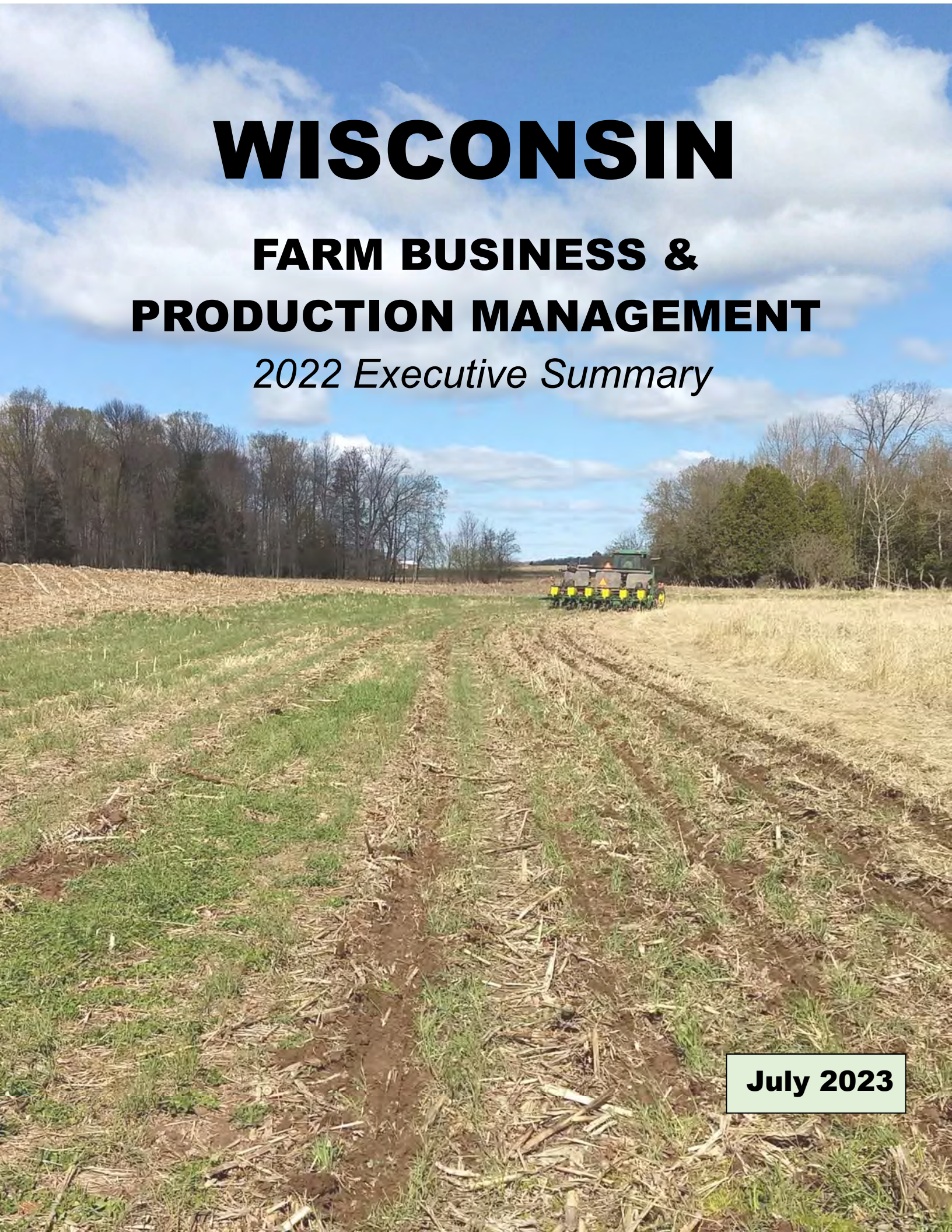


WISCONSIN

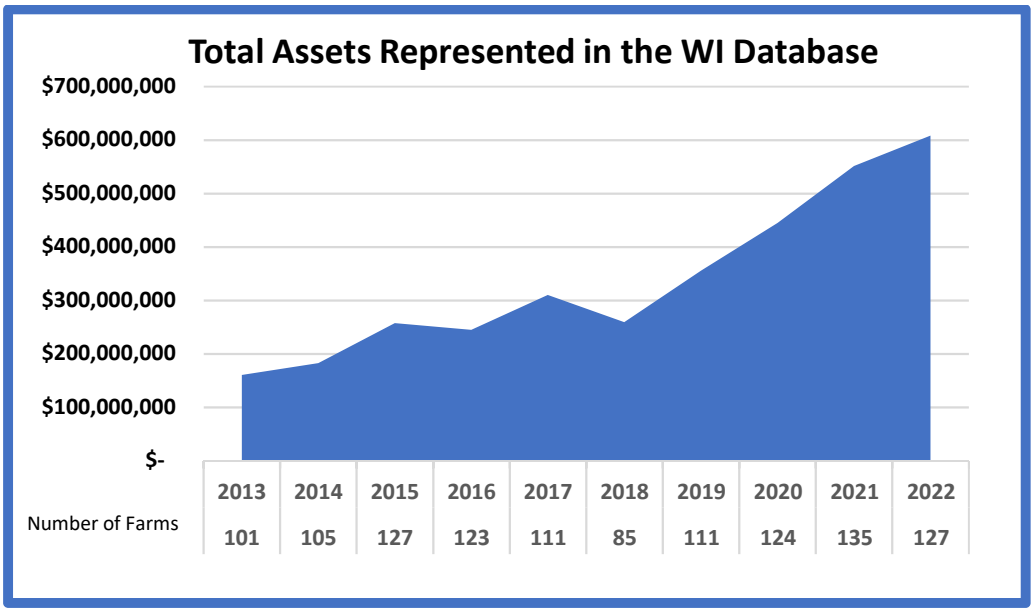
FARM BUSINESS & PRODUCTION MANAGEMENT

2022 Executive Summary

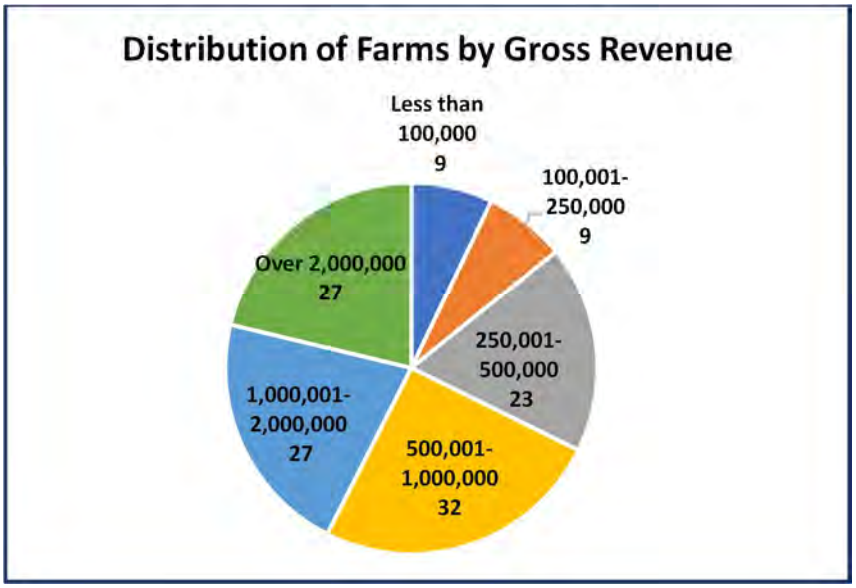
July 2023

Executive Summary
2022 Annual Report of Wisconsin
Farm Business and Production Management Program

