

2013 Ohio Farm Business Analysis

Dairy Enterprise Analysis Summary Including Benchmark Reports



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<http://farmprofitability.osu.edu/>

This document contains summary information for 35 dairy farms participating in the 2013 Ohio Farm Business Analysis and Benchmarking Program. These farms provided detailed financial and production data in order to complete a whole farm and enterprise analysis for their dairy and crop enterprises. Confidentiality of individual farm data is of utmost importance, so data is not shared if there are less than 5 farms in a group.

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2013 Ohio Farm Business Analysis

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Dairy Enterprise Analysis Reports

The Dairy Enterprise Analysis reports show the average physical production, gross margin over purchase costs, direct costs, overhead costs, and net returns per cow or per hundredweight (cwt). Information is presented for the average of all farms and the “High 20%” sorted by net return per cow.

Gross Margin is the accrual gross value added by the enterprise. It includes income from sale of offspring and livestock products, cull income, non-cash transfers to other enterprises, and the value of production used in the home or for feed. It also includes the value of inventory change from beginning to the end of the year. Inventory changes are calculated using the cost-based balance sheet, and each farm’s per-head values for their breeding livestock inventories are held constant from the beginning through the end of the year. The cost of livestock purchased and the value of animals transferred in are deducted.

Net Return is the amount contributed by a unit of the enterprise toward operator labor, management, and equity capital. Any wages and benefits paid to the operator are removed from labor costs (and added to *Labor and Management Charge*) so that all farms are on equal footing.

Net Return over Labor and Management is the return remaining after compensating the operator for unpaid labor and management. This is the per-unit return to equity capital.

Labor and Management calculation:

Management is calculated at 5% of the Value of Farm Production

Labor is valued at \$13.50 per hour for 3,000 hours annually (one operator)

Example:	Management at 5% * \$950,000 VFP	= \$47,500
	Labor of 3,000 hrs * \$13.50	<u>= \$40,500</u>
		\$88,000

Cost of Production shows the average cost per unit in each cost category. *Total direct and overhead expense per unit* is the breakeven price needed to cover cash costs and depreciation.

With Other Revenue Adjustments is the breakeven price adjusted for cull sales, other offspring sales, the cost of replacement stock, and any other miscellaneous income. This assumes that some costs can be covered by these other income sources.

With Labor and Management is the final breakeven price to provide a labor and management return for the operator(s).

Other Information contains both economic and technical efficiency measures for the enterprise.

Rounding of individual items for the report may cause minor discrepancies with the calculated total

Thirty-five Ohio dairy farms completed farm business analyses for 2013. These farms, 34 conventionally managed and one organically-managed, provided detailed financial and production data to complete both a whole farm financial analysis and dairy and crop enterprise analyses.

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A quick look at the farms...

12/22

2013	Average of 35 farms	Range	Top 20% Average
Number of Cows	259	48 – 1,000+	211
Milk sold Per cow	24,635	15,322 - 30,759	26,812
Feed cost per cwt of milk	\$12.10	\$7.54 – 16.28	\$11.31
Total cost per cwt.*	\$20.16	\$14.30 - \$27.55	\$17.13
Net return per cow**	\$544	(\$515) - \$2,400	\$1,501

* Including rev adj, labor and management charge; **before labor and management charge

Raised feed valued at cost of production (COP)

Ohio Farm Business Analysis Program

Dairy Enterprise Analysis
Average of all Farms and High 20% Sorted By Net Return Per Cow

