INFLUENCE OF INTENSIFIED ENVIRONMENTAL PRACTICES on Farm Profitability

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Influence of Intensified Environmental Practices on Farm Profitability

This database has expanded from the initial 53 farms in 2019 to 161 farms in 2025. This report provides financial and enterprise data, and a general interpretation comparing the "Intensified Environmental Practices" cohort and the Minnesota State Farm Business Management (FBM) Database average. A 3-Year Avg. and data for 2024 and 2025 are provided for most tables. The Pre and Post Study Data section uses two 5-Year average tables. **Sections in this special report include:**

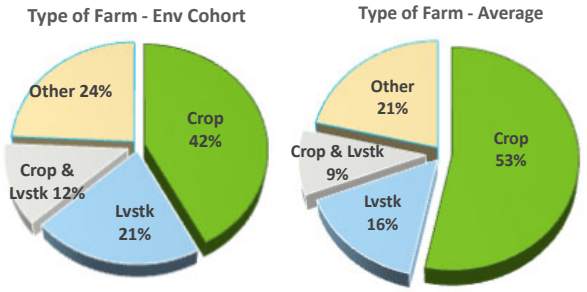
- Demographics – Farm numbers, Farm size, and individual farmer data
- Financial Analysis – Income Statement, Balance Sheet, and selected crop expense measures
- Crop Enterprise Summary Information – Corn, Soybeans, and Alfalfa Hay
- Livestock Enterprise Summary Information – Dairy Cows and Beef Cow Calf
- Pre and Post Study Data
- Farms that are Water Quality certified and using Cover Crops

The pre- and post-study comparison of the farmers in the Environmental Cohort has shown that this Cohort demonstrated a financial advantage over the FBM Database average before this study began. That comparison recognizes that producers who achieve Minnesota Agricultural Water Quality Certification (MAWQCP) have a management style that enhances profitability. It may also suggest that what farms do to achieve MAWQCP certification aligns well with enhanced profitability.

Demographics

The 2025 Minnesota State FBM Database includes data from 2,314 producers who participate in the Minnesota State Farm Business Management Education program. The Environmental Cohort consists of 161 of those producers in 2025, up from 153 in 2024. The Demographics table and the Type of Farm charts illustrate that the Environmental Cohort continues to represent a similar demographic to that found in the 2025 Minnesota State FBM Database and the 3-year average data. The "Type of Farm" pie charts continue to show a greater percentage of livestock enterprises and a lesser percentage of crop enterprises in the 2025 Environmental Cohort versus the FBM State Database.

Demographics	3-Year Avg.		2024		2025	
	Environ. Cohort	Database Avg.	Environ. Cohort	Database Avg.	Environ. Cohort	Database Avg.
Number of Farms	147	2285	153	2223	161	2314
Total Crop Acres per Farm	757	817	739	830	795	821
Total Crop Acres/Cohort	112,455	1,866,436	113,067	1,845,090	127,995	1,899,794
Age of Operator	48.6	47.4	48.7	47.4	48.7	47.5
Years Farming	23.5	22.8	23.8	22.8	24.2	22.9
Beginning Farmers (<10 yrs)	22%	29%	21%	29%	18%	29%

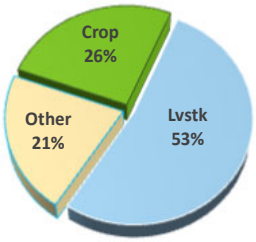


FINANCIALS AT-A-GLANCE

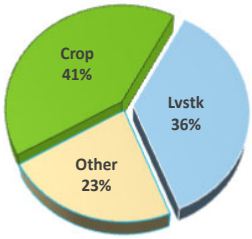
The 2025 financial data again shows that the Environmental Cohort generated more gross cash farm income and net farm income than the FBM State Database average. This data also shows that the farms in the Environmental Cohort generated more income from livestock sales. The 3-year average includes data from 2023 to 2025. Overall, in the 2025 State FBM Database, livestock producers had a better year financially than crop producers.