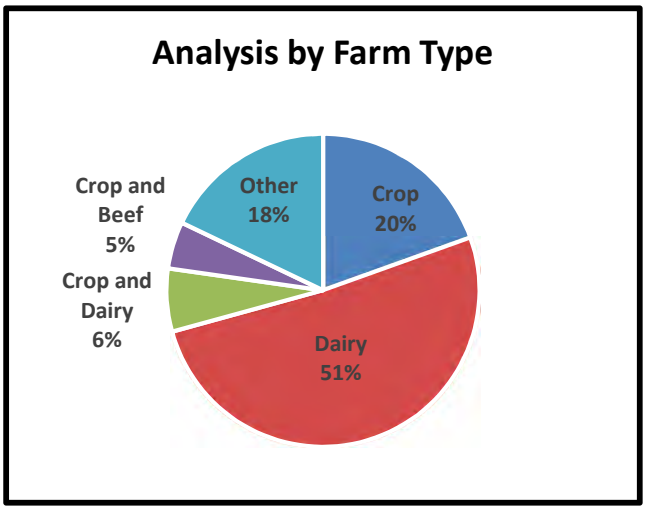
There were 127 farms that completed a farm financial analysis, down 8 analysis from 2021 due to two instructors not being replaced at their colleges. This report accounts for $608,651,564 of farm assets and 80,090 crop acres.



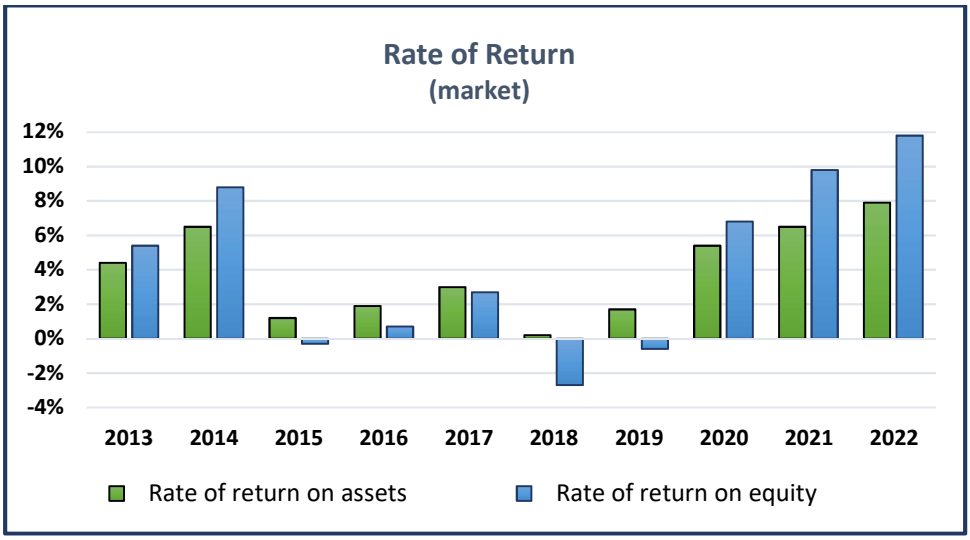
The average net farm income was $307,451, with a median net farm income of $155,946. The farms in the database represent a diverse set of farm producers with a large range in size and type of farm. The Financial Summary Report,sorted by gross farm income, demonstrates the diversity of the size of farm.

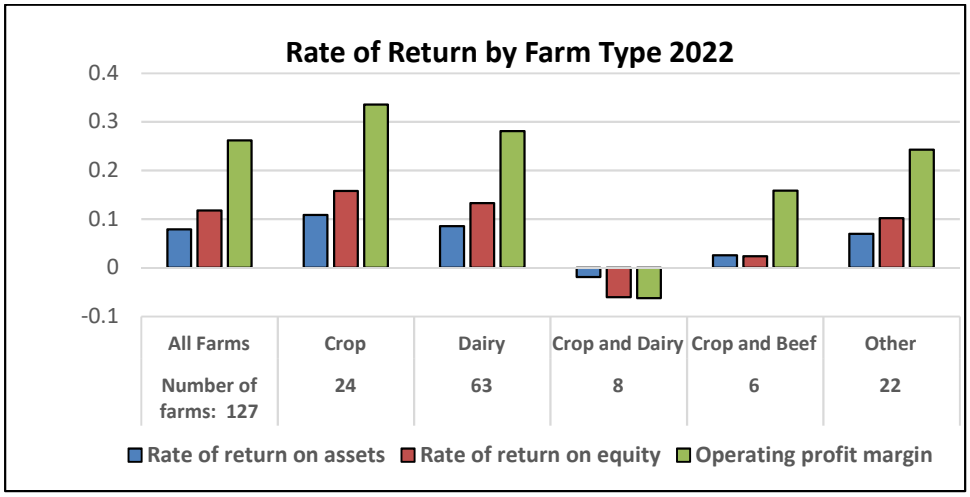


Over 50% of the farms in this report were dairy farms. Farms are identified by their type of farm, if more than 70% of their gross farm income comes from that source. "Other" farm type, are farms that had a combination of dairy, beef and crop income, or may have a large amount of custom hire income.

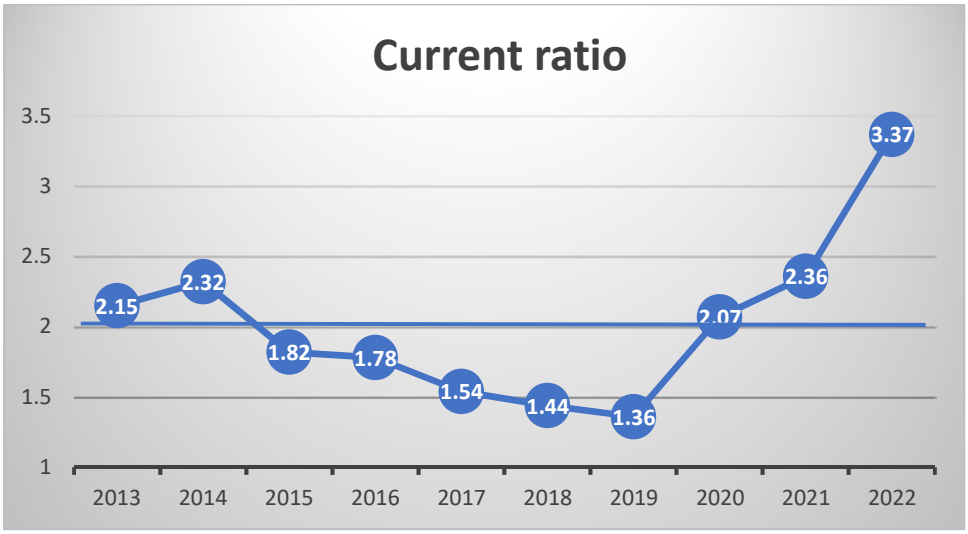


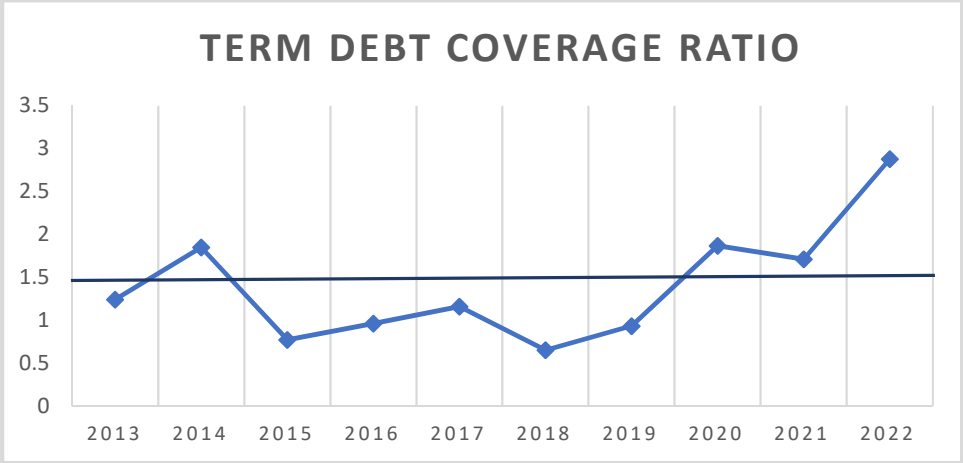
The rate of return on farm assets and equity surpassed the 2020 and 2021 returns. It is important to remember that farming is cyclical and there are cycles of good times and bad.



