



MINNESOTA STATE

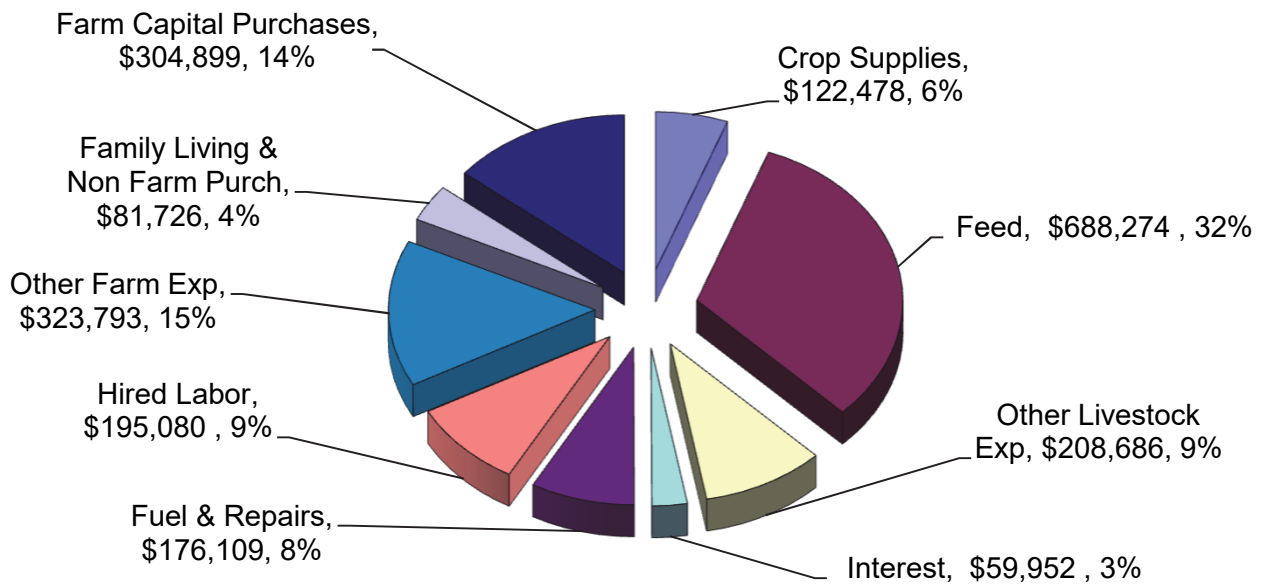
Farm Business Management Program Database

Dairy Farm Sort - 2023

Financial Sort By Gross Revenue & Enterprise Sort Data by Herd Size
Selected Production Practice Sorts, 5-yr & Long Term Trends of Selected Data

April 2024

Average Dollars Spent by a Dairy Farm: \$2,160,997



In Cooperation with the Center for Farm Financial Management, University of Minnesota
Compiled by Nathan Converse

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

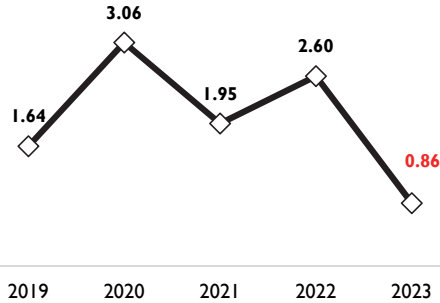
A Brief Overview of 2023

This report summarizes data from the Minnesota State Farm Business Management (FBM) Database to provide specialized information for Minnesota dairy producers.

Based on the graph on the cover, the farms in this report spent \$505,673,298 in their greater communities in 2023. The majority of the money is spent locally, including businesses and cooperatives, demonstrating the vital importance of farming on the economy of Minnesota. This report is designed to provide an overview of both the whole farm financial picture for dairy operations, and provide insight into the dairy enterprise based on herd size.

Debt Coverage Ratios Decline in 2023

A Debt Coverage Ratio below 1.0 indicates a dairy farm did not generate enough income to cover interest expense & debt



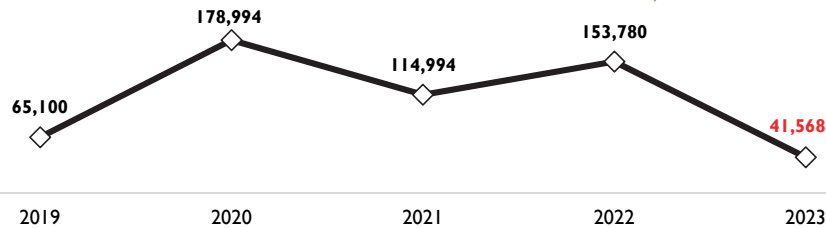
Net Return by Herd Size

The small and large herds had negative net returns (milk price minus cost of production) in 2023

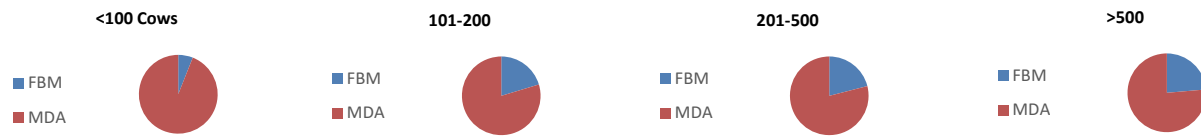


Net Farm Income Declines in 2023

The Median Net Farm Income declined to the lowest level in the last 5 years.