Income Statement	3-Year Avg.		2024		2025	
	Environ. Cohort	Database Avg.	Environ. Cohort	Database Avg.	Environ. Cohort	Database Avg.
Gross Cash Farm Income	$1,417,855	$1,090,669	$1,304,767	$1,057,092	$1,627,818	$1,113,772
Crop Sales	*$429,353*	*$526,114*	*$432,778*	*$508,162*	*$420,234*	*$457,929*
Livestock Sales	*$736,514*	*$364,634*	*$659,242*	*$365,204*	*$858,423*	*$403,043*
Other Income	*$251,988*	$199,921	*$212,747*	$183,726	*$349,161*	$252,800
Total Cash Farm Expense	$1,206,498	$925,317	$1,090,492	$898,843	$1,406,595	$971,595
Net Cash Income	$211,356	$165,352	$214,275	$158,249	$221,223	$142,178
Inv Chg, Deprec, Cap Sales	-$63,615	-$67,927	-$79,458	-$90,545	-$23,663	-$12,705
Average Net Farm Income	$147,741	$97,426	$134,817	$67,704	$197,560	$129,473
Median Net Farm Income	$62,788	$43,720	$42,409	$21,473	$98,923	$64,216

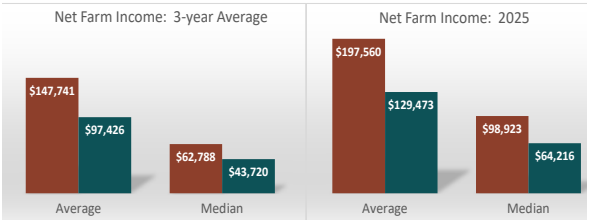
Income Source - Env Cohort



Income Source - Average



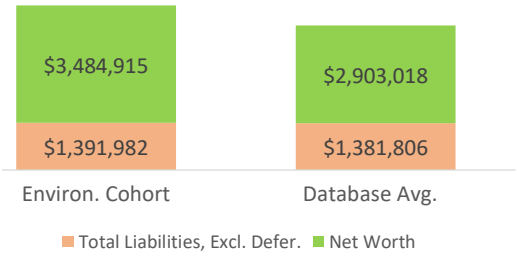
The Income Source pie charts show the Environmental Cohort showed higher income from livestock sales, $858,423 vs $403,043; while the State FBM Database average showed slightly higher income from crop sales, $457,929 vs $420,234.



The 2025 data recognizes an increase in average and median Net Farm Income for both the State FBM Database average and the Environmental Cohort. The Environmental Cohort was significantly above the State FBM Database average farm, with $197,569 compared to $129,473. The Median Net Farm Income for the Environmental Cohort increased to from $42,409 in 2024 to $98,923 in 2025; while the State FBM Database average increased from $21,431 in 2024 to $64,216 in 2025.

Balance Sheet (Market)	3-Year Avg.		2024		2025	
	Environ. Cohort	Database Avg.	Environ. Cohort	Database Avg.	Environ. Cohort	Database Avg.
Total Assets	$4,503,215	$4,085,902	$4,511,371	$4,083,817	$4,876,897	$4,284,824
Total Liabilities, Excl. Defer.	$1,351,549	$1,433,878	$1,240,051	$1,313,204	$1,391,982	$1,381,806
Net Worth	$3,151,666	$2,652,024	$3,271,320	$2,770,613	$3,484,915	$2,903,018

Total Farm Assets - 2025

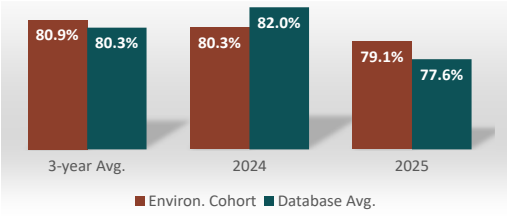


The 3-year Average, 2024, and 2025 data all indicate that the Environmental Cohort farms continue to have a slightly larger asset value and net worth on the Market Value Balance Sheet. The 2025 data shows that the amount of liabilities that each group manages was similar in all cases.

The Working Capital as a % of Gross Farm Expense for the Environmental Cohort reduced 6.5%, while the State FBM Database average percentage reduced by 1.5% from 2024 to 2025; resulting in the percentage being the same for both groups in 2025. This was the third year of reducing Working Capital. The 3-year average indicates that both groups have similar percentages. Farms in the Environmental Cohort have a slightly stronger Debt to Asset Ratio, at 39% compared to the State FBM Database average of 44% in both 2024 and 2025. The Debt Coverage Ratio increased significantly for both the Environmental Cohort and the State FBM Database average. The Operating Expense Ratio for the State FBM Database average improved from 82% to 77.6%, and the Environmental Cohort improved slightly as well, from 80.3% to 79.1%.