Dairy -- Average Per Cow

	Avg. Of All Farms		High 20%	
	35	7		
Number of farms				
Milk sold (hd)	Quantity 24,629.5	Value 5,276.31	Quantity 26,808.9	Value 5,800.49
Dairy Calves sold (hd)	0.4	50.20	0.2	47.02
Transferred out (hd)	0.0	-	0.0	-
Cull sales (hd)	0.3	261.07	0.3	265.48
Other income		42.88		50.00
Purchased (hd)	0.1	-2.98	0.0	-4.59
Transferred in (hd)	0.0	-	-	-
Inventory change (hd)	0.1	123.60	0.3	280.21
Gross margin		5,751.08		6,438.62
Direct Expenses				
Protein Vit Minerals (lb.)	190.3	1,601.54	-	1,439.83
Corn (bu.)	39.8	232.20	39.3	216.52
Corn Silage (lb.)	22,724.6	535.28	25,705.4	610.03
Corn, Ear (lb.)	333.5	22.04	1,724.5	114.20
Hay, Alfalfa (lb.)	2,566.1	209.30	1,740.5	106.78
Hay, Grass (lb.)	1,478.1	98.15	736.0	80.18
Haylage, Alfalfa (lb.)	1,772.3	42.16	6,912.9	169.50
Haylage, Grass (lb.)	1,006.5	39.01	4,571.6	113.21
Rye Silage (lb.)	1,326.5	37.96	1,862.2	92.70
Other feed stuffs (lb.)	828.5	162.60	2,534.7	90.45
Breeding fees		83.30		74.83
Veterinary		140.71		110.88
Supplies		236.97		137.72
Fuel & oil		108.89		95.12
Repairs		138.50		95.41
Custom hire		86.66		117.43
Hired labor		579.04		427.95
Utilities		97.18		88.97
Hauling and trucking		121.68		138.23
Marketing		65.51		71.56
Bedding		99.54		93.48
Total direct expenses	4,738.21			4,484.99
Return over direct expense	1,012.87			1,953.63
Overhead Expenses				
Interest	75.53			44.22
Mach & bldg depreciation	265.91			261.86
Miscellaneous	126.97			146.33
Total overhead expenses	468.41			452.41
Total dir & ovhd expenses	5,206.62			4,937.40
Net return	544.45			1,501.22
Labor & management charge	234.33			292.00
Net return over lbr & mgt	310.13			1,209.22
Cost of Production Per Cwt. Of Milk				
Total direct expense per unit	19.23			16.73
Total dir& ovhd expense per unit	21.14			18.41
With other revenue adjustments	19.21			16.04
With labor and management	20.16			17.13
Est. labor hours per unit	50.03			31.78
Other Information				
Number of cows	258.8			211.4
Milk produced per cow	24,635			26,812
Total milk sold	6,373,561			5,668,168
Lb. of milk sold per FTE	1,378,410			2,361,825
Culling percentage	30.1			27.1
Turnover rate	33.9			28.2
Cow death loss percent	3.7			1.1
Percent of barn capacity	102.9			88.2
Feed cost per day	8.17			8.31
Feed cost per cwt. of milk	12.10			11.31
Feed cost per cow	2,980.23			3,033.40
Avg. milk price per cwt.	21.42			21.64

2013 Ohio Dairy Farm Business Analysis

Dairy Benchmark Report; Per Cow; 35 Farms, Raised feed valued at cost of production