In cooperation with the Minnesota Department of Agriculture, we have estimated that the data in this report represents the following percentage of dairy herds in the state of Minnesota:



General Financial Summary

Farm Business Management Program Database

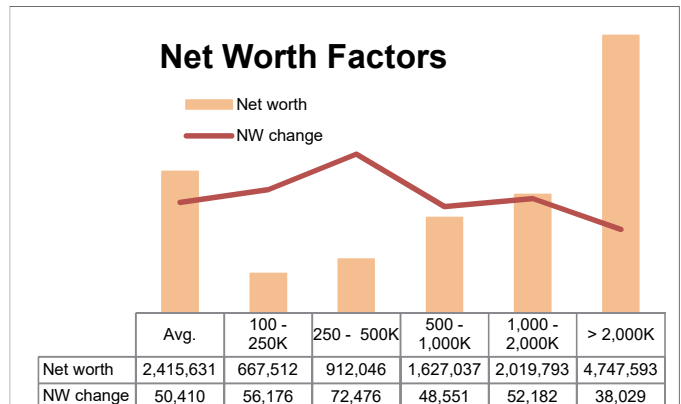
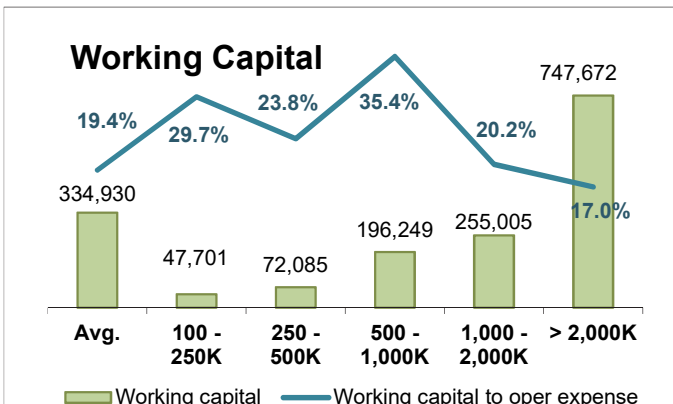
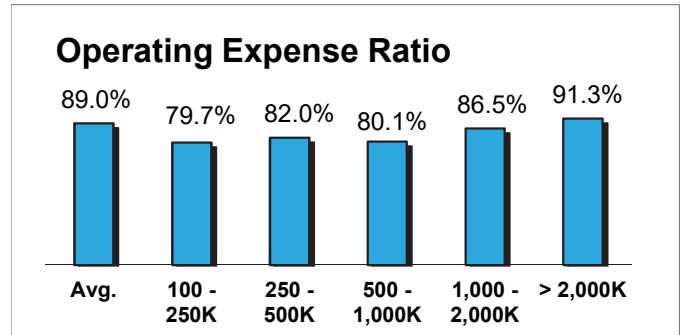
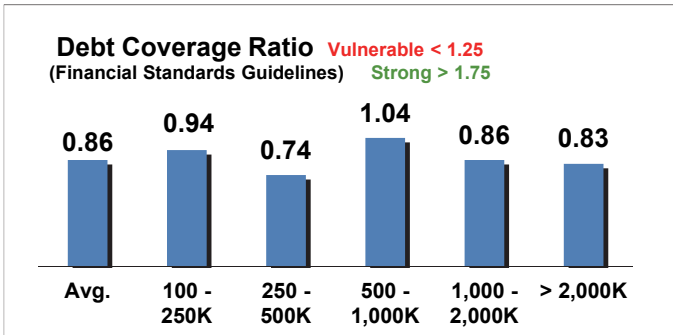
(Dairy Farms Sorted by Gross Farm Income, includes Organic and Organic Transition)

	Avg. Of All Farms	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	234	17	33	64	55	65
Income Statement						
Gross cash farm income	1,955,093	208,215	384,326	716,686	1,477,860	4,832,602
Total cash farm expense	1,774,372	180,336	322,921	577,485	1,294,574	4,512,622
Net cash farm income	180,721	27,879	61,406	139,201	183,286	319,980
Average net farm income	49,463	3,995	12,573	59,876	60,959	60,104
Median net farm income	41,568	583	20,144	52,620	59,731	73,406
Solvency (end of year at market)						
Total assets	4,265,185	1,232,581	1,555,722	2,586,381	3,568,571	8,676,320
Total liabilities	1,849,553	565,070	643,675	959,344	1,548,778	3,928,727
Net worth	2,415,631	667,512	912,046	1,627,037	2,019,793	4,747,593
Total net worth change	50,410	56,176	72,476	48,551	52,182	38,029

Financial Standards Measures

(Dairy Farms Sorted by Gross Farm Income, includes Organic and Organic Transition)