Selected Measures	3-Year Avg.		2024		2025	
	Environ. Cohort	Database Avg.	Environ. Cohort	Database Avg.	Environ. Cohort	Database Avg.
Working Capital as % of Exp.	46.4%	45.8%	48.8%	43.8%	42.3%	42.3%
Farm Debt to Asset Ratio	38.7%	44.0%	39.0%	44.0%	39.0%	44.0%
Debt Coverage Ratio	1.67	1.30	1.52	1.05	1.95	1.51
Operating Expense Ratio	80.9%	80.3%	80.3%	82.0%	79.1%	77.6%

Operating Expense Ratio



Crop Production Costs

In 2025, the Environmental Cohort has a lower seed cost per acre, while the State FBM Database average was lower in the other three factors. The 3-year average, however, shows that the Environmental Cohort was lower for two of those factors; seed cost and chemical cost per acre.

Selected Costs	3-Year Avg.		2024		2025	
	Environ. Cohort	Database Avg.	Environ. Cohort	Database Avg.	Environ. Cohort	Database Avg.
Seed Cost / crop acre	$85.22	$87.61	$85.25	$84.77	$87.71	$88.72
Fertilizer Cost / crop acre	$120.32	$117.16	$115.60	$104.67	$131.90	$118.34
Chemical Cost / crop acre	$54.70	$57.39	$50.05	$53.81	$57.60	$55.79
Fuel and Oil Cost / crop acre	$51.87	$42.79	$50.22	$39.58	$51.98	$41.23

Crop Enterprises At-A-Glance

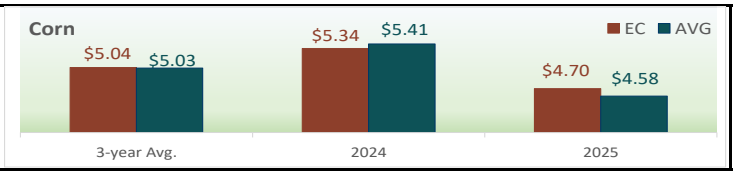
Selected direct expenses and management factors for each crop are listed with a 3-year average, 2024, and 2025 column in a table for each crop. For each table there is a graph of the Cost of Production with Labor per unit, Net Return per acre, and a total of the four listed direct expenses (Seed, Fertilizer, Chemicals, and Fuel & Oil).

Corn Enterprise	3-Year Avg.		2024		2025	
Owned & Rented Combined	EC	AVG	EC	AVG	EC	AVG
Number of Farms	87	1,500	98	1,401	97	1,555
Yield per acre	191.8	195.1	174.1	179.2	210.3	210.5
Seed Expense/acre	$118.35	$121.41	$119.68	$124.25	$120.52	$123.35
Fertilizer Expense/acre	$190.75	$200.61	$187.78	$188.71	$188.40	$180.81
Chemical Expense/acre	$57.63	$52.70	$51.81	$50.44	$64.30	$53.18
Fuel & Oil Expense/acre	$29.59	$32.28	$29.49	$30.31	$29.43	$30.07
Total dir & ovhd exp/ac	$903.86	$917.23	$871.06	$911.08	$931.24	$903.20
Net Return/acre	-$15.40	-$1.71	-$43.75	-$32.43	-$51.85	-$26.34
Gov. Payments/acre	$42.41	$38.73	$42.72	$42.06	$66.83	$72.39
Machinery Cost/acre	$198.94	$189.40	$194.84	$189.56	$200.98	$189.45
Cost of Prod w Lbr/unit	$5.04	$5.03	$5.34	$5.41	$4.70	$4.58

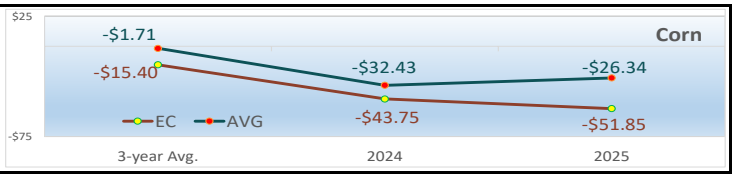
2025 **Corn** data shows a significant increase in yield for both groups from 2024, with actual yields being almost identical at 210+ bushels per acre. Seed expense was less for the Environmental Cohort while other listed expenses and Cost of Production per acre were less for the State FBM Database average. The 3-year average shows very similar numbers for many factors, with the Cost of Production being almost the same, while the Environmental Cohort had the advantage in 2024.

