soybean enterprises on rented land analyzing various environmental and tillage practices.

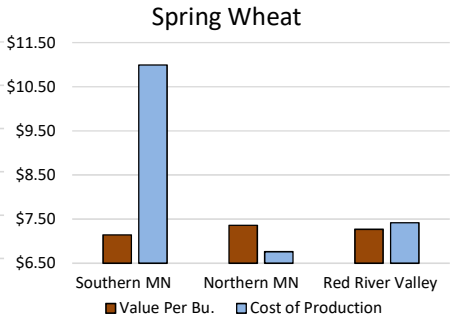


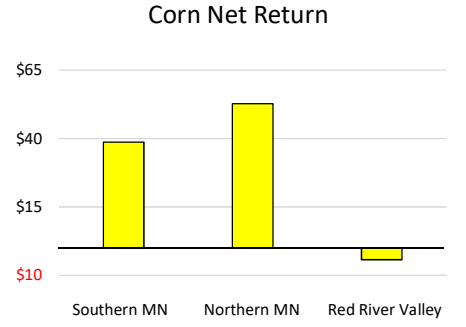


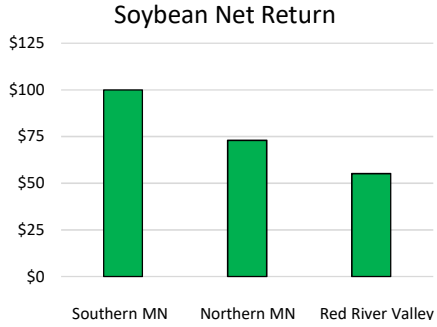


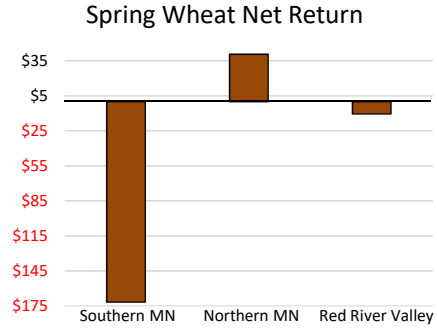








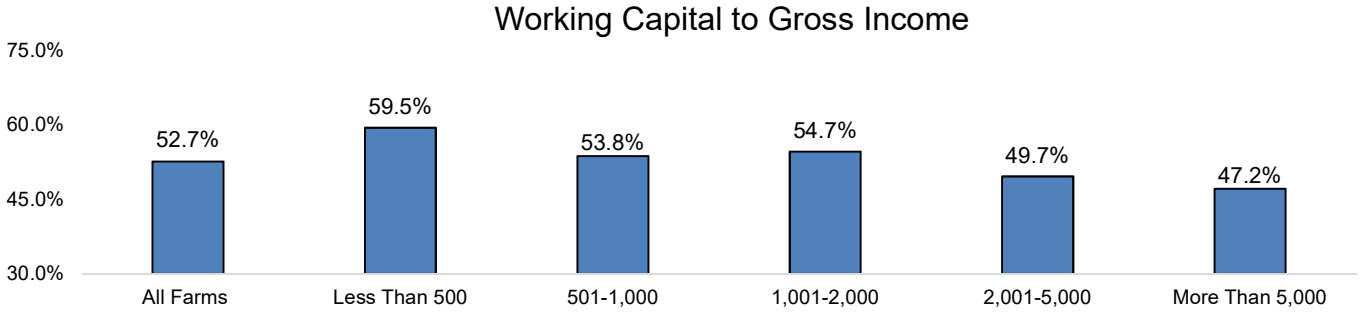


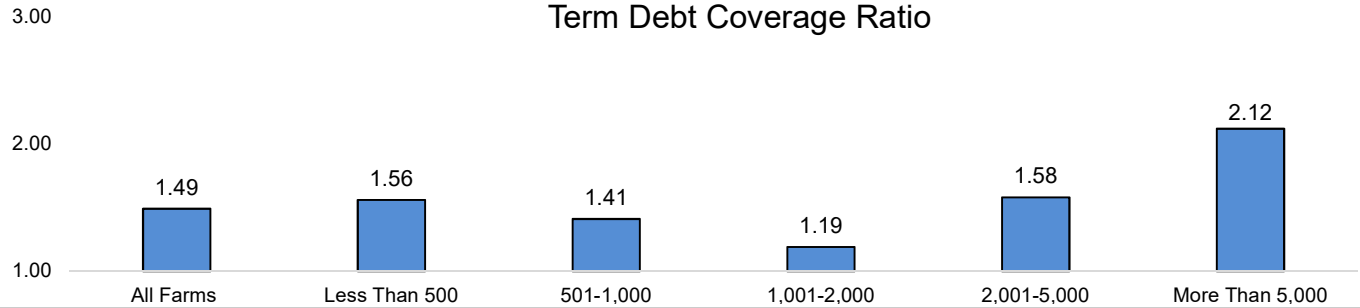


Crop Farm Financial Summary

(Sorted By Total Crop Acres)

Minnesota Statewide Data	All Farm Average	Less Than 500	501 - 1,000	1,001 - 2,000	2,001 - 5,000	More Than 5,000
Number of farms	1371	556	340	298	154	23
Income Statement						
Gross cash farm income	1,001,071	285,650	731,384	1,366,026	2,668,108	6,391,796
Total cash farm expense	722,686	217,418	552,136	1,045,048	2,104,597	5,009,133
Net cash farm income	228,384	68,323	179,248	320,978	563,511	1,382,663
Average net farm income	104,136	30,594	71,332	120,800	301,310	830,770
Median net farm income	46,051	19,023	61,885	111,570	240,500	720,422
Profitability (cost)						
Rate of return on assets	2.9%	2.1%	2.2%	2.3%	3.7%	5.1%
Rate of return on equity	2.2%	0.8%	1.0%	1.2%	3.6%	6.0%
Operating profit margin	8.5%	8.1%	7.2%	7.1%	9.7%	11.3%