	Avg. Of All Farms	100,000 - 250,000	250,001 - 500,000	500,001 - 1,000,000	1,000,001 - 2,000,000	Over 2,000,000
Number of farms	234	17	33	64	55	65
Liquidity						
Current ratio	2.07	2.02	1.90	2.69	2.10	1.98
Working capital	334,930	47,701	72,085	196,249	255,005	747,672
Working capital to oper expense	19.4%	29.7%	23.8%	35.4%	20.2%	17.0%
Solvency (market)						
Farm debt to asset ratio	45%	50%	44%	39%	45%	46%
Farm equity to asset ratio	55%	50%	56%	61%	55%	54%
Change in total net worth %	2%	9%	9%	3%	3%	1%
Profitability (cost)						
Rate of return on farm assets	0.7%	-0.4%	-0.8%	1.4%	0.8%	0.7%
Rate of return on farm equity	-2.0%	-9.3%	-6.0%	-0.4%	-2.0%	-2.1%
Operating profit margin	2.0%	-1.8%	-3.2%	5.0%	2.3%	1.6%
Net farm income (avg)	49,463	3,995	12,573	59,876	60,959	60,104
EBIDTA	212,774	40,985	66,597	137,551	196,035	420,147
Repayment Capacity						
Debt repayment capacity	148,110	37,991	47,563	85,558	131,880	303,281
Debt repayment margin	-24,202	-2,463	-16,922	3,640	-21,270	-63,478
Debt coverage ratio	0.86	0.94	0.74	1.04	0.86	0.83
Replacement coverage ratio	0.72	0.75	0.65	0.81	0.73	0.69
Term debt to EBITDA	5.13	8.03	6.13	4.32	5.46	5.11
Efficiency						
Asset turnover rate (cost)	37.7%	23.3%	25.9%	27.6%	35.3%	42.2%
Operating expense ratio	89.0%	79.7%	82.0%	80.1%	86.5%	91.3%
Depreciation expense ratio	5.2%	7.9%	8.9%	7.1%	5.8%	4.6%
Interest expense ratio	3.2%	8.8%	5.7%	4.3%	3.5%	2.8%
Net farm income ratio	2.6%	3.6%	3.5%	8.5%	4.1%	1.3%

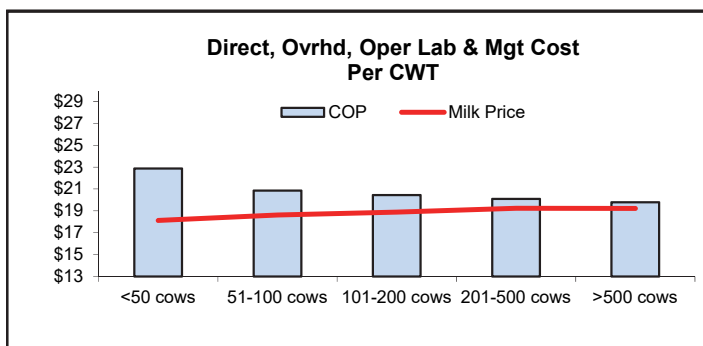
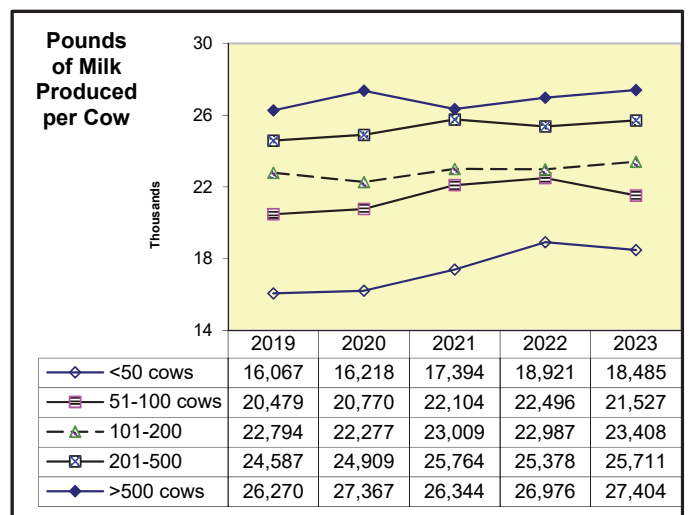
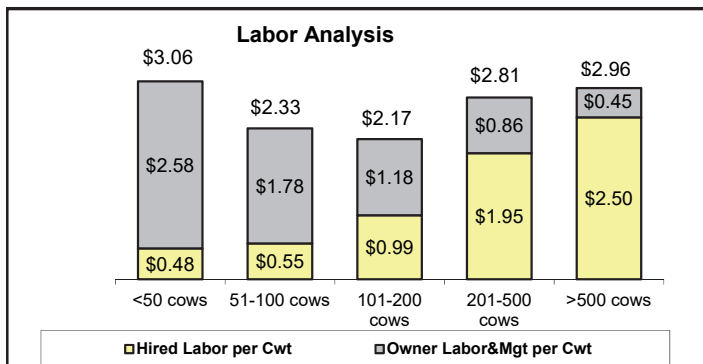
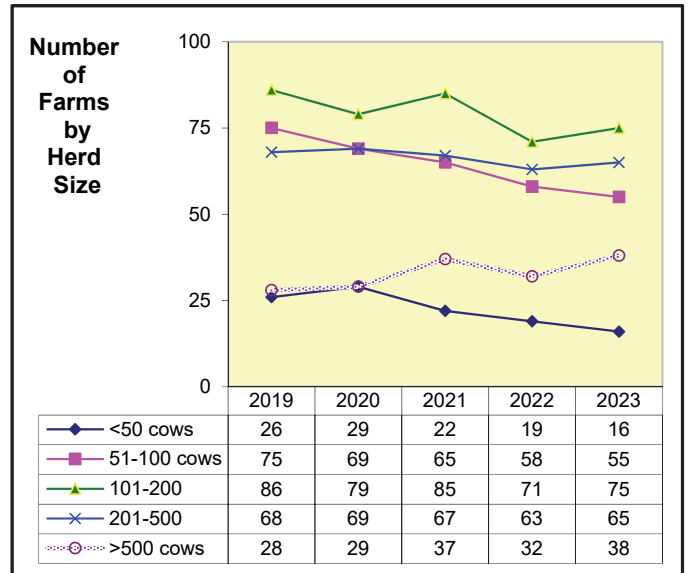
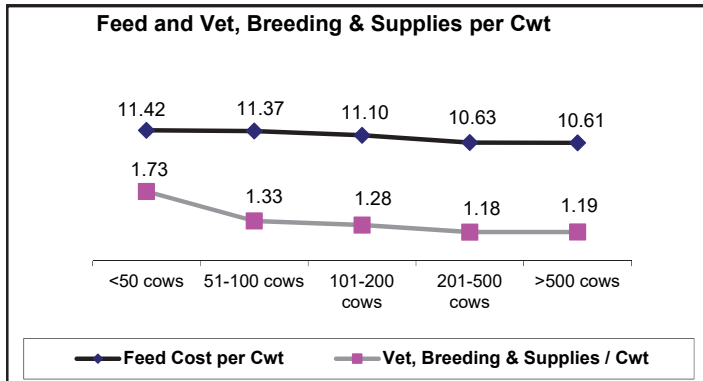