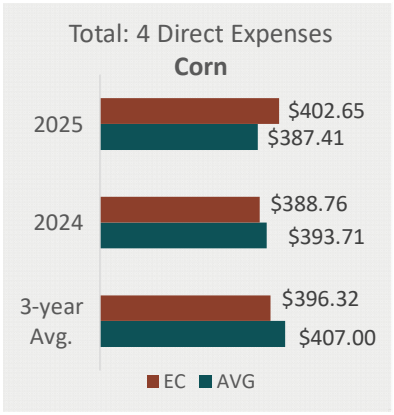
The one factor that shows a consistent trend is the Machinery Cost per acre, where the FBM Database average is lower than the Environmental Cohort. Net Return per Acre during this 3-year period has been better for the State FBM Database, which is impacted by the higher average yields. Government payments increased significantly for both groups in 2025. For the total of the four listed direct expenses, the Environmental Cohort was less for the 3-year average, while showing variability in 2024 and 2025.

Cost of Production with Labor/unit (3-year trend)



Net Return/acre (3-year trend)



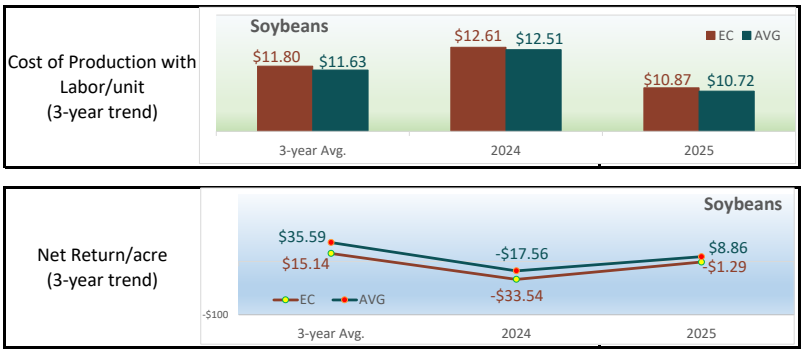


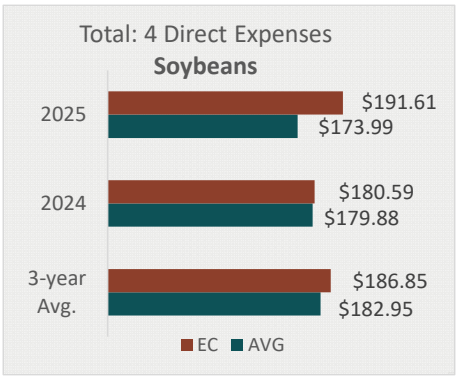
Soybean Enterprise	3-Year Avg.		2024		2025	
Owned & Rented Combined	EC	AVG	EC	AVG	EC	AVG
Number of Farms	72	1,366	81	1,285	78	1,375
Yield per acre	51.4	51.7	46.7	48.2	57.6	55.7
Seed Expense/acre	$56.62	$59.10	$54.91	$58.38	$58.88	$59.49
Fertilizer Expense/acre	$48.73	$41.08	$46.70	$41.09	$50.39	$35.14
Chemical Expense/acre	$64.49	$63.06	$62.04	$61.85	$66.04	$61.08
Fuel & Oil Expense/acre	$17.00	$19.71	$16.94	$18.56	$16.30	$18.28
Total dir & ovhd exp/ac	$567.31	$562.47	$552.67	$565.82	$590.96	$559.76
Net Return/acre	$15.14	$35.59	-$33.54	-$17.56	-$1.29	$8.86
Gov. Payments/acre	$31.82	$28.45	$31.05	$30.10	$55.91	$56.09
Machinery Cost/acre	$125.86	$117.31	$126.11	$117.76	$124.57	$116.83
Cost of Prod w Lbr/unit	$11.80	$11.63	$12.61	$12.51	$10.87	$10.72

Soybean data shows that the Environmental Cohort has lower seed expenses and fuel & oil expenses each year, while having higher total direct and operating costs in both the 3-year average and in 2025. The FBM State Database average has a lower Cost of Production per unit in 2025, with the 3-year average being very similar for groups. For both the total of the four listed direct expenses and the Machinery Cost per acre, the State FBM Database average was less for the 3-year average, 2024, and 2025.

Soybean yields were very similar for the 3-year average, while for the net return, the State FBM Database average had the advantage throughout. Each year, for several factors, the difference is so minor that there is limited cost-saving benefit to one set of practices vs the other. Government payments increased significantly for both Soybean groups in 2025 as well.

This Cost of Production chart shows that production practices for these two groups result in Costs of Production that are very similar over time, with the State FBM Database average having a minor advantage throughout. The FBM State Database average has the advantage of a higher Net Return per acre each year, with 2025 showing the smallest advantage.