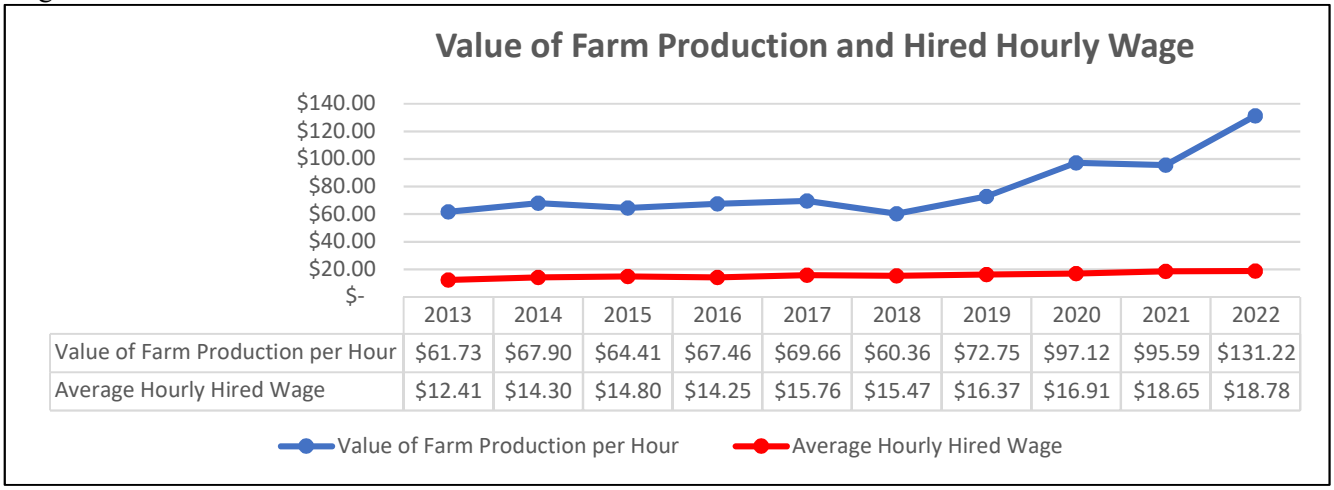


Farms are in a much better financial position than a few years ago. This is shown by their current ratio and their term debt coverage ratio being strong. A current ratio over 2 and a term debt coverage ratio over 1.5 are considered to be strong.



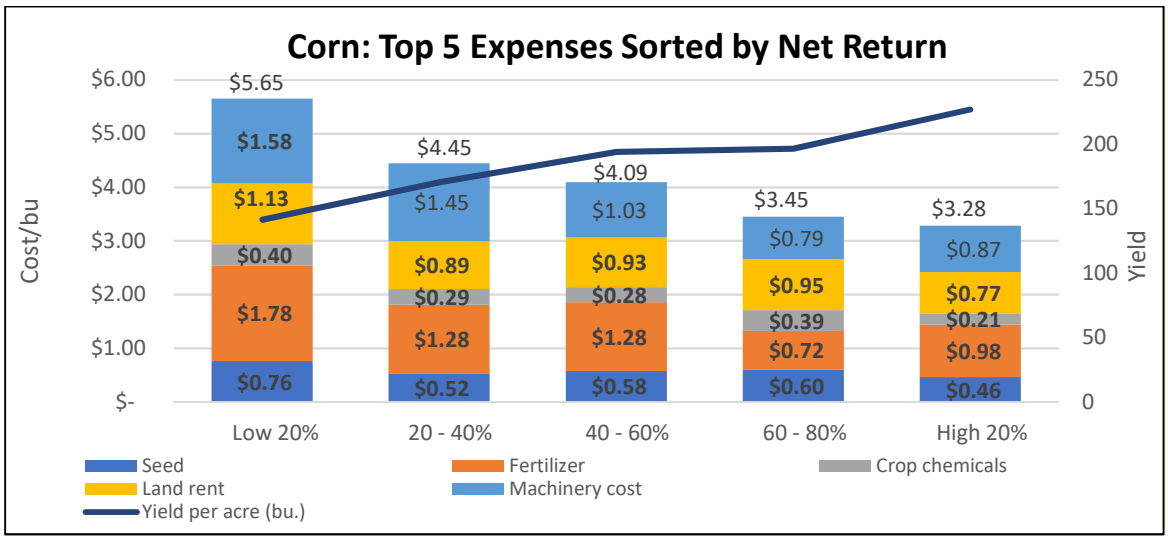


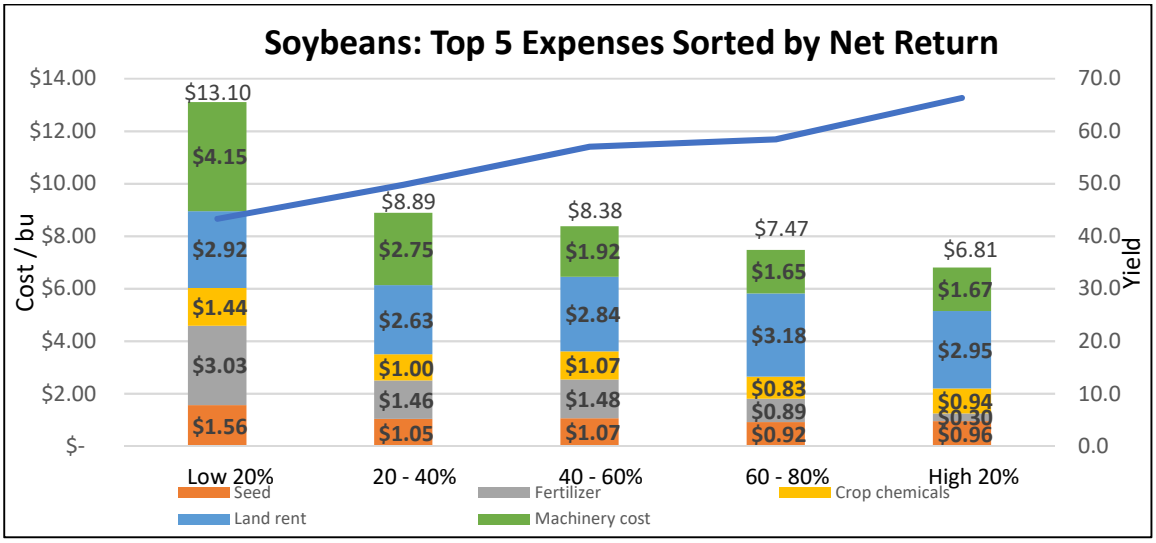
Farmers don't always put a value on their time. But if they did, the 2022 average value of farm production per hour was $131.22, up from $95.59/ hour in 2021 due to higher commodity prices. The average hired hourly wage also continues to rise to $18.78/hour.