State Database Dairy Cow Enterprise <i>(Excludes Organic and Organic Transition)</i>	Sorted by Average Number of Dairy Cows					
	Average	Up to 50 Cows	51 to 100 Cows	101 to 200 Cows	201 To 500 Cows	Over 500 Cows
	***** Per Cow *****					
Number Of Farms	249	16	55	75	65	38
Milk sold (hd)	4,940.54	3,349.15	3,987.86	4,397.24	4,923.25	5,246.76
Dairy Calves sold (hd)	111.72	38.55	77.37	66.29	110.65	130.78
Transferred out (hd)	51.69	138.28	89.87	80.14	47.80	39.63
Cull sales (hd)	319.76	335.61	313.25	378.67	332.18	296.25
Government payments	258.86	413.01	410.42	419.80	333.84	150.12
Other income (includes DRP insurance)	161.18	27.13	84.38	105.11	142.16	199.33
Purchased & Transferred in (hd)	-168.47	-339.14	-161.82	-120.91	-111.46	-211.70
Inventory change (hd)	52.68	152.66	73.64	6.08	10.41	85.49
Dairy repl cost	-691.44	-520.14	-683.55	-688.30	-699.08	-692.06
Gross margin	5,036.98	3,595.09	4,191.64	4,646.42	5,089.74	5,244.81
Direct Expenses						
Protein Vit Minerals	987.76	745.92	962.47	929.96	887.27	1,067.67
Complete Ration	558.47	279.22	212.19	395.48	695.64	574.64
Corn	371.94	296.14	343.32	344.67	329.02	408.39
Corn Silage	485.77	354.86	379.65	442.62	437.31	539.91
Hay, Alfalfa	264.81	283.91	393.17	400.03	274.16	205.11
Other forages	111.03	150.62	156.39	86.16	109.90	112.93
Breeding fees	53.31	43.31	47.91	49.42	52.47	55.70
Veterinary	102.66	65.58	87.39	90.20	101.97	109.10
Supplies	163.77	178.31	164.02	165.02	170.48	159.38
Fuel & oil	112.03	101.34	96.61	114.97	119.74	108.87
Repairs	215.83	186.41	200.67	227.51	235.67	203.70
Custom hire	96.01	30.56	45.72	65.03	76.33	122.95
Hired labor	364.55	58.32	19.60	121.66	292.59	520.56
Hauling, & Trucking	119.89	110.93	98.66	95.33	103.22	138.90
Marketing	51.29	30.19	44.20	46.89	50.69	54.10
Bedding	91.67	32.59	69.47	87.48	95.51	94.39
Other direct expenses	123.52	140.47	122.73	120.69	119.26	126.51
Total direct expenses	4,274.31	3,088.68	3,444.17	3,783.12	4,151.23	4,602.81
Return over direct expense	762.67	506.42	747.47	863.30	938.51	642.00
Overhead Expenses						
Hired labor	164.54	28.20	99.73	110.04	208.94	165.61
Building & machinery leases	77.87	28.78	10.81	46.36	83.60	92.49
Utilities	64.17	86.45	91.30	89.84	59.55	55.74
Interest	106.95	88.49	113.89	116.37	107.97	103.16
Mach & bldg depreciation	200.72	255.47	213.43	229.82	215.90	181.38
Miscellaneous	111.28	174.02	134.71	134.93	120.05	95.71
Total overhead expenses	725.53	661.41	663.87	727.36	796.01	694.09
Total dir & ovhd expenses	4,999.84	3,750.09	4,108.04	4,510.48	4,947.25	5,296.91
Net return	37.14	-154.99	83.61	135.93	142.49	-52.10
Labor & management charge	192.16	477.72	383.03	275.76	221.54	124.30
Net return over lbr & mgt	-155.02	-632.71	-299.43	-139.83	-79.05	-176.40
Cost of Production per CWT						
Total direct expense per cwt.	16.49	16.71	16.00	16.16	16.15	16.80
Total dir& ovhd expense per cwt.	19.29	20.29	19.08	19.27	19.24	19.33
With other revenue adjustments	18.97	18.96	18.21	18.28	18.66	19.37
With labor and management	19.71	21.54	19.99	19.46	19.52	19.82
Est. labor hours per unit	37.8	41.4	35.4	33.9	37.3	39.4
Other Information						
Avg. number of Cows	288	40	77	140	310	953
Milk produced per Cow	25,918	18,485	21,527	23,408	25,711	27,404
Energy corrected milk per cow	28,253	19,706	23,624	25,365	28,010	29,915
Lbs of fat & protein per cow	1,916	1,334	1,607	1,717	1,899	2,030
Turnover rate	34.6	37.2	36.4	37.9	34.5	33.4
Feed cost per head per day	7.62	5.78	6.70	7.12	7.49	7.97
Feed cost per cwt of milk	10.73	11.42	11.37	11.10	10.63	10.61
Feed cost per Cow	2,779.78	2,110.67	2,447.19	2,598.92	2,733.30	2,908.65
Avg. milk price per cwt.	19.14	18.12	18.62	18.88	19.23	19.22
Milk price / feed margin	8.41	6.70	7.25	7.77	8.60	8.60