RankEm

	My Farm	Group Median	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Products Sold Value	5,070.23	3,605.83	3,849.83	4,317.11	4,580.88	4,919.23	5,118.08	5,404.90	5,726.78	6,095.25	6,339.22	
Gross Margin	5,509.99	3,913.24	4,308.11	4,639.28	5,049.70	5,412.61	5,539.60	5,887.72	6,471.18	6,763.24	7,069.31	
Total Feed Expense	2,909.83	3,986.59	3,569.28	3,387.32	3,222.17	2,968.52	2,879.41	2,719.18	2,334.41	2,123.75	1,948.08	
Breeding Fees	74.00	137.13	111.43	92.32	85.59	77.76	71.42	66.33	47.88	37.31	26.59	
Veterinary	119.02	272.17	212.27	180.33	141.38	125.42	113.75	110.44	95.28	69.88	58.39	
Supplies	126.93	241.36	179.59	174.80	162.69	139.14	112.30	93.80	76.81	64.74	49.62	
DHIA	25.94	35.23	31.68	30.95	29.03	26.51	25.07	23.84	19.00	16.79	7.71	
Fuel & Oil	104.72	176.74	161.47	150.77	120.38	116.90	100.82	87.26	76.87	58.31	49.10	
Repairs	158.90	267.11	204.18	186.06	175.18	167.32	154.87	123.08	75.61	56.75	13.18	
Custom Hire	60.90	267.43	179.47	137.70	122.69	65.50	47.52	29.21	21.16	15.66	4.41	
Hired Labor	558.75	898.69	680.04	635.41	619.67	599.32	522.44	344.94	268.93	176.44	66.38	
Utilities	101.91	175.06	147.34	136.92	125.77	106.38	100.42	90.69	79.42	75.04	57.30	
Hauling And Trucking	122.77	225.36	177.31	173.09	151.09	127.73	121.33	108.49	104.08	84.65	34.19	
Marketing	59.75	85.53	76.07	72.26	70.15	63.23	55.87	53.16	45.72	41.49	32.91	
Bedding	66.40	178.40	148.40	137.98	111.35	83.74	64.00	48.92	33.84	30.60	4.17	
Operating Interest	9.87	61.18	34.37	26.50	18.99	10.66	7.73	4.56	2.29	0.72	0.19	
All Direct Repairs	147.51	0.00	175.08	241.83	188.37	175.18	167.24	147.39	108.79	72.85	54.69	
Total Direct Expenses	4,609.83	5,630.21	5,387.00	5,138.30	4,897.47	4,755.88	4,574.84	4,274.57	3,734.60	3,573.76	3,043.39	
Return Over Dir. Expenses	796.04	196.34	427.73	587.04	675.08	785.31	820.07	1,046.98	1,350.19	1,909.41	2,250.19	
Ovhd - Farm Insurance	32.64	82.73	66.51	57.88	38.97	35.35	31.11	28.27	24.32	18.75	8.49	
Ovhd - Int On Intern. Debt	13.32	147.16	88.53	41.11	17.64	14.55	12.68	9.26	8.24	7.21	3.93	
Ovhd - Int On Long Term Debt	61.27	212.72	158.18	125.92	113.43	66.57	54.08	36.77	27.44	16.74	7.02	
Ovhd - Machinery Depreciatn	111.91	281.30	248.97	232.55	174.27	120.77	99.31	80.95	41.34	27.66	18.33	
Ovhd - Building Depreciatn	107.36	317.75	231.35	210.98	162.67	116.42	95.29	70.42	46.62	24.93	15.19	
Total Overhead Expenses	501.37	715.78	659.13	622.27	576.63	533.75	492.50	437.30	326.73	251.90	185.87	
Total Dir & Ovhd Expenses	5,018.44	6,457.23	6,023.55	5,452.29	5,309.06	5,160.86	4,936.10	4,751.70	4,321.05	3,979.75	3,544.76	
Net Return	442.83	-488.18	-70.99	61.75	219.73	401.19	475.89	563.04	722.44	1,424.00	1,860.53	
Labor & Management Charge	258.92	825.32	640.15	447.39	371.54	324.20	242.53	225.43	185.25	153.24	72.37	
Net Return Over Lbr & Mgt	246.54	-1,139.78	-397.71	-347.88	-90.88	62.10	272.30	338.55	429.06	1,007.34	1,411.07	
Direct Cost Of Prod/Unit	19.41	22.98	21.90	21.59	21.05	19.87	19.25	18.73	17.96	17.50	16.59	
Dir & Ovhd Cost Of Prod/Unit	22.03	25.62	24.44	24.12	22.61	22.17	21.66	20.46	19.83	19.41	17.60	
COP With Other Rev Adjust	19.48	24.31	22.29	22.01	20.66	20.12	19.32	18.75	18.01	16.85	15.55	
Cost Of Prod With Lbr & Mgt	21.22	27.47	25.20	22.99	22.26	21.51	21.17	19.69	19.19	18.22	16.19	
Average Number Of Head	187.0	48.0	77.0	103.0	120.0	139.5	219.0	244.0	345.0	548.0	825.0	
Milk Produced Per Head	23.127	16,092	17,365	19,336	21,380	22,271	23,696	25,457	27,036	29,175	30,176	
Total Milk Sold	4,441,380	1,037,952	1,675,556	2,004,791	2,528,995	3,461,343	4,631,211	6,737,359	8,033,978	14,854,417	22,587,043	
Culling Percentage	29.1	13.4	21.8	23.7	25.2	27.7	30.9	32.8	37.7	40.6	45.8	
Percent Of Barn Capacity	102.3	73.1	83.6	91.9	98.1	99.2	104.1	111.0	113.8	118.5	141.4	
Feed Cost Per Cwt Of Milk	12.62	15.71	14.55	14.08	13.47	12.97	12.35	11.76	11.05	10.56	9.45	
Feed Cost Per Head	2,909.83	3,986.59	3,643.03	3,444.33	3,359.49	2,968.52	2,879.41	2,719.18	2,334.41	2,123.75	1,948.08	
Average Price/Cwt. Of Milk	21.01	19.72	20.08	20.50	20.69	20.86	21.06	21.65	22.42	24.45	25.18	

How to use this chart:

Each row contains data from 35 Ohio Dairy Farms. The data is grouped by percentiles. For example, if we look at Total Feed Expense (line 3), the 3 or 4 farms with the highest feed costs per cow averaged \$3,986. This value is in the 10% column. The next 3 or 4 farms with the highest feed cost per cow averaged \$3,599 per cow which is in the 20% column. This process is continued up to the 100% column where the 3 or 4 farms with the lowest feed cost per cow averaged \$1,948 (note: these farms had at least some heifers custom raised). Each row is calculated independently, which is why you will see your farm's values in many different columns. Use this chart to identify strengths, areas of concern, and opportunities to improve compared to the performance of other Ohio dairy farms.

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Dairy Enterprise Analysis
Average for all Farms and High 20% Sorted By Net Return Per Cwt.