Asset turnover rate	34.2%	26.3%	31.0%	33.0%	38.6%	45.7%
Liquidity & Repayment						
Current ratio	2.30	2.79	2.38	2.26	2.19	2.16
Working capital	501,855	159,472	366,939	691,308	1,303,582	2,950,261
Working capital to gross income	52.7%	59.5%	53.8%	54.7%	49.7%	47.2%
Term debt coverage ratio	1.49	1.56	1.41	1.19	1.58	2.12
Replacement coverage ratio	1.07	1.16	1.00	1.22	1.14	1.49
Term debt to EBITDA	3.45	5.13	3.78	3.64	2.83	2.05
Solvency						
Total assets	4,103,518	1,789,799	3,423,765	5,492,846	9,081,546	18,751,666
Total liabilities	1,634,049	669,114	1,274,070	2,236,614	3,820,909	7,832,150
Net worth	2,469,469	1,120,685	2,149,696	3,256,233	5,260,637	10,919,516
Farm debt to asset ratio	42%	42%	41%	43%	43%	42%
Nonfarm Information						
Net nonfarm income	52,492	66,537	54,920	38,217	30,561	8,845
Farms reporting living expenses	232	94	66	48	22	-
Total family living expense	81,808	64,152	81,208	90,026	128,901	-
Total living, invest, cap. purch	160,080	110,071	137,898	231,632	222,619	-

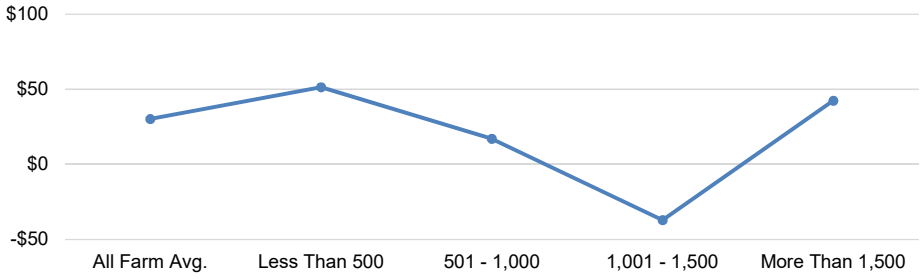




Northern Minnesota Crop Enterprise Analysis on Rented Acres
(Sorted By Total Crop Enterprise Acres)