Selected Dairy Enterprise Factors from the Farm Business Management Program Database

(excludes Organic and Organic Transition)

Herd Size	State Ave.	up to 50 cows	51-100 cows	101-200 cows	201-500 cows	over 500 cows
Number of Farms	249	16	55	75	65	38
Ave # of Cows	288.0	40.3	76.5	140.0	309.9	953.0
Milk Prod. Per Cow	25,918	18,485	21,527	23,408	25,711	27,404
Feed Cost per Cwt	10.73	11.42	11.37	11.10	10.63	10.61
Interest per Cwt	0.41	0.48	0.53	0.50	0.42	0.38
Vet, Breeding & Supplies / Cwt	1.46	1.73	1.33	1.28	1.18	1.19
Hired Labor per Cwt	2.04	0.48	0.55	0.99	1.95	2.50
Deprec/Lease per Cwt	0.77	1.51	1.32	0.96	1.07	1.09
Milk Price per Cwt	19.14	18.12	18.62	18.88	19.23	19.22
Dir & Ovhd Cost per Cwt	19.29	20.29	19.08	19.27	19.24	19.33
Return over Dir & Ovhd per Cow	37	-155	84	136	142	-52
Herd Profit over Dir&Ovhd	10,696	-6,246	6,396	19,030	44,158	-49,651
Owner Labor&Mgt per Cwt	0.74	2.58	1.78	1.18	0.86	0.45
Net per Cow after Labor&Mgt	-155	-633	-299	-140	-79	-176
Herd Profit over Labor&Mgt	-44,646	-25,498	-22,906	-19,576	-24,498	-168,109