Dairy -- Average Per Cwt. Of Milk

	Avg. Of All Farms		High 20%	
Number of farms	35		7	
Milk sold (hd)	Quantity 99.98	Value 21.42	Quantity 99.99	Value 21.63
Dairy Calves sold (hd)	0.00	0.20	0.00	0.18
Transferred out (hd)	0.00	-	0.00	-
Cull sales (hd)	0.00	1.06	0.00	0.99
Other income		0.17		0.19
Purchased (hd)	0.00	-0.01	0.00	-0.02
Transferred in (hd)	0.00	-	-	-
Inventory change (hd)	0.00	0.50	0.00	1.05
Gross margin		23.35		24.01
Direct Expenses				
Protein Vit Minerals (lb.)	0.77	6.50	-	5.37
Corn (bu.)	0.16	0.94	0.15	0.81
Corn Silage (lb.)	92.25	2.17	95.87	2.28
Corn, Ear (lb.)	1.35	0.09	6.43	0.43
Hay, Alfalfa (lb.)	10.42	0.85	6.49	0.40
Hay, Grass (lb.)	6.00	0.40	2.74	0.30
Haylage, Alfalfa (lb.)	7.19	0.17	25.78	0.63
Haylage, Grass (lb.)	4.09	0.16	17.05	0.42
Rye Silage (lb.)	5.38	0.15	6.95	0.35
Other feed stuffs (lb.)	3.36	0.66	9.45	0.34
Breeding fees		0.34		0.28
Veterinary		0.57		0.41
Supplies		0.96		0.51
Fuel & oil		0.44		0.35
Repairs		0.56		0.36
Custom hire		0.35		0.44
Hired labor		2.35		1.60
Utilities		0.39		0.33
Hauling and trucking		0.49		0.52
Marketing		0.27		0.27
Bedding		0.40		0.35
Total direct expenses		19.23		16.73
Return over direct expense		4.11		7.29
Overhead Expenses				
Interest		0.31		0.16
Mach & bldg depreciation		1.08		0.98
Miscellaneous		0.52		0.55
Total overhead expenses		1.90		1.69
Total dir & ovhd expenses		21.14		18.41
Net return		2.21		5.60
Labor & management charge		0.95		1.09
Net return over lbr & mgt		1.26		4.51
Cost of Production Per Cwt. Of Milk				
Total direct expense per unit		19.23		16.73
Total dir& ovhd expense per unit		21.14		18.41
With other revenue adjustments		19.21		16.04
With labor and management		20.16		17.13
Est. labor hours per unit		0.20		0.12
Other Information				
Number of cows		258.8		211.4
Milk produced per cow		24,635		26,812
Total milk sold		6,373,561		5,668,168
Lb. of milk sold per FTE		1,378,410		2,361,825
Culling percentage		30.1		27.1
Turnover rate		33.9		28.2
Cow death loss percent		3.7		1.1
Percent of barn capacity		102.9		88.2
Feed cost per day		8.17		8.31
Feed cost per cwt. of milk		12.10		11.31
Feed cost per cow		2,980.23		3,033.40
Avg. milk price per cwt.		21.42		21.64

2013 Ohio Dairy Farm Business Analysis

Dairy Benchmark Report; Per Cwt. Of Milk; 35 Enterprises, Raised feed valued at cost of production