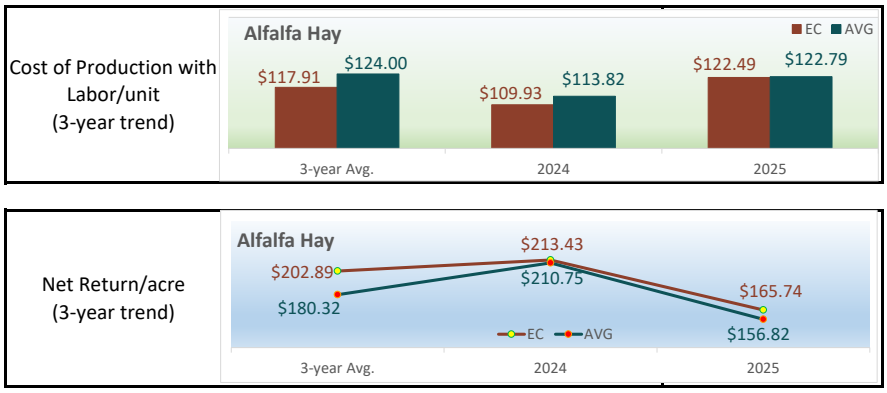


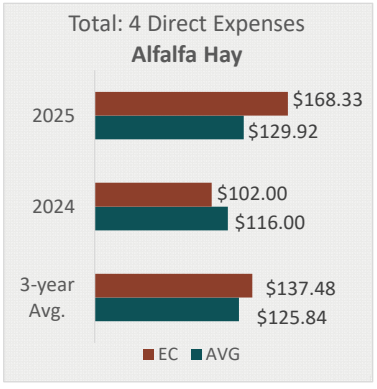


Alfalfa Hay yields were higher for the Environmental Cohort in 2025 and the 3-year average, while the FBM State Database average showed lower Total Direct and Overhead expenses and the four listed direct expenses for those same time periods.

Alfalfa Hay Enterprise	3-Year Avg.		2024		2025	
Owned & Rented Combined	EC	AVG	EC	AVG	EC	AVG
Number of Farms	31	284	28	273	37	262
Yield per acre	5.2	4.8	5.2	5.2	5.8	5.2
Seed Expense/acre	$1.42	$0.89	$4.88	$0.92	$0.35	$0.00
Fertilizer Expense/ac	$87.32	$73.70	$51.36	$66.89	$116.08	$81.69
Chemical Expense/ac	$11.68	$11.89	$10.40	$11.52	$15.19	$10.41
Fuel & Oil Expense/ac	$37.07	$39.36	$35.36	$36.67	$36.71	$37.82
Total dir & ovhd exp/ac	$563.31	$544.26	$511.16	$538.87	$668.89	$585.24
Net Return/acre	$202.89	$180.32	$213.43	$210.75	$165.74	$156.82
Gov. Payments/acre	NA	NA	NA	$1.90	NA	NA
Machinery Cost/acre	$214.54	$217.35	$199.81	$216.78	$243.25	$237.34
Cost of Prod w Lbr/unit	$117.91	$124.00	$109.93	$113.82	$122.49	$122.79

The Environmental Cohort showed lower Fuel & Oil expenses and lower Cost of Production per unit for the 3-year average, 2024 and 2025. The outlier in this data is the higher cost of fertilizer for the Environmental Cohort in 2025. The Environmental Cohort had a higher Net Return in all cases, which appears to result primarily from the higher yield per acre.





The Crop Enterprise tables continue to suggest that any advantage in individual costs and returns varies for each group each year. After five years of comparative data, it is difficult to suggest ongoing cost benefits of intensified environmental crop production practices. This report will continue to add data annually to aid in understanding the overall implications of intensified practices on crop profitability.

Pre-Study and Post-Study Data

For 2025, this table now includes the 3-year average and a percentage comparison for the pre and post study data. The data for the Environmental Cohort has **42** farms that were enrolled continuously for 10 years. The FBM State Database average group includes **675** farms that were enrolled all 10 years but NOT Water Quality Certified in 2025.