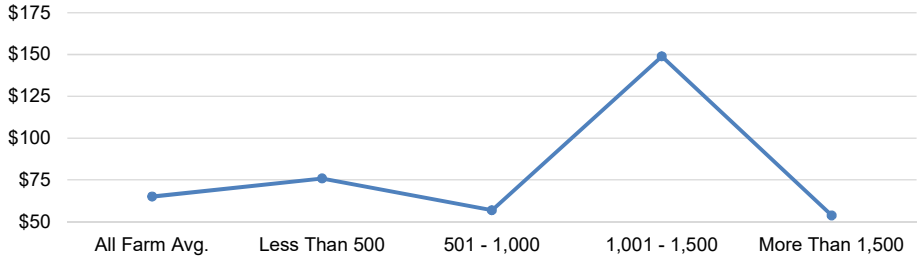
N. Minnesota & Red River Corn Data	All Farm Average	Less Than 500	501 - 1,000	1,001 - 1,500	More Than 1,500
Number of farms	331	257	45	12	17
Yield per acre (bu.)	161.36	154.95	162.17	168.67	165.91
Value per bushel	4.62	4.60	4.60	4.39	4.78
Gross return per acre	808.68	790.47	814.04	798.30	831.96
Seed	101.33	103.40	101.29	108.79	95.56
Fertilizer	189.05	175.22	201.91	198.49	191.87
Crop chemicals	38.03	40.86	36.25	32.71	38.14
Fuel & oil	37.58	38.35	36.84	42.04	35.35
Repairs	69.09	69.69	66.90	76.25	67.21
Land rent	148.31	125.41	153.80	177.10	191.15
Total direct expenses per acre	661.78	629.43	675.33	702.67	674.82
Return over direct expenses per acre	146.90	161.04	138.71	95.63	157.15
Total overhead expenses per acre	116.72	109.71	121.62	132.80	114.80
Total dir & ovhd expenses per acre	778.50	739.14	796.96	835.47	789.62
Net return per acre	30.18	51.33	17.08	(37.17)	42.34
Cost of Production					
Total direct expense per bu.	4.10	4.06	4.16	4.17	4.07
Total direct and ovhd expense per bu.	4.82	4.77	4.91	4.95	4.76
Less government & other income	4.44	4.27	4.50	4.61	4.52
With labor & management	4.76	4.69	4.81	4.93	4.75
Machinery cost per acre	182.08	188.06	179.09	188.95	174.08

N. Minnesota & Red River Corn Net Return per Acre - After Labor & Management



N. Minnesota & Red River Soybean Data	All Farm Average	Less Than 500	501 - 1,000	1,001 - 1,500	More Than 1,500
Number of farms	349	254	58	23	14
Yield per acre (bu.)	39.86	39.10	39.64	40.00	41.17
Value per bushel	12.48	12.41	12.52	12.53	12.50
Gross return per acre	519.76	515.21	516.47	524.15	526.88
Seed	62.37	59.53	65.77	61.67	63.02
Fertilizer	37.18	35.28	33.99	36.07	45.09
Crop chemicals	54.07	54.57	49.88	51.16	61.23
Fuel & oil	21.39	21.97	21.40	20.41	21.08
Repairs	39.31	38.87	41.52	35.05	35.81
Land rent	128.88	117.87	130.22	126.95	140.19
Total direct expenses per acre	387.23	375.50	387.94	361.09	400.13
Return over direct expenses per acre	132.52	139.71	128.52	220.46	126.75
Total overhead expenses per acre	67.46	63.87	71.63	71.54	72.97
Total dir & ovhd expenses per acre	454.69	439.37	459.57	432.63	473.10
Net return per acre	65.07	75.84	56.90	148.92	53.77
Cost of Production					
Total direct expense per bu.	9.71	9.60	9.79	8.08	9.72
Total direct and ovhd expense per bu.	11.41	11.24	11.59	9.68	11.49
Less government & other income	10.85	10.47	11.08	9.32	11.19
With labor & management	11.65	11.45	11.87	9.82	11.82
Machinery cost per acre	103.32	107.41	105.46	96.37	97.30