	My Farm	Group Median	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Products Sold Value	20.94	19.72	20.08	20.50	20.69	20.84	20.99	21.65	22.42	24.45	25.18	
Gross Margin	23.40	21.12	21.89	22.07	22.25	22.98	23.50	23.75	24.52	26.62	28.65	
Total Feed Expense	12.62	15.71	14.55	14.08	13.47	12.97	12.35	11.76	11.05	10.56	9.45	
Breeding Fees	0.32	0.61	0.48	0.43	0.39	0.33	0.30	0.25	0.20	0.16	0.12	
Veterinary	0.54	1.17	0.93	0.79	0.68	0.58	0.46	0.42	0.39	0.32	0.30	
Supplies	0.55	1.26	0.84	0.77	0.66	0.56	0.52	0.45	0.36	0.30	0.16	
DHIA	0.12	0.18	0.16	0.15	0.13	0.12	0.11	0.10	0.08	0.06	0.03	
Fuel & Oil	0.47	0.91	0.69	0.63	0.56	0.49	0.44	0.36	0.29	0.27	0.21	
Repairs	0.64	1.38	0.97	0.87	0.84	0.72	0.58	0.53	0.35	0.22	0.05	
Custom Hire	0.23	1.14	0.92	0.59	0.40	0.27	0.20	0.12	0.10	0.07	0.03	
Hired Labor	2.23	4.18	3.34	3.01	2.50	2.29	1.93	1.62	1.10	0.94	0.26	
Utilities	0.45	0.91	0.64	0.58	0.55	0.50	0.45	0.39	0.36	0.27	0.25	
Hauling And Trucking	0.54	0.84	0.77	0.74	0.67	0.59	0.53	0.50	0.41	0.34	0.15	
Marketing	0.24	0.43	0.34	0.29	0.27	0.25	0.24	0.23	0.20	0.20	0.16	
Bedding	0.30	0.67	0.64	0.55	0.49	0.37	0.23	0.21	0.15	0.10	0.02	
Operating Interest	0.04	0.28	0.15	0.10	0.08	0.05	0.04	0.02	0.01	0.00	0.00	
All Direct Repairs	0.57	0.00	0.87	1.02	0.87	0.83	0.66	0.56	0.52	0.32	0.21	
Total Direct Expenses	19.41	22.98	21.90	21.59	21.05	19.87	19.25	18.73	17.96	17.50	16.59	
Return Over Dir. Expenses	3.83	1.02	2.13	2.54	3.01	3.60	3.87	4.37	5.23	6.97	10.35	
Ovhd - Farm Insurance	0.15	0.43	0.29	0.25	0.18	0.16	0.14	0.11	0.10	0.08	0.04	
Ovhd - Int On Intern. Debt	0.06	0.54	0.36	0.27	0.09	0.06	0.06	0.04	0.03	0.03	0.02	
Ovhd - Int On Long Term Debt	0.25	0.77	0.71	0.58	0.52	0.31	0.25	0.16	0.11	0.07	0.02	
Ovhd - Machinery Depreciatn	0.49	1.37	1.07	0.92	0.68	0.57	0.45	0.37	0.16	0.15	0.09	
Ovhd - Building Depreciatn	0.52	1.51	1.05	0.80	0.72	0.58	0.40	0.32	0.16	0.15	0.05	
Total Overhead Expenses	2.17	3.50	2.87	2.64	2.37	2.23	2.08	1.99	1.51	1.10	0.72	
Total Dir & Ovhd Expenses	22.03	25.62	24.44	24.12	22.61	22.17	21.66	20.46	19.83	19.41	17.60	
Net Return	2.08	-2.37	-0.37	0.25	1.03	1.67	2.15	2.41	2.76	5.36	8.17	
Labor & Management Charge	1.12	4.27	2.94	2.07	1.81	1.20	1.07	0.89	0.79	0.66	0.35	
Net Return Over Lbr & Mgt	0.89	-5.31	-2.04	-1.60	-0.39	0.31	0.96	1.38	1.72	4.46	6.26	
Direct Cost Of Prod/Unit	19.41	22.98	21.90	21.59	21.05	19.87	19.25	18.73	17.96	17.50	16.59	
Dir & Ovhd Cost Of Prod/Unit	22.03	25.62	24.44	24.12	22.61	22.17	21.66	20.46	19.83	19.41	17.60	
COP With Other Rev Adjust	19.48	24.31	22.29	22.01	20.66	20.12	19.32	18.75	18.01	16.85	15.55	
Cost Of Prod With Lbr & Mgt	21.22	27.47	25.20	22.99	22.26	21.51	21.17	19.69	19.19	18.22	16.19	
Average Number Of Head	187.0	48.0	77.0	103.0	120.0	139.5	219.0	244.0	345.0	548.0	825.0	
Milk Produced Per Head	23.127	16.092	17.365	19.336	21.380	22.271	23.696	25.457	27.036	29.175	30.176	
Total Milk Sold	4,441,380	1,037,952	1,675,556	2,004,791	2,528,995	3,461,343	4,631,211	6,737,359	8,033,978	14,854,417	22,587,043	
Culling Percentage	29.1	13.4	21.8	23.7	25.2	27.7	30.9	32.8	37.7	40.6	45.8	
Percent Of Barn Capacity	102.3	73.1	83.6	91.9	98.1	99.2	104.1	111.0	113.8	118.5	141.4	
Feed Cost Per Cwt Of Milk	12.62	15.71	14.55	14.08	13.47	12.97	12.35	11.76	11.05	10.56	9.45	
Feed Cost Per L Head	3,986.59	3,643.03	3,444.33	3,359.49	2,968.52	2,879.41	2,719.18	2,334.41	2,123.75	1,948.08		
Average Price/Cwt. Of Milk	21.01	19.72	20.08	20.50	20.69	20.86	21.06	21.65	22.42	24.45	25.18	

How to use this chart:

Each row contains data from 35 Ohio Dairy Farms. The data is grouped by percentiles. For example, if we look at Total Feed Expense (line 3), the 3 or 4 highest feed costs averaged \$15.71 per cwt. This value is in the 10% column. The next 3 or 4 highest feed costs are averaged together, and their average feed expense of \$14.55 is in the 20% column. This process is continued up to the 100% column where the 3 or 4 farms with the lowest feed costs per cwt. averaged \$9.45 (note: these farms had at least some heifers custom raised). Each row is calculated independently which is why you will see your farm's values in many different columns. Use this chart to identify strengths, areas of concern and opportunities to improve compared to the performance of other Ohio dairy farms.