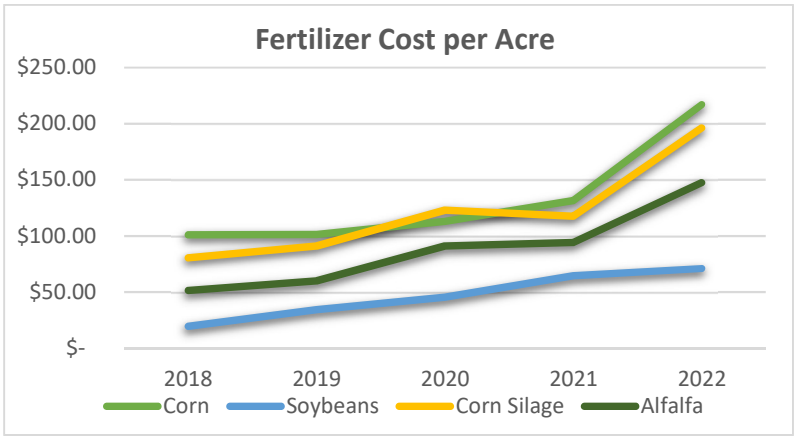
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Value of Farm Production per Hour	$61.73	$67.90	$64.41	$67.46	$69.66	$60.36	$72.75	$97.12	$95.59	$131.22
Average Hourly Hired Wage	$12.41	$14.30	$14.80	$14.25	$15.76	$15.47	$16.37	$16.91	$18.65	$18.78

Crops: Yields in Wisconsin overall were good. Corn averaged 177 bu per acre, soybeans 53 bu per acre, corn silage 25 ton per acre and alfalfa 5.3 ton per acre. Sorting farms by their profitability and looking at the top five expenses of corn and soybeans, yield played a critical role in profitability and overall expense per bushel.

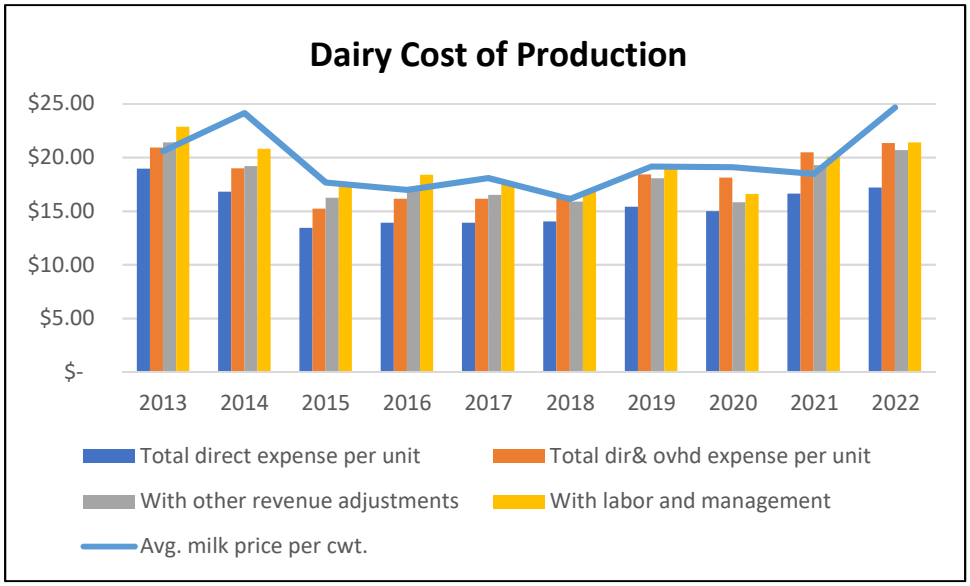


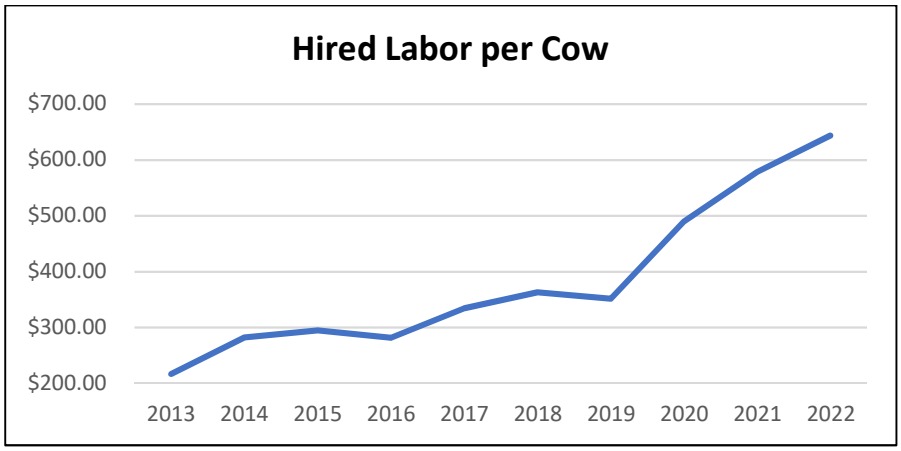


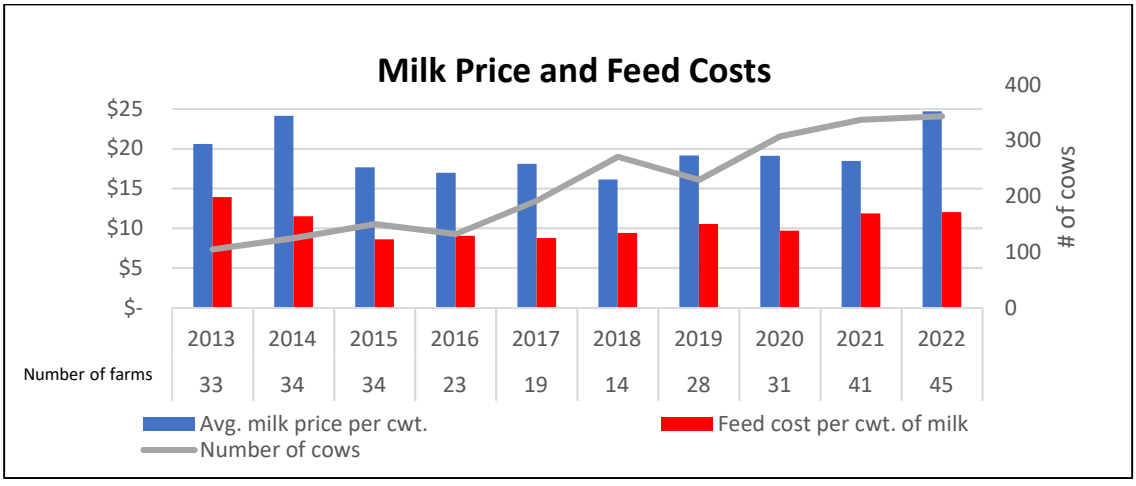
One notable increase that was seen across all crops was the large increase of fertilizer. In the past five years, the fertilizer expense per acre has more than doubled in our major commodities.