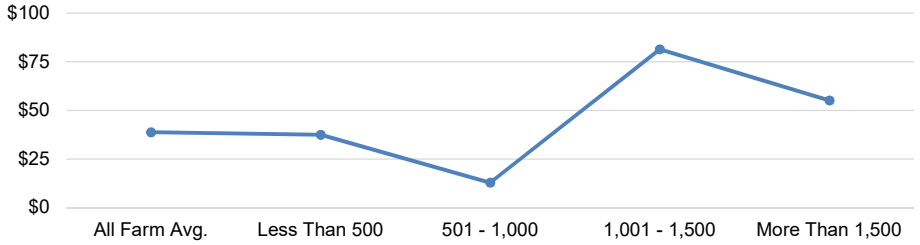
N. Minnesota & Red River Soybean Net Return per Acre - After Labor & Management



Southern Minnesota Crop Enterprise Analysis on Rented Acres
(Sorted By Total Crop Enterprise Acres)

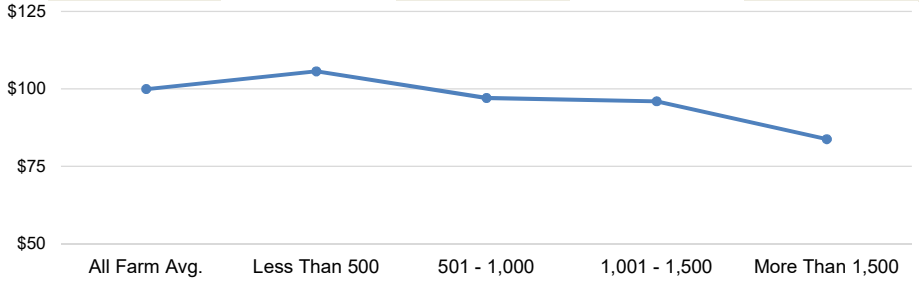
Southern Minnesota Corn Data	All Farm Average	Less Than 500	501 - 1,000	1,001 - 1,500	More Than 1,500
Number of farms	1030	809	155	35	31
Yield per acre (bu.)	202.63	195.84	201.60	205.88	216.46
Value per bushel	4.86	4.76	4.85	4.95	5.02
Gross return per acre	1052.32	1007.50	1046.14	1083.78	1137.17
Seed	121.46	121.62	125.09	121.52	115.62
Fertilizer	246.00	234.42	248.79	233.49	273.59
Crop chemicals	58.71	56.10	61.44	59.20	59.75
Fuel & oil	35.40	33.82	37.25	38.15	34.29
Repairs	64.26	66.80	69.75	62.40	51.72
Land rent	262.37	239.74	269.38	268.48	295.73
Total direct expenses per acre	893.34	851.55	915.77	883.21	953.36
Return over direct expenses per acre	158.98	155.95	130.37	200.56	183.81
Total overhead expenses per acre	120.26	118.52	117.55	119.10	128.72
Total dir & ovhd expenses per acre	1013.60	970.07	1033.32	1002.32	1082.08
Net return per acre	38.72	37.43	12.83	81.46	55.09
Cost of Production					
Total direct expense per bu.	4.41	4.35	4.54	4.29	4.40
Total direct and ovhd expense per bu.	5.00	4.95	5.13	4.87	5.00
Less government & other income	4.67	4.57	4.78	4.55	4.77
With labor & management	4.96	4.92	5.09	4.81	4.95
Machinery cost per acre	186.22	191.63	188.65	171.88	179.73

Southern Minnesota
Net Return per Acre -
After Labor & Management



Southern Minnesota Soybean Data	All Farm Average	Less Than 500	501 - 1,000	1,001 - 1,500	More Than 1,500
Number of farms	938	772	129	24	13
Yield per acre (bu.)	56.89	55.46	57.48	57.79	61.41
Value per bushel	12.79	12.64	12.77	12.92	13.43
Gross return per acre	752.24	728.94	756.08	776.28	834.79
Seed	57.26	58.74	57.01	54.20	53.67
Fertilizer	51.56	44.56	51.22	54.39	85.86
Crop chemicals	72.59	70.16	73.62	70.72	83.82
Fuel & oil	22.08	20.96	23.76	21.29	23.38
Repairs	40.71	41.05	42.85	36.94	36.08
Land rent	261.40	243.13	269.88	289.42	298.77
Total direct expenses per acre	577.22	549.93	584.04	591.76	680.94
Return over direct expenses per acre	175.02	179.01	172.04	184.52	153.85
Total overhead expenses per acre	75.09	73.35	75.00	88.50	70.04
Total dir & ovhd expenses per acre	652.31	623.28	659.04	680.27	750.98
Net return per acre	99.94	105.66	97.04	96.02	83.81
Cost of Production					
Total direct expense per bu.	10.15	9.92	10.16	10.24	11.09
Total direct and ovhd expense per bu.	11.47	11.24	11.47	11.77	12.23
Less government & other income	11.03	10.73	11.08	11.26	12.07
With labor & management	11.71	11.52	11.72	11.84	12.45
Machinery cost per acre	121.49	124.49	119.60	116.96	116.85