Financial Factors	Pre-Study 3-Year Average (2016 - 2018)			Post-Study 3-Year Average (2023 - 2025)		
	Environ. Cohort	State Avg.	EC as % of State Avg	Environ. Cohort	State Avg.	EC as % of State Avg
Gross Cash Farm Income	$1,386,695	$845,864	164%	$2,354,609	$1,302,693	181%
Crop Sales	*$327,331*	*$468,585*	*70%*	*$526,957*	*$730,235*	*72%*
Livestock Sales	*$894,698*	$255,626	*350%*	*$1,528,767*	*$342,056*	*447%*
Total Cash Farm Expense	*$1,201,137*	$725,284	166%	*$1,989,959*	*$1,074,489*	185%
Net Cash Income	*$185,559*	$120,580	154%	*$364,650*	*$228,204*	160%
Average Net Farm Income	$114,054	$69,049	165%	$256,883	$103,810	247%
Median Net Farm Income	$57,603	$40,594	142%	$102,763	$53,354	193%
Working Capital as % of OE	42.1%	33.5%	126%	57.8%	51.6%	112%
Farm Debt to Asset Ratio	24%	35%	145%	19%	30%	158%
Rate of Return on Assets	2.13%	2.27%	94%	4.03%	2.37%	170%
Debt Coverage Ratio	1.34	1.11	121%	2.52	1.15	218%
Operating Expense Ratio	84.3%	80.3%	105%	82.4%	80.3%	103%
Total net worth change	$65,716	$70,259	94%	$283,957	$211,262	134%

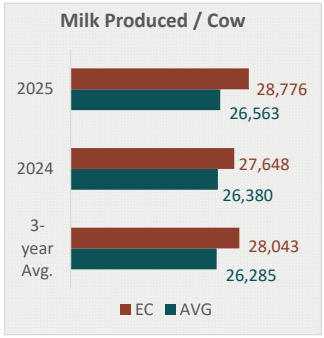
The Environmental Cohort shows advantages (noted as 100+%) over the State Database average for most factors; which is the basis for the earlier statement that "producers who earn water quality certification have a management style that enhances profitability." Crop sales are less due to a higher level of livestock on the Environmental Cohort farms, while Operating Expense Ratio was basically even. Rate of Return on Assets and Total net worth change are slightly less for the Environmental Cohort in the pre-study data.

Livestock Enterprises At-A-Glance

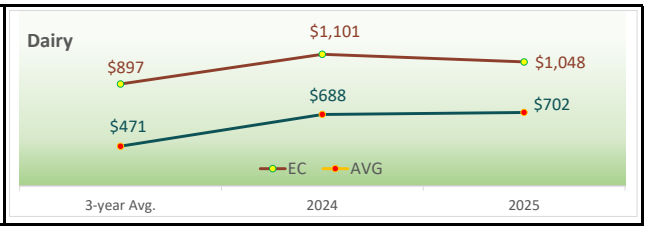
The Income Source charts on page one indicate that the Environmental Cohort generates more income from livestock than the FBM State Database average. Those two charts noted that the Environmental Cohort has 17% more livestock and livestock/crop farm types, and 15% less income from crops.

Dairy Enterprise (Excl Organic, Org Trans)	3-Year Avg.		2024		2025	
	EC	AVG	EC	AVG	EC	AVG
Number of Farms	20	229	18	222	23	216
Gross Margin / cow	$6,144	$5,489	$6,168	$5,669	$6,528	$5,774
Feed Cost / cow	$2,891	$2,694	$2,845	$2,679	$2,849	$2,623
Net Return / cow	$897	$471	$1,101	$688	$1,048	$702
Gov. Payments /cow	$81	$92	$15	$12	$15	$0
Avg. Milk Price / cwt	$20.98	$20.37	$21.84	$21.36	$21.04	$20.68
Milk Produced / cow	28,043	26,285	27,648	26,380	28,776	26,563
Number of Cows	405	307	370	303	491	331

For the **Dairy enterprise**, the Environmental Cohort had larger herds, higher net return per cow, received a slightly higher milk price per CWT, and produced more milk per cow than the State FBM Database average. The State FBM Database average showed a lower feed cost per cow.