Dairy: Dairy farms had a profitable year. The average milk price received was $24.68/cwt, feed costs per cwt. of milk was $12.02 or $3,340 per head. The average farm size had 344 cows and had energy corrected milk of 29,953 pounds. One should note, that a few large farms can drastically change the average. In the livestock report, farms are sorted by herd size. One cost that continues to rise, is labor cost. The labor costs per head has tripled in the past 10 years.







Environmental Report: For the past three years, we have been collecting whole farm data on farms who identified as implementing an environmental practice such as: no-till, strip-till and/or planting cover crops or grazing. This year 44 of the 127 farms identified as implementing a practice. In looking at the data over three years, there was not a significant difference in the overall expenses per acre and age of the producer. Average farm assets were similar in 2020 and 2021, but the average assets increased in 2022 among the environmental group. This could be due to 1-2 large farms being added to the database. Three ratios that did remain consistent over the three years were the environmental group had a stronger current ratio, a slightly lower debt to asset ratio, and a greater rate of return on assets. This data would suggest that those farms implementing an environmental practice tend to be better farm managers.

	2020		2021		2022	
	Traditional	Environmental Practice	Traditional	Environmental Practice	Traditional	Environmental Practice
Current Ratio	1.95	2.39	2.12	3.23	3.21	3.61
Rate of Return on Assets	5.1%	5.9%	5.4%	9.5%	6.4%	9.8%
Farm Debt to Asset	51%	43%	50%	45%	48%	41%

This is the second year of running a "Cover Crop Analysis" report. This report gives an enterprise look at the actual costs and outcomes that occurred when planting after a cover crop. There are costs and benefits from implementing farm practices that exceed conventional practices to provide a greater support in environmental sustainability. Decisions to implement a new practice are impacted by the balancing act of environmental sustainability and financial viability. Caution should be used when analyzing the numbers, as it is only the second year of the report and there are a limited number of farms with a cover crop analysis. One should note, this is statewide data, and there are variations of soil type and growing seasons from Southern Wisconsin to Northern Wisconsin. Additional cover crop data from project partners can be found at https://www.agcentric.org/farm-business-management/annual-fbm-reports/.

		2021		2022	
		Combined Crop and Cover Crop	Conventional State Average	Combined Crop and Cover Crop	Conventional State Average
Corn	# of Farms	6	55	15	64
	Yield (bu)	181	190.2	184.62	182.69
	Net Return	$ 256.40	$ 289.74	$ 205.19	$ 302.64
	Mach Cost	$ 152.53	$ 198.26	$ 237.71	$ 218.10
	Seed	$ 113.80	$ 108.41	$ 133.53	$ 107.16
	Fertilizer	$ 126.60	$ 132.11	$ 219.00	$ 217.20
	Chemical	$ 47.87	$ 42.98	$ 64.23	$ 57.81
	Other Direct Excluding Lanc	$ 151.58	$ 196.59	$ 240.53	$ 223.27
Corn Silage	# of Farms	11	43	13	45
	Yield (ton)	22.5	22.2	26.24	24.78
	Net Return	$ 136.56	$ 191.23	$ 281.63	$ 274.10
	Mach Cost	$ 245.24	$ 296.73	$ 317.64	$ 330.90
	Seed	$ 139.32	$ 109.53	$ 152.70	$ 109.03
	Fertilizer	$ 141.60	$ 117.53	$ 175.74	$ 207.56
	Chemical	$ 93.77	$ 37.42	$ 109.05	$ 87.95
	Other Direct Excluding Lanc	$ 267.78	$ 288.35	$ 357.70	$ 305.36
Soybeans	# of Farms	5	33	6	45
	Yield (bu)	58.8	54	51	55.6
	Net Return	$ 197.95	$ 198.19	$ 114.63	$ 228.38
	Mach Cost	$ 199.02	$ 104.88	$ 143.58	$ 150.89
	Seed	$ 105.97	$ 52.97	$ 68.61	$ 58.36
	Fertilizer	$ 81.61	$ 64.32	$ 46.27	$ 72.44
	Chemical	$ 53.72	$ 43.68	$ 63.68	$ 56.18
	Other Direct Excluding Lanc	$ 192.13	$ 104.21	$ 146.74	$ 132.16

COVER CROP ANALYSIS 2022

CORN GRAIN WITH COVER CROP ENTERPRISE ANALYSIS

Owned and Rented Acres Combined

Wisconsin Farm Business and Production Management Database

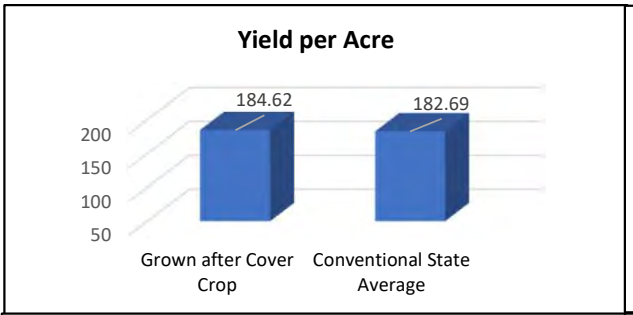
Cover Crop Analysis Comparison

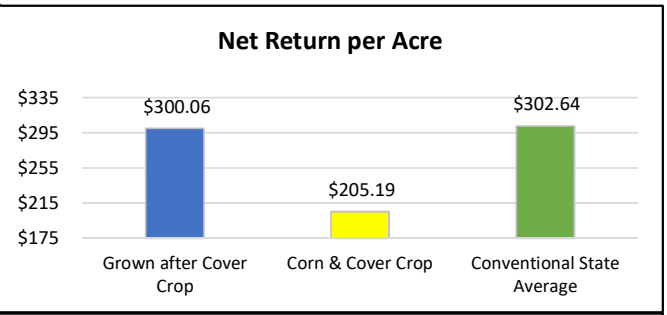
In 2022, crop enterprises grown after cover crops were tracked for a second year. The goal is to continue to grow these reports in the future. The tables on this page provide comparison data for the crop raised after a cover crop, the cover crop only, the combined revenue and expenses for the enterprise and cover crop, and the conventional statewide average. The major direct expenses are listed here. A full detailed listing can be found at https://finbin.umn.edu/, by selecting the Summary Crop Report then sorting by Cover Crop Report. The limited number of farms with cover crop enterprises in this first year, reminds us that care must be taken when interpreting the numbers. As the data grows, a more comprehensive comparison will be available.