Southern Minnesota
Net Return per Acre -
After Labor & Management



Environmental Practices Relating to Economic Viability

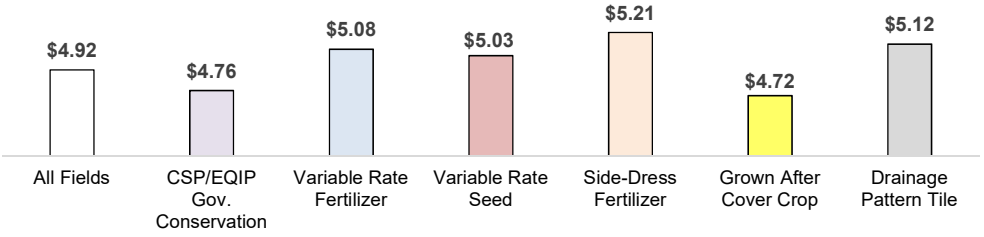
Farms use a variety of practices to limit environmental impact while trying to maintain economic viability. Below is a sampling of these practices from the farms in the Minnesota State Farm Management Database.

CSP/EQIP Gov. Conservation: USDA 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.
Cover Crops: Reduce the need for fertilizer and herbicide while improving soil health, sequestering carbon and reducing erosion
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	Grown After Cover Crop	Drainage Pattern Tile
Number of farms	1361	47	167	127	93	31	128
Yield	192.10	181.15	195.90	196.53	190.47	176.85	188.63
Seed	$116.33	$107.47	$119.53	$115.07	$115.88	$103.50	$118.76
Fertilizer	$231.47	$216.35	$248.01	$239.08	$246.21	$197.91	$248.12
Chemical	$53.43	$44.17	$55.58	$54.80	$57.39	$54.92	$63.82
Fuel & oil	$35.95	$33.32	$36.27	$37.24	$35.99	$28.87	$34.36
Repairs	$65.49	$57.03	$69.19	$68.37	$70.98	$54.29	$65.44
Rent	$233.28	$193.63	$239.68	$237.59	$246.70	$218.06	$256.19
Interest	$22.14	$19.25	$25.59	$25.63	$27.83	$16.64	$24.76
Mach and bldg depreciation	$58.46	$77.75	$71.78	$64.88	$66.10	$54.57	$66.64
Net return	$36.54	$99.51	$34.12	$41.50	-$7.53	$100.37	$11.67
Cost of prod - w/ labor & mgt	$4.92	$4.76	$5.08	$5.03	$5.21	$4.72	$5.12
Machinery cost / acre	$185.17	$186.90	$199.04	$191.96	$199.03	$175.17	$194.09

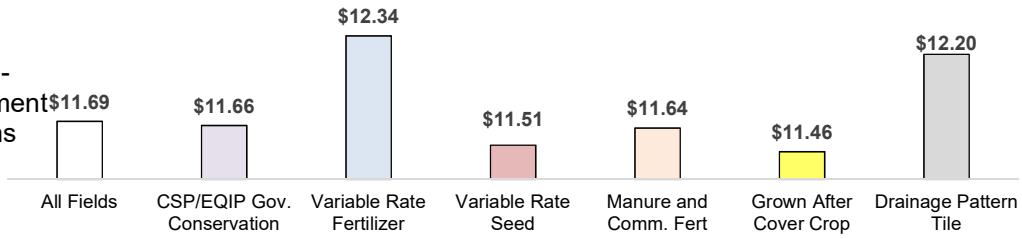
Cost of Production - with Labor & Management on Rented Corn