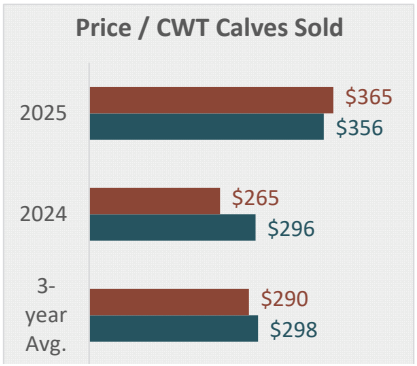


Net Return/cow (3-year trend)

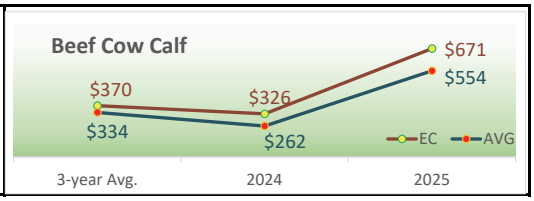


For the **Beef Cow-Calf enterprise**, the Environmental Cohort had higher Gross Margin and Net Return per cow each year while the State FBM Database average had a lower feed cost in 2025. The Environmental Cohort generally has a larger number of cows each year while the State FBM Database average shows more cows per FTE (Full Time Equivalent) in the 3-year average and in 2025. The State FBM Database average showed a higher Price/Beef Calves Sold in the 3-year average and in 2024, while the Environmental Cohort showed a higher price in 2025.

Beef Cow Calf Enterprise (Excl. Backgrounding)	3-Year Avg.		2024		2025	
	EC	AVG	EC	AVG	EC	AVG
Number of Farms	13	79	15	68	13	98
Gross Margin / cow	$1,504	$1,440	$1,377	$1,314	$1,980	$1,737
Feed Cost / cow	$616	$631	$593	$625	$664	$640
Net Return / cow	$370	$334	$326	$262	$671	$554
Number of Cows	75	63	68	56	78	65
Cows per FTE	262	271	288	262	267	280
Calves sold per Cow	0.82	0.78	0.83	0.84	0.75	0.74
Price/ CWT Calves Sold	$290	$298	$265	$296	$365	$356



Net Return/cow (3-year trend)



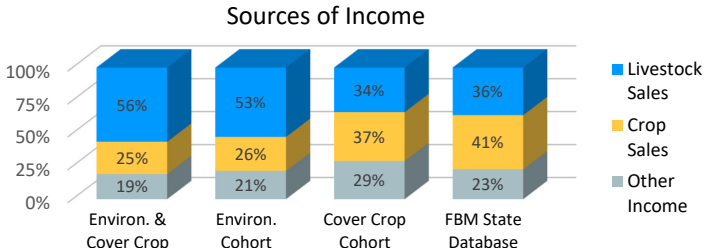
FBM Farms that are Water Quality Certified and using Cover Crops

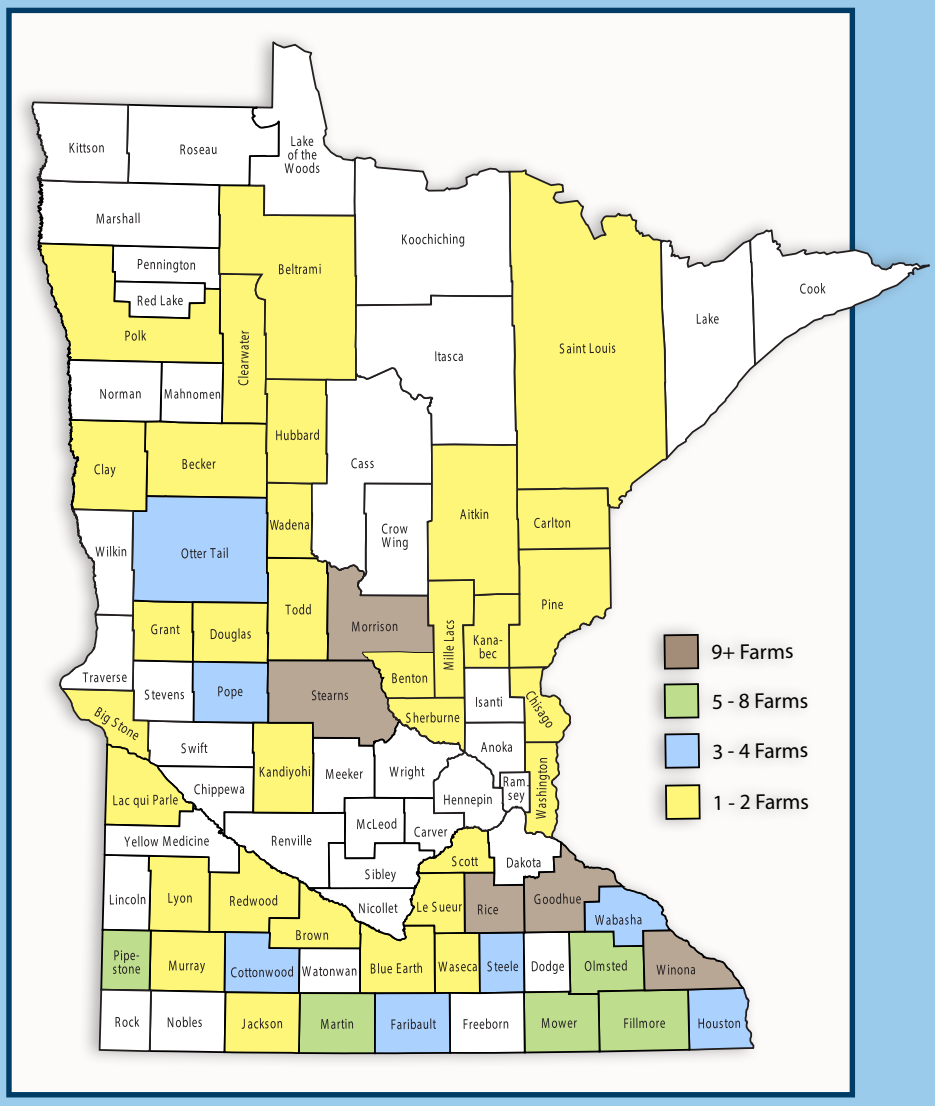
Farmers enrolled in the FBM program are able to indicate if they are raising cover crops and if they are MN Water Quality Certified farms (Environmental Cohort). In 2025, 21 farms were a part of both cohorts. These tables compare this combined cohort with the Environmental and Cover Crop cohorts individually, and the State FBM Database average.