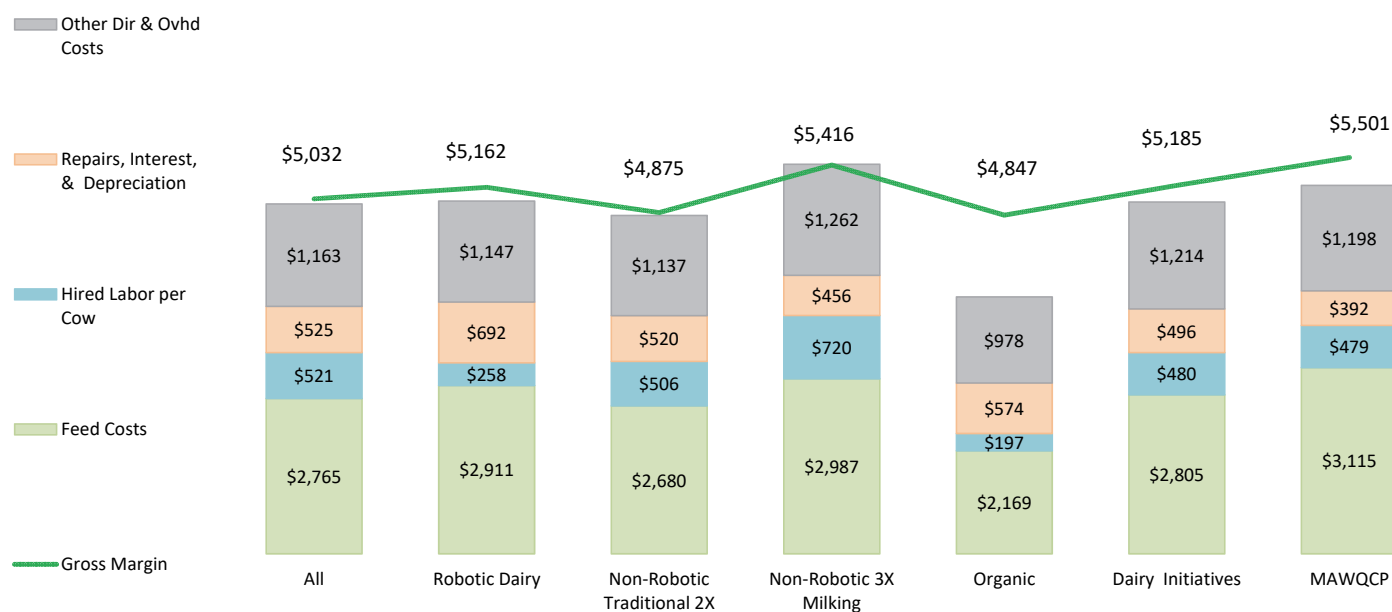


Additional Selected Sorts within the Dairy Enterprise

The State Database provides the opportunity to dig deeper into the data using special markers on farms with different practices. Using the FINPACK & RankEM Central software from the Center for Farm Financial Management, specific production practices can be included or excluded from a given sort. This enables selected practices to be compared. Below is a sample of the sort options which provide another comparative look at Minnesota's State Dairy Data. The MAWQCP sort includes data from conventional non-Organic farms that are enrolled in the Minnesota Agricultural Water Quality Certification Program.

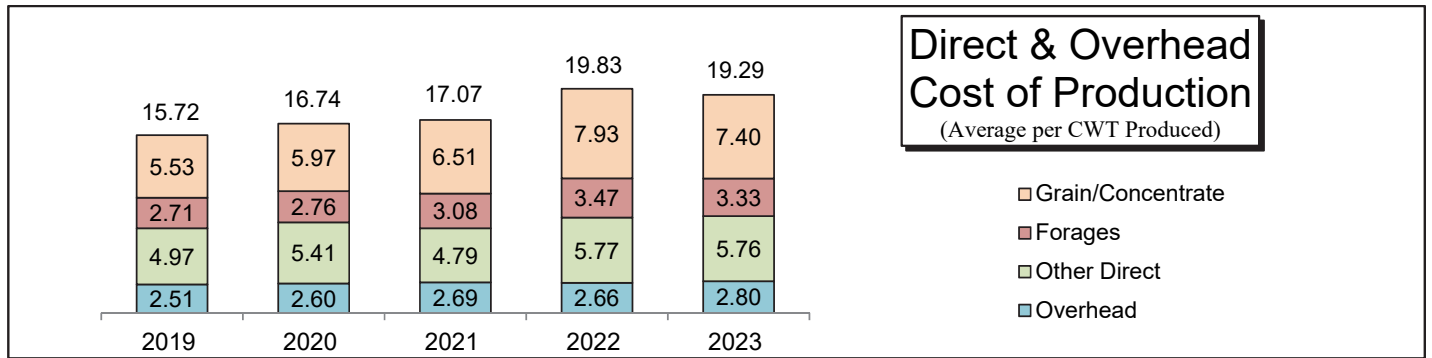
Sort - Includes	All	Robotic Dairy	Non-Robotic Traditional 2X	Non-Robotic 3X Milking	Organic	Dairy Initiatives	MAWQCP
Number of Farms	269	35	186	25	20	57	18
Number of Cows	259	234	243	714	91	257	370
Milk Produced per Cow	25,652	26,460	24,978	28,204	15,157	25,273	27,165
Milk Sold	\$4,936	\$5,038	\$4,746	\$5,417	\$4,757	\$4,968	\$5,453
Gross Margin	\$5,032	\$5,162	\$4,875	\$5,416	\$4,847	\$5,185	\$5,501
Feed Cost per Cow	\$2,765	\$2,911	\$2,680	\$2,987	\$2,169	\$2,805	\$3,115
Breeding Fees	\$53	\$50	\$54	\$53	\$31	\$54	\$55
Veterinary	\$101	\$101	\$98	\$116	\$25	\$95	\$111
Repairs	\$217	\$229	\$221	\$199	\$253	\$211	\$189
Hired Labor per Cow	\$521	\$258	\$506	\$720	\$197	\$480	\$479
Interest	\$107	\$170	\$106	\$80	\$119	\$94	\$46
Depreciation	\$201	\$293	\$193	\$177	\$202	\$191	\$157
Total Dir & Ovhd Cost	\$4,973	\$5,007	\$4,843	\$5,425	\$3,918	\$4,996	\$5,185
Net Return	\$59	\$155	\$32	-\$9	\$929	\$189	\$317
Cost of Prod - O&D	\$19.39	\$18.92	\$19.39	\$19.23	\$25.85	\$19.77	\$19.09
Turnover Rate	34.4	36.7	35.0	32.8	26.9	34.3	33.9
Lbs of fat & protein/Cow	1,899	1,921	1,838	2,124	1,217	1,870	2,036
Energy Corrected Milk/Cow	27,989	28,344	27,136	31,218	17,613	27,591	29,991
Lb. of Milk Sold/FTE	1,803,227	2,711,944	1,754,526	1,807,077	1,081,036	1,825,220	1,725,601
Feed Cost per CWT	\$10.78	\$11.00	\$10.73	\$10.59	\$14.31	\$11.10	\$11.47
Average Milk Price	\$19.32	\$19.10	\$19.06	\$19.33	\$31.80	\$19.79	\$20.20