Dairy Enterprise Analysis
Average of all Farms and Farms Sorted By Enterprise Size

Dairy -- Average Per Cow

	<u>Avg. Of All Farms</u>		<u>51 - 100</u>		<u>101 - 200</u>		<u>201 - 500</u>		<u>Over 500</u>	
Number of farms	35		5		11		12		5	
Milk sold (hd)	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Dairy Calves sold (hd)	0.4	50.20	0.4	140.48	0.3	62.74	0.4	43.42	0.3	41.41
Transferred out (hd)	0.0	-	-	-	0.0	-	0.0	-	-	-
Cull sales (hd)	0.3	261.07	0.3	272.33	0.3	274.36	0.3	243.38	0.3	270.91
Other income	-	42.88	-	77.05	-	65.55	-	45.00	-	27.35
Purchased (hd)	0.1	-2.98	0.0	-42.97	-	-	0.0	-	0.2	-
Transferred in (hd)	0.0	-	-	-	-	-	0.0	-	-	-
Inventory change (hd)	0.1	123.60	0.0	102.62	0.1	118.18	0.1	152.63	0.2	106.82
Gross margin	5,751.08	-	5,103.47	-	5,317.06	-	5,597.68	-	6,168.31	-
Direct Expenses										
Protein Vit Minerals (lb.)	190.3	1,601.54	-	967.21	-	1,235.81	-	1,833.08	478.6	1,592.49
Complete Ration (lb.)	-	26.65	-	-	-	164.45	-	-	-	1.13
Corn (bu.)	39.8	232.20	61.6	344.73	83.5	435.72	36.8	222.97	23.0	149.07
Corn Silage (lb.)	22,724.6	535.28	19,531.4	572.18	21,269.6	451.48	22,381.7	446.16	24,061.9	657.51
Hay, Alfalfa (lb.)	2,566.1	209.30	2,732.0	116.17	3,244.6	193.03	2,890.5	255.50	1,902.8	175.97
Hay, Grass (lb.)	1,478.1	98.15	2,943.2	322.47	1,740.2	125.15	1,188.2	57.59	1,501.6	99.07
Haylage, Grass (lb.)	1,006.5	39.01	7,348.9	306.20	1,582.7	33.18	18.8	0.64	1,068.8	50.44
Other feed stuffs (lb.)	4,260.8	238.10	4,143.3	189.61	1,542.6	104.20	1,533.6	69.54	8,142.6	467.46
Breeding fees	-	83.30	-	51.39	-	63.67	-	85.90	-	92.63
Veterinary	-	140.71	-	108.30	-	131.77	-	167.80	-	122.52
BST	-	13.15	-	-	-	1.33	-	31.71	-	-
Supplies	-	181.78	-	191.04	-	183.11	-	226.37	-	137.33
Contract production exp.	-	42.04	-	-	-	18.47	-	68.19	-	31.67
Fuel & oil	-	108.89	-	83.01	-	135.16	-	99.48	-	109.72
Repairs	-	138.50	-	159.10	-	169.93	-	131.62	-	130.17
Custom hire	-	86.66	-	20.57	-	51.31	-	99.45	-	93.59
Hired labor	-	579.04	-	284.98	-	417.78	-	592.17	-	678.67
Utilities	-	97.18	-	120.27	-	114.54	-	93.88	-	88.97
Hauling and trucking	-	121.68	-	106.02	-	138.29	-	107.07	-	129.22
Marketing	-	65.51	-	61.10	-	56.58	-	66.75	-	68.88
Bedding	-	99.54	-	39.31	-	78.22	-	84.44	-	130.21
Total direct expenses	4,738.21	-	4,043.67	-	4,303.21	-	4,740.30	-	5,006.73	-
Return over direct expense	1,012.87	-	1,059.80	-	1,013.85	-	857.38	-	1,161.57	-
Overhead Expenses										
Interest	-	75.53	-	61.00	-	68.74	-	98.51	-	55.42
Mach & bldg depreciation	-	265.91	-	240.28	-	280.95	-	220.25	-	307.24
Miscellaneous	-	126.97	-	137.91	-	210.51	-	113.94	-	106.29
Total overhead expenses	-	468.41	-	439.19	-	560.19	-	432.69	-	468.95
Total dir & ovhd expenses	5,206.62	-	4,482.86	-	4,863.40	-	5,172.99	-	5,475.68	-
Net return	544.45	-	620.61	-	453.66	-	424.69	-	692.62	-
Labor & management charge	-	234.33	-	687.11	-	355.70	-	188.79	-	168.47
Net return over lbr & mgt	-	310.13	-	-66.50	-	97.96	-	235.90	-	524.15
Cost of Production Per Cwt. Of Milk										
Total direct expense per unit	-	19.23	-	20.98	-	18.87	-	20.10	-	18.52
Total dir & ovhd expense per unit	-	21.14	-	23.25	-	21.33	-	21.93	-	20.25
With other revenue adjustments	-	19.21	-	20.42	-	19.04	-	19.89	-	18.60
With labor and management	-	20.16	-	23.99	-	20.60	-	20.69	-	19.23
Est. labor hours per unit	-	50.03	-	43.65	-	56.16	-	50.98	-	45.22
Other Information										
Number of cows	-	258.8	-	79.4	-	131.2	-	293.3	-	720.2
Milk produced per cow	-	24,635	-	19,278	-	22,804	-	23,584	-	27,034
Total milk sold	-	6,373,561	-	1,529,779	-	2,991,385	-	6,915,872	-	19,469,736
Lb. of milk sold per FTE	-	1,378,410	-	1,235,846	-	1,136,902	-	1,294,936	-	1,674,099
Culling percentage	-	30.1	-	32.5	-	29.9	-	29.2	-	30.7
Turnover rate	-	33.9	-	36.3	-	32.8	-	33.8	-	33.7
Cow death loss percent	-	3.7	-	2.8	-	2.8	-	4.6	-	3.1
Percent of barn capacity	-	102.9	-	86.7	-	106.3	-	107.7	-	100.1
Feed cost per day	-	8.17	-	7.72	-	7.52	-	7.91	-	8.75
Feed cost per cwt. of milk	-	12.10	-	14.62	-	12.03	-	12.24	-	11.81
Feed cost per cow	-	2,980.23	-	2,818.57	-	2,743.04	-	2,885.49	-	3,193.14
Avg. milk price per cwt.	-	21.42	-	23.64	-	21.03	-	21.69	-	21.17