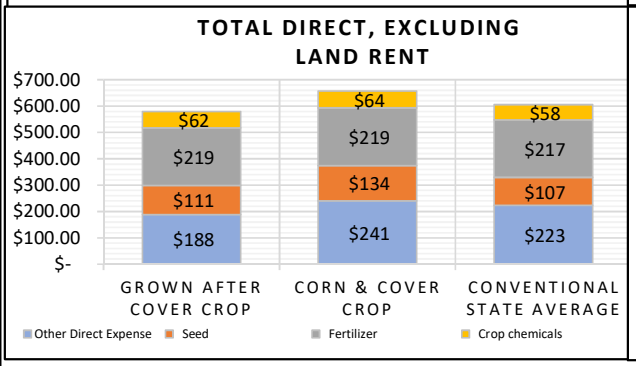
	Grown after Cover Crop	Cover Crop	Corn & Cover Crop	Conventional State Average
Number of farms	15	15	15	64
Yield per acre (bu.)	184.62	-	-	182.69
Value per bu.	$ 6.11	-	-	$ 6.19
Other crop income per acre*	$ 6.11	$ 4.71	$ 23.16	$ 6.19
Gross return per acre	$ 1,147.22	$ 24.59	$ 1,171.81	$ 1,173.34
Selected Direct Expenses				
Seed	$ 110.99	$ 22.54	$ 133.53	$ 107.16
Fertilizer	$ 218.59	$ 0.41	$ 219.00	$ 217.20
Crop chemicals	$ 61.76	$ 2.47	$ 64.23	$ 57.81
Fuel & oil	$ 39.54	$ 13.55	$ 52.89	$ 46.91
Repairs	$ 72.42	$ 2.05	$ 19.15	$ 67.32
Custom hire	$ 5.10	$ 2.94	$ 8.04	$ 40.86
Total direct expenses per acre	$ 731.03	$ 77.70	$ 808.73	$ 734.80
Return over direct exp per acre	$ 416.19	$ (53.11)	$ 363.08	$ 438.54
Total overhead expenses per acre	$ 116.13	$ 41.76	$ 157.89	$ 135.90
Total dir & ovhd expenses per acre	$ 847.16	$ 119.46	$ 966.62	$ 870.69
Net Return per Acre	$ 300.06	$ (94.86)	$ 205.19	$ 302.64
Net return over labor and management	$ 229.53	$ (124.31)	$ 105.22	$ 259.98
Cost of Production with labor & mgt	$ 4.87	-	$ 5.64	$ 4.77
Machinery cost per acre	$ 176.76	$ 60.45	$ 237.21	$ 218.10
Land Cost**	$ 174.89	$ 2.27	$ 177.16	$ 172.17

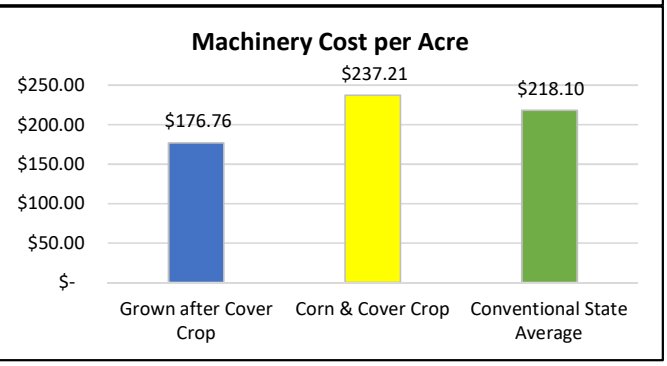
*Other crop income may include government payments for conservation related production practices and/or stover sales.

**For owned and rented acres combined, land cost is calculated as the sum of: Land Rent, Interest & RE Taxes









COVER CROP ANALYSIS 2022

CORN SILAGE WITH COVER CROP ENTERPRISE ANALYSIS

Owned and Rented Acres Combined

Wisconsin Farm Business and Production Management Database

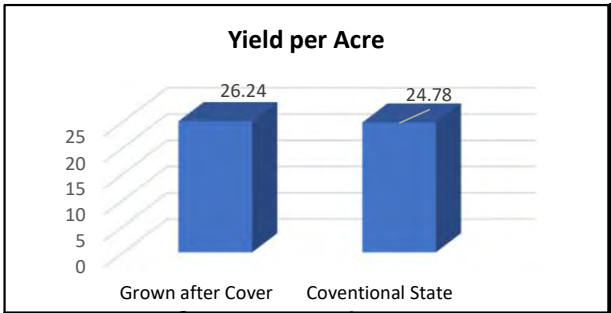
Cover Crop Analysis Comparison

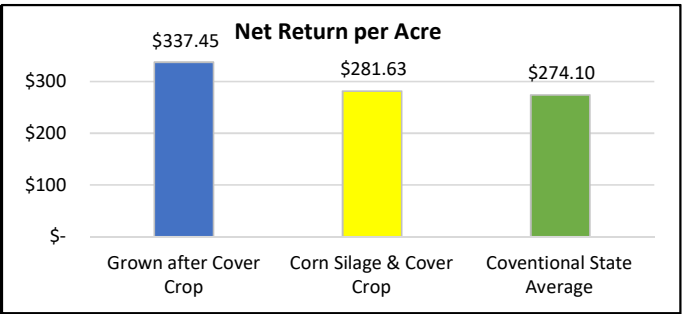
In 2022, crop enterprises grown after cover crops were tracked for a second year. The goal is to continue to grow these reports in the future. The tables on this page provide comparison data for the crop raised after a cover crop, the cover crop only, the combined revenue and expenses for the enterprise and cover crop, and the conventional statewide average. The major direct expenses are listed here. A full detailed listing can be found at https://finbin.umn.edu/, by selecting the Summary Crop Report then sorting by Cover Crop Report. The limited number of farms with cover crop enterprises in this first year, reminds us that care must be taken when interpreting the numbers. As the data grows, a more comprehensive comparison will be available.

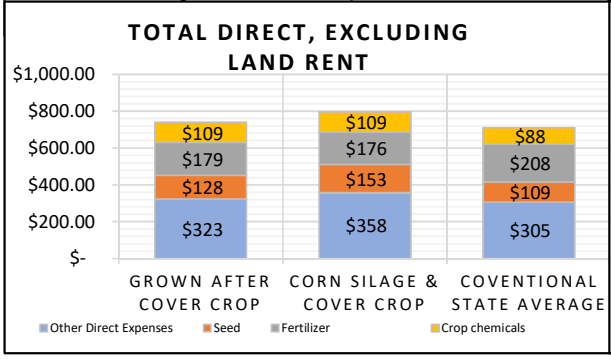
	Grown after Cover Crop	Cover Crop Only	Corn Silage & Cover Crop	Coventional State Average
Number of farms	13	13	13	45
Yield per acre (ton)	26.24	-	-	24.78
Value per ton	$ 52.07	-	-	$ 50.94
Other crop income per acre*	-	-	-	$ 1.51
Gross return per acre	$ 1,366.40	$ 28.55	$ 1,398.61	$ 1,263.94
Selected Direct Expenses				
Seed	$ 128.06	$ 25.63	$ 152.70	$ 109.03
Fertilizer	$ 179.36	-	$ 175.74	$ 207.56
Crop chemicals	$ 109.41	-	$ 109.05	$ 87.95
Fuel & oil	$ 44.49	$ 13.39	$ 57.20	$ 66.24
Repairs	$ 61.70	$ 18.87	$ 77.82	$ 79.76
Custom hire	$ 133.71	$ 5.64	$ 134.44	$ 109.81
Total direct expenses per acre	$ 878.33	$ 67.53	$ 936.12	$ 804.11
Return over direct exp per acre	$ 488.08	$ (38.98)	$ 462.49	$ 459.83
Total overhead expenses per acre	$ 150.63	$ 34.57	$ 180.86	$ 185.73
Total dir & ovhd expenses per acre	$ 1,028.95	$ 102.10	$ 1,116.98	$ 989.84
Net return per acre	$ 337.45	$ (73.55)	$ 281.63	$ 274.10
Net return over labor and management	$ 308.77	$ (82.91)	$ 245.10	$ 233.21
Cost of Production with labor & mgt	$ 40.30	-	$ 43.09	$ 41.53
Machinery cost per acre	$ 278.17	$ 49.35	$ 317.64	$ 330.90
**Land Cost	$ 171.77	$ 2.07	$ 175.09	$ 168.64

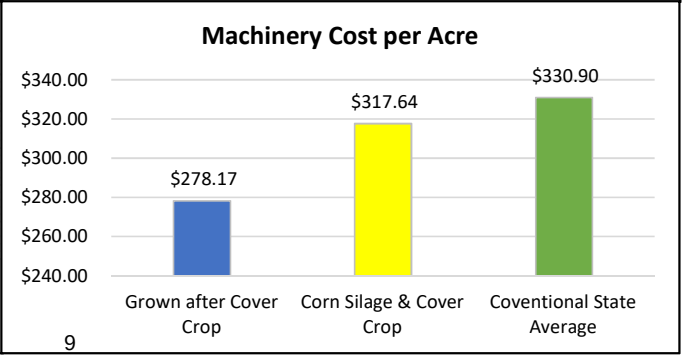
*Other crop income may include government payments for conservation related production practices.