Gross Margin & Expenses per Cow

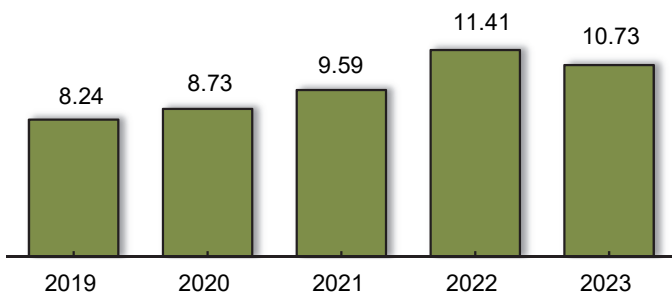


Summary of Selected Dairy Enterprise Factors - Average Farm Data

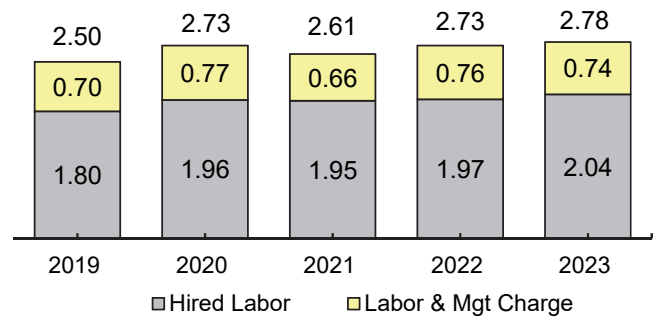
(excludes Organic and Organic Transition)