Dairy Enterprise Analysis
Average of all Farms and Farms Sorted By Enterprise Size

Dairy -- Average Per Cwt. Of Milk

	Avg. Of All Farms		51 - 100		101 - 200		201 - 500		Over 500	
Number of farms	35		5		11		12		5	
Milk sold (hd)	Quantity 99.98	Value 21.42	Quantity 99.94	Value 23.62	Quantity 100.00	Value 21.03	Quantity 99.97	Value 21.68	Quantity 100.00	Value 21.17
Dairy Calves sold (hd)	0.00	0.20	0.00	0.73	0.00	0.28	0.00	0.18	0.00	0.15
Transferred out (hd)	0.00	-	-	-	0.00	-	0.00	-	-	-
Cull sales (hd)	0.00	1.06	0.00	1.41	0.00	1.20	0.00	1.03	0.00	1.00
Other income		0.17		0.40		0.29		0.19		0.10
Purchased (hd)	0.00	-0.01	0.00	-0.22	-	-	0.00	-	0.00	-
Transferred in (hd)	0.00	-	-	-	-	-	0.00	-	-	-
Inventory change (hd)	0.00	0.50	0.00	0.53	0.00	0.52	0.00	0.65	0.00	0.40
Gross margin		23.35		26.47		23.32		23.74		22.82
Direct Expenses										
Protein Vit Minerals (lb.)	0.77	6.50	-	5.02	-	5.42	-	7.77	1.77	5.89
Complete Ration (lb.)	-	0.11	-	-	-	0.72	-	-	-	0.00
Corn (bu.)	0.16	0.94	0.32	1.79	0.37	1.91	0.16	0.95	0.09	0.55
Corn Silage (lb.)	92.25	2.17	101.32	2.97	93.27	1.98	94.90	1.89	89.01	2.43
Hay, Alfalfa (lb.)	10.42	0.85	14.17	0.60	14.23	0.85	12.26	1.08	7.04	0.65
Hay, Grass (lb.)	6.00	0.40	15.27	1.67	7.63	0.55	5.04	0.24	5.55	0.37
Haylage, Grass (lb.)	4.09	0.16	38.12	1.59	6.94	0.15	0.08	0.00	3.95	0.19
Other feed stuffs (lb.)	17.30	0.97	21.49	0.98	6.76	0.46	6.50	0.29	30.12	1.73
Breeding fees		0.34		0.27		0.28		0.36		0.34
Veterinary		0.57		0.56		0.58		0.71		0.45
Supplies		0.79		0.99		0.81		1.09		0.51
Contract production exp.		0.17		-		0.08		0.29		0.12
Fuel & oil		0.44		0.43		0.59		0.42		0.41
Repairs		0.56		0.83		0.75		0.56		0.48
Custom hire		0.35		0.11		0.23		0.42		0.35
Hired labor		2.35		1.48		1.83		2.51		2.51
Utilities		0.39		0.62		0.50		0.40		0.33
Hauling and trucking		0.49		0.55		0.61		0.45		0.48
Marketing		0.27		0.32		0.25		0.28		0.25
Bedding		0.40		0.20		0.34		0.36		0.48
Total direct expenses	19.23		20.98		18.87		20.10		18.52	
Return over direct expense	4.11		5.50		4.45		3.64		4.30	
Overhead Expenses										
Farm insurance	0.13		0.26		0.21		0.14		0.08	
Interest	0.31		0.32		0.30		0.42		0.21	
Mach & bldg depreciation	1.08		1.25		1.23		0.93		1.14	
Miscellaneous	0.39		0.45		0.71		0.34		0.32	
Total overhead expenses	1.90		2.28		2.46		1.83		1.73	
Total dir & ovhd expenses	21.14		23.25		21.33		21.93		20.25	
Net return	2.21		3.22		1.99		1.80		2.56	
Labor & management charge	0.95		3.56		1.56		0.80		0.62	
Net return over lbr & mgt	1.26		-0.34		0.43		1.00		1.94	
Cost of Production Per Cwt. Of Milk										
Total direct expense per unit	19.23		20.98		18.87		20.10		18.52	
Total dir& ovhd expense per unit	21.14		23.25		21.33		21.93		20.25	
With other revenue adjustments	19.21		20.42		19.04		19.89		18.60	
With labor and management	20.16		23.99		20.60		20.69		19.23	
Est. labor hours per unit	0.20		0.23		0.25		0.22		0.17	
Other Information										