**For owned and rented acres combined, land cost is calculated as the sum of: Land Rent, Interest & RE Taxes









COVER CROP ANALYSIS 2022

SOYBEANS WITH COVER CROP ENTERPRISE ANALYSIS

Owned and Rented Acres Combined

Wisconsin Farm Business and Production Management Database

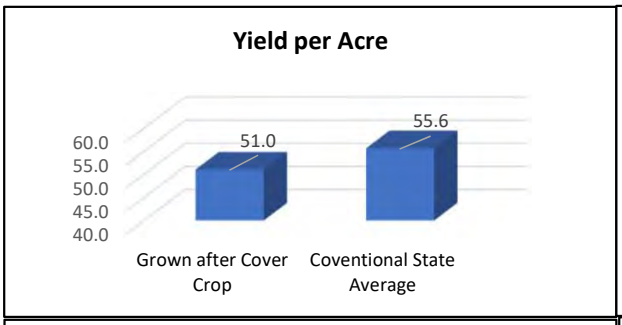
Cover Crop Analysis Comparison

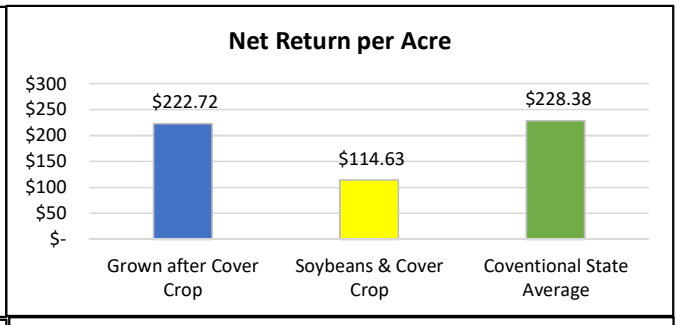
In 2022, crop enterprises grown after cover crops were tracked for a second year. The goal is to continue to grow these reports in the future. The tables on this page provide comparison data for the crop raised after a cover crop, the cover crop only, the combined revenue and expenses for the enterprise and cover crop, and the conventional statewide average. The major direct expenses are listed here. A full detailed listing can be found at https://finbin.umn.edu/, by selecting the Summary Crop Report then sorting by Cover Crop Report. The limited number of farms with cover crop enterprises in this first year, reminds us that care must be taken when interpreting the numbers. As the data grows, a more comprehensive comparison will be available.

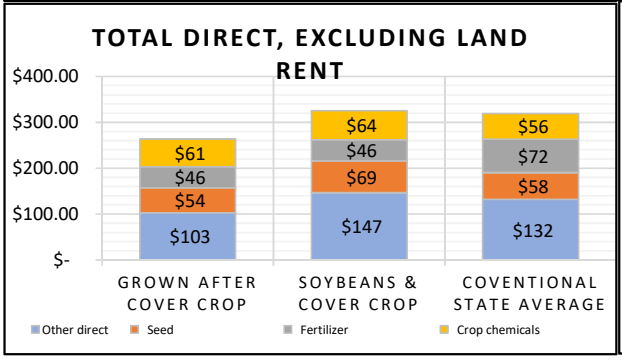
	Grown after Cover Crop	Cover Crop Only	Soybeans & Cover Crop	Coventional State Average
Number of farms	6	6	6	45
Yield per acre (bu.)	51.0	-	-	55.6
Value per bu.	$ 13.89	-	-	$ 14.05
Other crop income per acre*	-	$ 16.74	$ 16.74	$ 5.72
Gross return per acre	$ 708.37	$ 30.88	$ 739.26	$ 788.77
Selected Direct Expenses				
Seed	$ 54.12	$ 14.49	$ 68.61	$ 58.36
Fertilizer	$ 46.27	-	$ 46.27	$ 72.44
Crop chemicals	$ 60.69	$ 2.98	$ 63.68	$ 56.18
Fuel & oil	$ 16.20	$ 12.21	$ 28.41	$ 25.17
Repairs	$ 36.12	$ 26.43	$ 62.54	$ 40.54
Custom hire	$ 13.76	$ 0.50	$ 14.26	$ 21.46
Total direct expenses per acre	$ 389.69	$ 61.39	$ 451.08	$ 450.58
Return over direct exp per acre	$ 318.68	$ (30.51)	$ 288.18	$ 338.19
Total overhead expenses per acre	$ 51.20	$ 39.66	$ 90.86	$ 74.07
Total dir & ovhd expenses per acre	$ 440.88	$ 101.05	$ 541.93	$ 524.64
Net Return Per Acre	$ 267.49	$ (70.16)	$ 197.32	$ 264.12
Net return over labor & management	$ 222.72	$ (108.09)	$ 114.63	$ 228.38
Cost of Prodcution with labor and mgt	$ 9.52	-	$ 11.86	$ 9.95
Machinery cost per acre	$ 105.23	$ 70.32	$ 175.56	$ 123.74
Land Cost	$ 136.92	$ 6.97	$ 143.58	$ 150.89

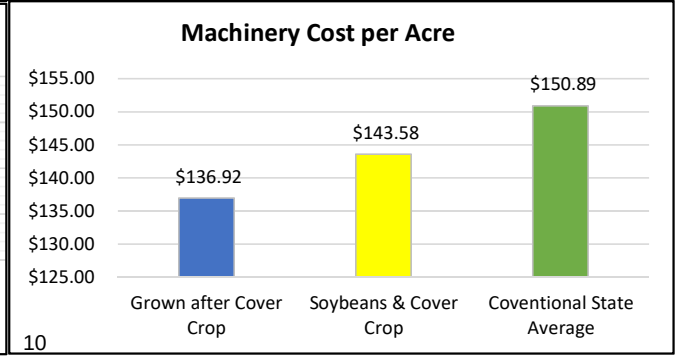
*Other crop income may include government payments for conservation related production practices and/or stover sales.