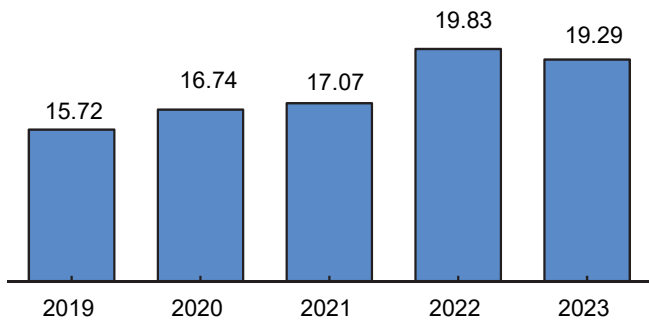
Feed Cost per CWT



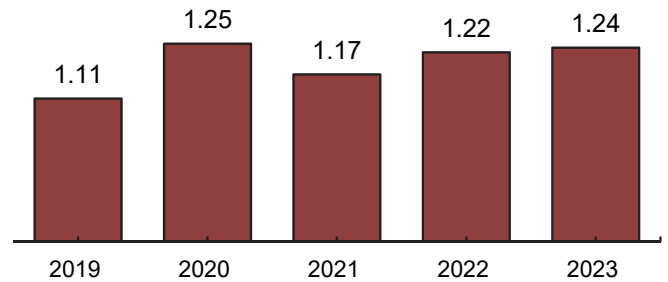
Labor per CWT



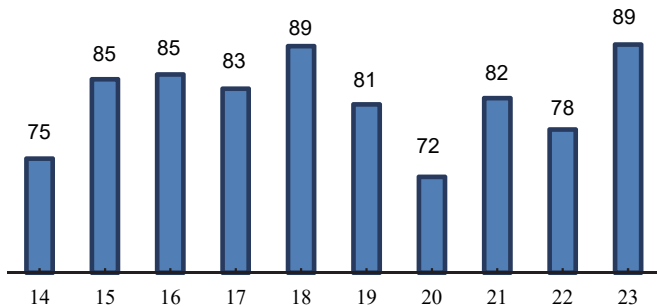
Dir & Ovhd Exp per CWT



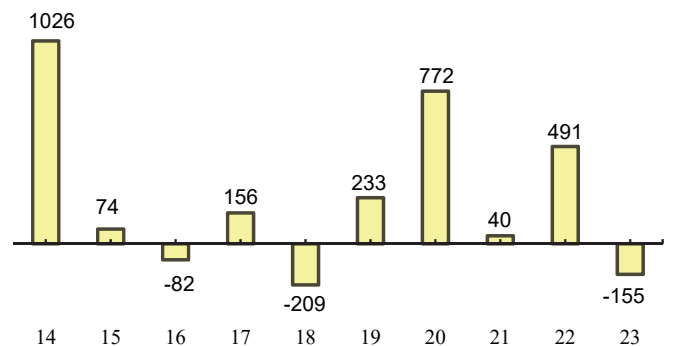
Vet, Breeding & Supplies



Operating Expense Ratio



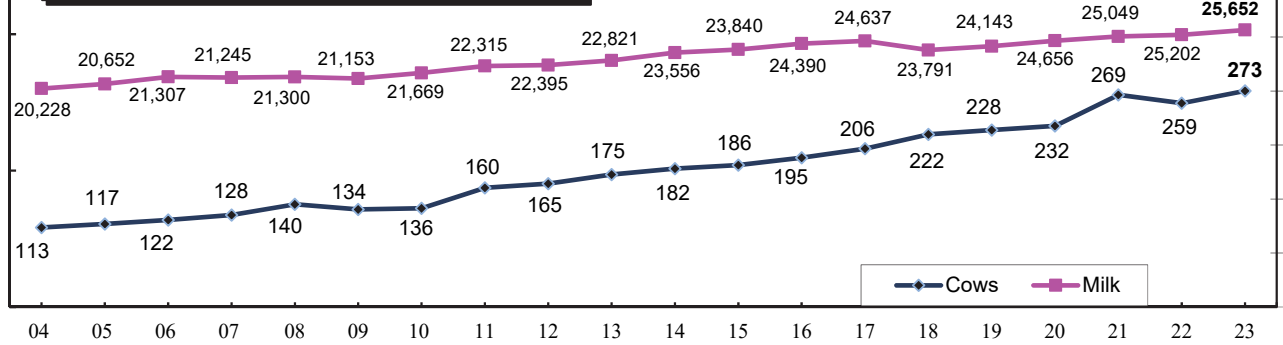
Net Return after Dir, Ovhd, & Labor



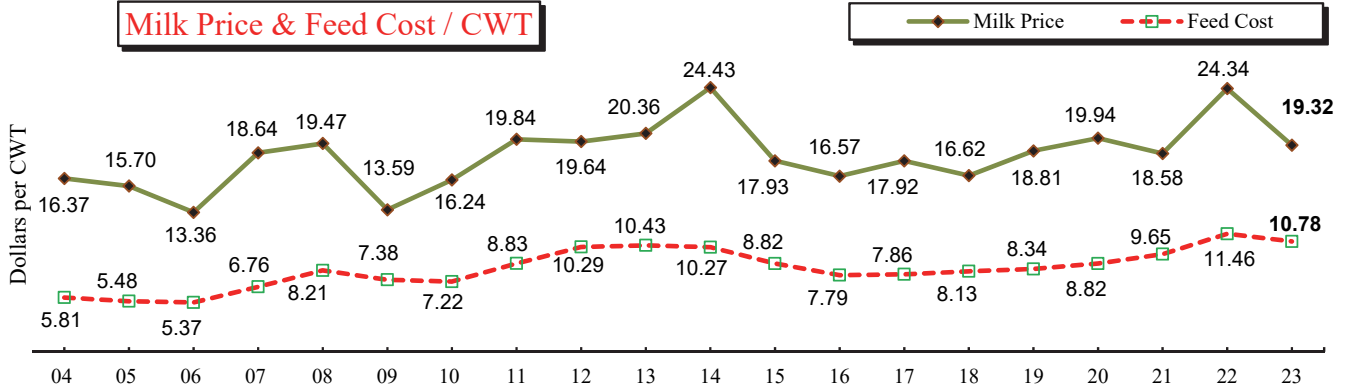
A Long Term History of Selected Dairy Information

(Includes Organic and Organic Transition)

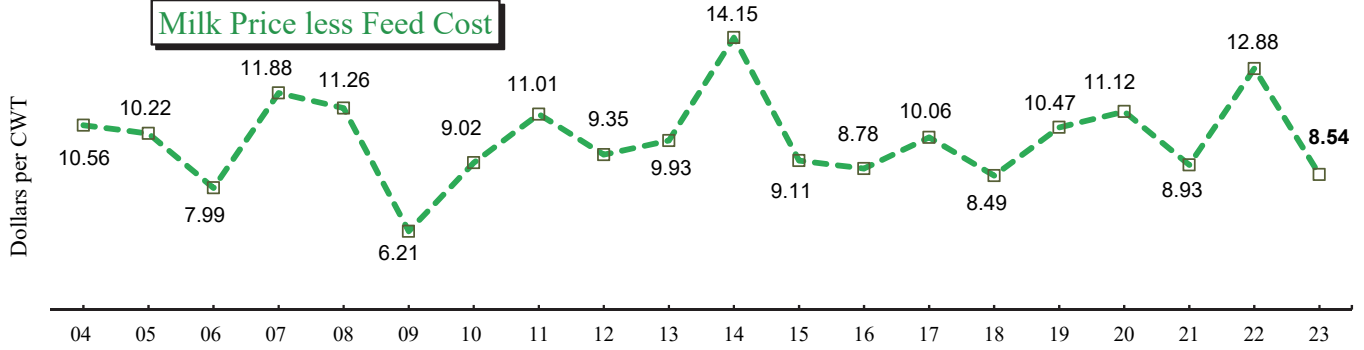
Avg No. of Cows & Production per Cow



Milk Price & Feed Cost / CWT



Milk Price less Feed Cost



Avg Milk Price Received vs. Total Direct, Ovhd, & Labor