Soybean Enterprise

Minnesota Statewide Data	All Fields	CSP/EQIP Gov. Conservation	Variable Rate Fertilizer	Variable Rate Seed	Manure and Comm. Fert	Grown After Cover Crop	Drainage Pattern Tile
Number of farms	1287	42	112	83	207	34	127
Yield	50.97	48.02	53.27	54.71	55.65	51.04	54.01
Seed	$59.04	$56.26	$56.48	$57.00	$57.77	$54.71	$58.28
Fertilizer	$46.56	$56.45	$65.00	$51.46	$52.21	$34.04	$45.90
Chemical	$66.15	$63.74	$73.34	$70.13	$70.18	$64.99	$74.14
Fuel & oil	$21.84	$19.66	$19.73	$23.44	$20.83	$18.19	$21.31
Repairs	$40.22	$32.26	$42.22	$40.90	$38.67	$37.70	$42.26
Rent	$215.31	$188.34	$232.55	$222.51	$250.38	$211.78	$256.59
Interest	$13.08	$11.17	$13.70	$16.34	$12.47	$12.09	$14.75
Mach and bldg depreciation	$34.58	$48.93	$47.02	$36.08	$38.03	$37.59	$47.28
Net return	$87.81	$84.27	$60.63	$103.81	$92.77	$114.57	$70.43
Cost of prod - w/ labor & mgt	$11.69	$11.66	$12.34	$11.51	$11.64	$11.46	$12.20
Machinery cost / acre	$115.17	$119.13	$126.46	$119.75	$117.94	$115.36	$128.94

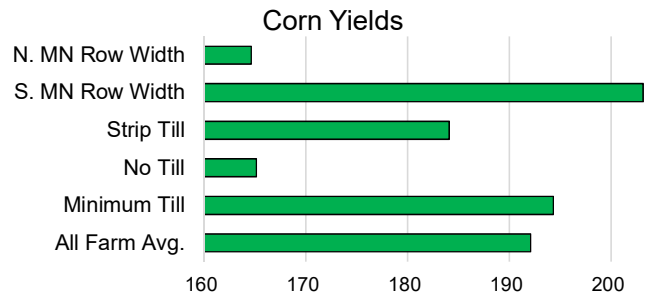
Cost of Production - with Labor & Management on Rented Soybeans

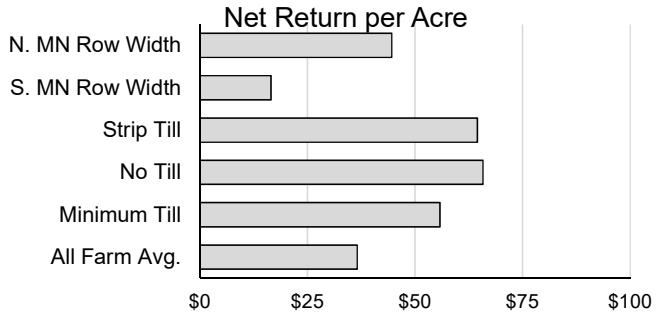


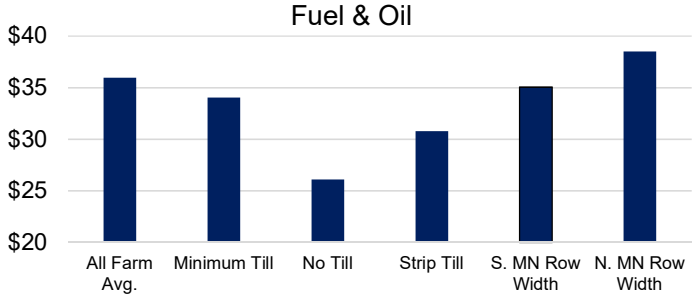
Environmental Practices - Tillage Alternatives