Number of cows	258.8		79.4		131.2		293.3		720.2	
Milk produced per cow	24,635		19,278		22,804		23,584		27,034	
Total milk sold	6,373,561		1,529,779		2,991,385		6,915,872		19,469,736	
Lb. of milk sold per FTE	1,378,410		1,235,846		1,136,902		1,294,936		1,674,099	
Culling percentage	30.1		32.5		29.9		29.2		30.7	
Turnover rate	33.9		36.3		32.8		33.8		33.7	
Cow death loss percent	3.7		2.8		2.8		4.6		3.1	
Percent of barn capacity	102.9		86.7		106.3		107.7		100.1	
Feed cost per day	8.17		7.72		7.52		7.91		8.75	
Feed cost per cwt. of milk	12.10		14.62		12.03		12.24		11.81	
Feed cost per cow	2,980.23		2,818.57		2,743.04		2,885.49		3,193.14	
Avg. milk price per cwt.	21.42		23.64		21.03		21.69		21.17	

Appendix I

Dairy Enterprise Analysis Procedures and Measures

The Dairy Enterprise Analysis shows the profitability of each dairy enterprise including five or more farms.

Gross Margin includes product and livestock sales, cull sales, the value of offspring transferred out of the enterprise, the value of inventory change from beginning to end of year, and any other income assigned to the enterprise. Livestock purchases and the value of animals transferred in from other enterprises are subtracted.

Direct Expenses include expenses that are directly related to the specific livestock enterprise. Feed and most other direct expenses are directly assigned based on farm records. Some, such as Fuel and Oil and Repairs, which are difficult to assign directly to enterprises, are determined by allocating the total annual expense across all enterprises using allocation factors entered for each farm.

Overhead Expenses are also determined by allocating the total annual expense across all enterprises using allocation factors entered for each farm.

Net Return is the Gross Return minus Total Direct and Overhead Expenses.

Net Return over Labor and Management is calculated by allocating the farmer's charge for unpaid labor and management across all enterprises and subtracting it from Net Return.

Estimated Labor Hours is calculated by allocating the farmer's estimate of total operator and hired labor hours for the year across all enterprises.

Cost of Production is calculated by dividing the total expense for each category by Total Production. Cull sales, other offspring sales, and any other miscellaneous income are subtracted and replacement purchases and transfers in are added to arrive at the cost *with Other Revenue Adjustments*.

Cost of Production with Labor and Management is the cost with other revenue adjustments plus the producer's charge for operator's labor and management. This is the breakeven price for the primary product to provide a return for operator labor and management.

The last section of each analysis contains both economic and technical efficiency measures.

Rounding of individual items for the report may have caused minor discrepancies with the calculated totals.