The first table lists general demographic data showing that this cohort has fewer crop acres and fewer beginning farmers. Comparing financial and chart data, these farms have a larger percentage of livestock sales, which aligns with the Environmental Cohort. This group is similar in business size, generates the second highest average net farm income, but has a more moderate median net farm income. This group has a solid Debt Coverage Ratio but has the weakest Working Capital position.

Demographics	2025			
	Environ. & Cover Crop	Environ. Cohort	Cover Crop Cohort	FBM State Database
Number of Farms	21	161	126	2314
Total Crop Acres per Farm	645	795	993	821
Age of Operator	49.6	48.7	47.7	47.5
Years Farming	23.8	24.2	24.0	22.9
Beginning Farmers (<10 yrs)	14%	18%	20%	29%

Financial Factors	2025			
	Environ. & Cover Crop	Environ. Cohort	Cover Crop Cohort	FBM State Database
Gross Cash Farm Income	$1,238,760	$1,627,818	$1,306,615	$1,113,772
Crop Sales	*$303,995*	*$420,234*	*$484,482*	*$457,929*
Livestock Sales	*$698,200*	*$858,423*	*$443,111*	*$403,043*
Other Income	*$236,565*	$349,161	*$379,022*	$252,800
Total Cash Farm Expense	*$1,141,137*	$1,406,595	*$1,165,491*	$971,595
Average Net Farm Income	$145,777	$197,560	$112,104	$129,473
Median Net Farm Income	$70,262	$98,923	$96,601	$64,216
Working Capital as % of OE	31.0%	42.3%	39.7%	42.3%
Debt Coverage Ratio	1.68	1.95	1.39	1.51

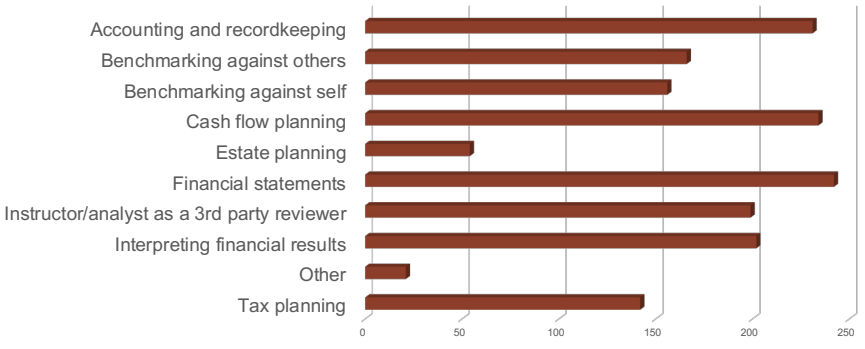




SOURCES OF DATA

The 161 producers who provided data for this report have all earned a Minnesota Water Quality Certification from the MN Department of Agriculture. Those producers are located in 49 of Minnesota's 87 counties. Those counties are highlighted on the map.

WHAT PRODUCERS LIKE BEST ABOUT THE MN FBM PROGRAM



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