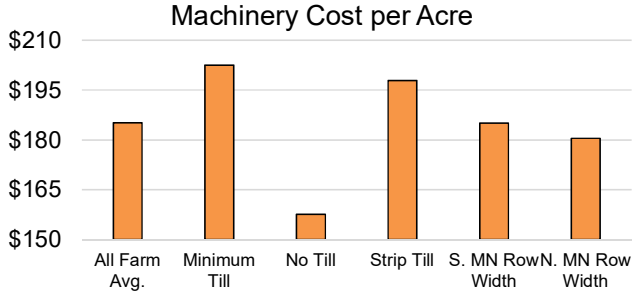
Corn on Rented Acres

Minnesota Statewide Data	All Farm Average	Minimum Till	No Till	Strip Till	Southern MN Row Width 19 - 25"	Northern MN Row Width 19 - 25"
Number of farms	1361	72	38	30	80	75
Yield per acre (bu.)	192.10	194.34	165.14	184.10	203.15	164.64
Value per bu.	4.91	4.76	4.75	4.96	4.79	4.71
Gross return per acre	990.17	1,022.55	891.67	994.62	1,038.38	829.58
Seed	116.33	117.19	104.39	108.53	121.86	99.02
Fertilizer	231.47	205.83	217.07	215.54	235.95	185.52
Crop chemicals	53.43	52.26	50.71	52.27	55.95	39.11
Crop insurance	30.83	30.06	27.64	28.62	39.46	30.56
Drying expense	14.89	15.42	17.74	16.50	17.83	9.14
Storage	1.98	3.46	2.19	1.80	2.73	1.38
Fuel & oil	35.95	34.06	26.12	30.79	35.06	38.52
Repairs	65.49	60.83	60.07	74.25	60.98	71.46
Custom hire	16.67	23.64	13.35	25.14	18.82	9.34
Hired labor	5.57	8.69	2.91	5.66	6.45	2.17
Land rent	233.28	244.18	185.64	222.08	262.31	159.87
Machinery leases	4.75	11.02	4.43	1.74	3.06	2.17
Utilities	1.34	3.10	1.78	1.53	0.28	0.17
Hauling and trucking	2.94	6.24	3.15	1.33	8.68	0.09
Marketing	1.37	1.46	1.34	2.96	0.98	1.24
Operating interest	14.80	14.97	7.73	12.28	14.30	16.40
Miscellaneous	3.18	3.94	3.58	2.75	4.25	3.33
Total direct expenses per acre	834.27	836.36	729.84	803.80	889.15	669.51
Return over direct exp per acre	155.90	186.20	161.83	190.83	149.23	160.08
Total overhead expenses per acre	119.36	130.44	96.07	126.34	132.72	115.49
Total dir & ovhd expenses per acre	953.63	966.80	825.91	930.13	1021.87	785.00
Net return per acre before labor & mgmt	36.54	55.76	65.76	64.49	16.51	44.59
Cost of Production						
Total direct expense per bu.	4.34	4.30	4.42	4.37	4.38	4.07
Total direct and ovhd expense per bu.	4.96	4.97	5.00	5.05	5.03	4.77
Less government & other income	4.62	4.47	4.35	4.61	4.71	4.44
With labor & management	4.92	4.83	4.71	5.01	4.98	4.79
Machinery cost per acre	185.17	202.48	157.62	197.85	185.03	180.51