**For owned and rented acres combined, land cost is calculated as the sum of: Land Rent, Interest & RE Taxes









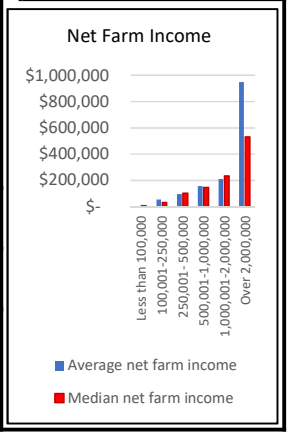
Key Financial Numbers by Size

2022 Gross Farm Revenue

	Less than 100,000	*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	9	9	23	32	27	27
Current ratio	3.73	1.96	2.80	3.13	2.80	3.97
Working capital to gross revenue	52.6 %	28.2 %	38.7 %	43.2 %	36.7 %	30.0 %
Working capital to operating expense	73.4 %	50.0 %	61.9 %	62.1 %	47.5 %	41.2 %
Term debt coverage ratio	1.85	1.82	3.42	2.64	1.92	3.33
Farm debt to asset ratio	35 %	37 %	34 %	43 %	51 %	45 %
Operating expense ratio	71.7 %	56.4 %	62.4 %	69.7 %	77.3 %	72.7 %
Depreciation expense ratio	18.9 %	9.5 %	11.1 %	6.2 %	5.3 %	5.7 %
Interest expense ratio	11.4 %	6.9 %	4.9 %	4.1 %	4.9 %	3.4 %
Net farm income ratio	-2.0 %	27.2 %	21.6 %	20.0 %	12.5 %	18.1 %
Rate of return on assets	0.4 %	4.9 %	5.7 %	6.4 %	6.5 %	9.7 %
Rate of return on equity	-0.4 %	6.4 %	7.0 %	9.2 %	9.9 %	14.9 %
Average net farm income	$ (1,151)	$ 52,777	$ 97,395	$ 157,082	$ 211,058	$ 948,755
Median net farm income	$ 6,734	$ 33,137	$ 102,902	$ 148,150	$ 233,649	$ 529,558
Net worth	$ 755,836	$ 1,044,712	$ 1,533,977	$ 1,693,734	$ 2,444,866	$ 6,286,124
Net nonfarm income	$ 58,772	$ 27,819	$ 49,324	$ 8,604	$ 10,758	$ 6,194
Family living/owner withdrawals	$ (38,325)	$ (24,236)	$ (24,395)	$ (46,617)	$ (68,580)	$ (143,893)
Machinery value per crop acre	$ 2,845	$ 2,951	$ 1,078	$ 1,174	$ 954	$ 1,424
Total crop acres	40	63	298	403	809	1,577
Total crop acres owned	24	60	102	125	238	446
Average Age of Operator	42.3	46.0	44.7	49.2	48.4	49.2
Average number of operators	1.1	1.1	1.4	1.7	1.7	2.4
Total labor hours per farm	1,225	2,734	3,533	5,627	9,339	27,974
Total hired labor hours	41	211	1,174	2,879	7,274	26,502
Average hourly hired labor wage	$ 12.33	$ 16.55	$ 16.19	$ 13.13	$ 14.67	$20.69
Value of farm production / hour	$ 37.35	$ 62.55	$ 121.35	$ 115.34	$133.70	$138.61

Farm Financial Scorecard Table

Vulnerable	Okay	Strong
< 1.3	1.3 - 2	> 2
< 10%	10-30%	> 30%
< 20%	20-40%	< 40%
> 1.25	1.25-1.75	> 1.75
< 60%	30-60%	< 30%
< 80%	60-80%	> 60%
< 10%	5-10%	< 5%
> 10%	5-10%	< 5%
< 10%	10-20%	< 20%
< 4%	4-8%	> 8%
< 3%	3-10%	> 10%



Key Financial Numbers byType

*Type of farm is defined by 70% of farm income coming from a specific source.

2022 Data By Type of Farm

	Avg. of All Farms	Crop	Dairy	Crop and Dairy	Crop and Beef	Other
Number of farms	127	24	63	8	6	22
Current ratio	3.37	3.15	3.35	3.84	10.55	3.47
Working capital to gross revenue	33.3 %	48.3 %	26.3 %	41.4 %	60.4 %	50.6 %
Working capital to operating expense	45.8 %	78.0 %	35.4 %	52.5 %	80.7 %	73.2 %
Term debt coverage ratio	2.88	4.81	2.73	1.81	3.18	2.86
Farm debt to asset ratio	45 %	36 %	46 %	45 %	27 %	47 %
Operating expense ratio	72.7 %	61.8 %	74.3 %	78.9 %	74.9 %	69.2 %
Depreciation expense ratio	6.0 %	6.1 %	5.2 %	7.8 %	8.6 %	9.2 %
Interest expense ratio	3.9 %	3.3 %	3.8 %	4.2 %	4.4 %	4.7 %
Net farm income ratio	17.4 %	28.8 %	16.6 %	9.1 %	12.0 %	16.9 %
Rate of return on assets	7.9 %	10.9 %	8.6 %	-1.9 %	2.6 %	7.0 %
Rate of return on equity	11.8 %	15.8 %	13.3 %	-6.0 %	2.4 %	10.2 %
Average net farm income	$307,451	$ 251,134	$ 409,567	$ 137,812	$ 40,723	$244,165
Median net farm income	$155,946	$ 177,314	$ 170,938	$ 213,102	$ 32,517	$106,781
Net worth	$2,688,367	$ 1,931,222	$ 3,386,479	$ 2,281,049	$ 1,319,427	$2,392,163
Net nonfarm income	$20,841	$ 16,271	$ 23,051	$ 20,276	$ 27,138	$18,696
Family living/owner withdrawals	$(65,769)	$ (40,835)	$ (84,844)	$ (41,594)	$ (27,808)	$(61,572)
Machinery value per crop acre	$1,254	$ 786	$ 1,544	$ 989	$ 1,131	$1,218
Total crop acres	670	818	627	921	267	747
Total crop acres owned	201	154	254	222	108	153
Average Age of Operator	47.9	43.5	49.2	50.2	52.0	47.2
Average number of operators	1.7	1.3	1.9	1.9	1.5	1.6
Total labor hours per farm	10,345	2,978	15,972	8,174	1,994	6,962
Total hired labor hours	8,221	1,398	13,653	5,759	61	4,733
Average hourly hired labor wage	$ 18.78	$ 14.91	$ 19.01	$ 17.09	$ 12.33	$ 18.91
Value of farm production / hour	$ 131.22	$ 297.10	$ 111.85	$ 148.28	$ 136.60	$ 167.71

Farm Financial Scorecard Table

Vulnerable	Okay	Strong
< 1.3	1.3 - 2	> 2
< 10%	10-30%	> 30%
< 20%	20-40%	< 40%
> 1.25	1.25-1.75	> 1.75
< 60%	30-60%	< 30%
< 80%	60-80%	> 60%
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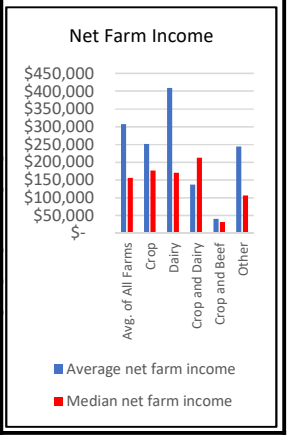

Summary

The 2022 Wisconsin Executive Summary Report is a result of the time and commitment from the contributing Farm Business & Production Management farm students, instructors, and the support from their prospective colleges. Five instructors at four Wisconsin Technical Colleges compiled data from 127 farms. The farm students, who provided the data for this report deserve special recognition for their commitment to maintaining sustainable businesses by committing to education and farm financial analysis.

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Technical College Areas Highlighted in Yellow on map.

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FINPACK

FINBIN

This report was developed using FINPACK and RANKEM software developed by the Center for Farm Financial Management at the University of Minnesota. https://www.cffm.umn.edu

Additional farm financial reports can be queried from the Center for Farm Financial Management FINBIN website. https://finbin.umn.edu.

This report was created through the efforts of the WI FBPM instructors and edited by Sara Maass-Pate, Farm Business & Production Management Instructor at Fox Valley Technical College and the USDA NIFA Farm Business Management Benchmarking Grant: "Amplifying the Relevancy of Financial Benchmarking through Expanded Outreach and Environmental Emphasis to grow the National Database.", award number 2022-38504-37841.