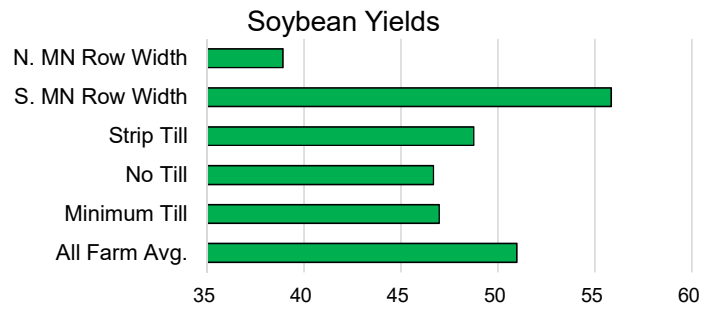
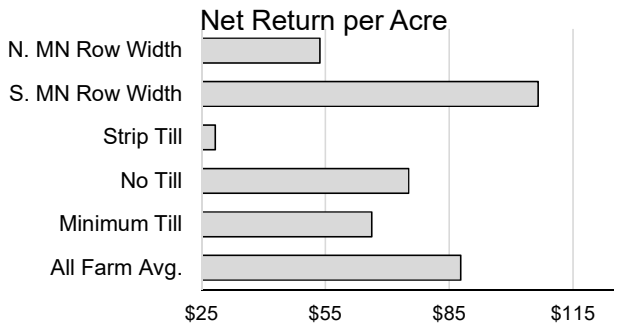
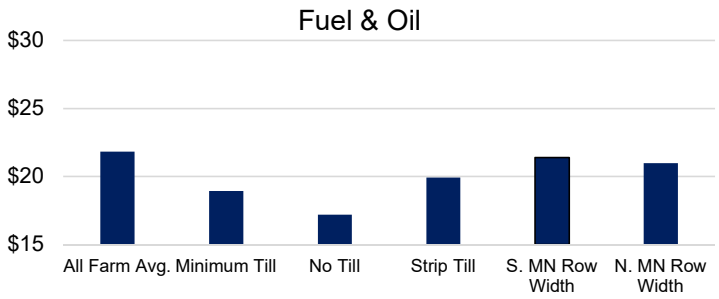
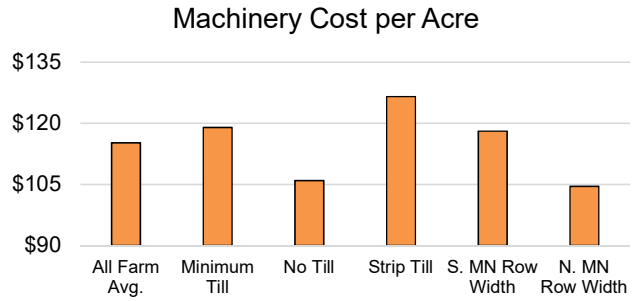








Environmental Practices - Tillage Alternatives

Soybeans on Rented Acres

Minnesota Statewide Data	All Farm Average	Minimum Till	No Till	Strip Till	Southern MN 22" or Less Row Width	Northern MN 22" or Less Row Width
Number of farms	1287	78	66	20	166	146
Yield per acre (bu.)	50.97	46.97	46.68	48.76	55.84	38.92
Value per bu.	12.70	12.76	12.71	12.84	12.72	12.55
Gross return per acre	671.38	632.21	639.51	650.86	739.90	512.67
Seed	59.04	60.16	55.47	57.94	57.55	63.11
Fertilizer	46.56	54.56	47.55	55.59	45.55	31.97
Crop chemicals	66.15	70.24	63.27	71.99	71.66	51.98
Crop insurance	26.56	25.82	26.96	27.19	29.95	21.51
Storage	1.03	0.56	0.52	1.60	0.96	0.52
Fuel & oil	21.84	18.95	17.20	19.93	21.39	20.99
Repairs	40.22	39.04	35.08	44.03	39.76	39.93
Custom hire	12.33	17.90	17.07	13.69	12.78	7.44
Hired labor	3.73	3.72	3.69	2.66	4.07	0.93
Land rent	215.31	179.50	215.89	224.00	249.95	136.95
Machinery leases	3.28	2.15	2.50	0.48	2.31	0.87
Utilities	0.71	0.21	1.30	1.05	-	-
Hauling and trucking	1.40	4.46	2.40	0.85	1.78	0.49
Marketing	1.42	1.55	2.27	3.69	1.38	1.13
Operating interest	8.64	7.68	8.53	7.06	9.85	7.74
Miscellaneous	2.92	2.78	3.32	1.51	4.48	3.33
Total direct expenses per acre	511.14	489.26	503.03	533.26	553.52	388.90
Return over direct exp per acre	160.24	142.95	136.48	117.60	186.39	123.76
Total overhead expenses per acre	72.43	76.71	61.29	89.32	79.86	70.11
Total dir & ovhd expenses per acre	583.57	565.97	564.33	622.58	633.38	459.02
Net return per acre before labor & mgmt	87.81	66.24	75.19	28.28	106.52	53.65
Cost of Production						
Total direct expense per bu.	10.03	10.42	10.78	10.94	9.91	9.99
Total direct and ovhd expense per bu.	11.45	12.05	12.09	12.77	11.34	11.79
Less government & other income	10.98	11.35	11.10	12.26	10.81	11.17
With labor & management	11.69	12.11	11.92	13.25	11.48	12.04
Machinery cost per acre	115.17	118.96	105.96	126.56	118.09	104.53