

# Dairy Farm Sort

from the

**2004**

*Minnesota State Colleges and Universities*

## State Farm Business Management Program Database

**Financial Sort Categories:**

*(By Gross Revenue)*

\$50,001 to \$100,000

\$100,001 to \$250,000

\$250,001 to \$500,000

\$500,001 to \$1,000,000

Over \$1,000,000

**Enterprise Sort Categories:**

*(By Herd Size)*

Up to 50 Cows

51 to 100 Cows

101 to 200 Cows

201 to 500 Cows

Over 500 Cows



A MEMBER OF THE MINNESOTA STATE COLLEGES  
AND UNIVERSITIES SYSTEM

April, 2005



In Cooperation with the  
Center for Farm Financial Management  
University of Minnesota

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Farm Management Program Website: [www.mgt.org](http://www.mgt.org)

**General Financial Summary**  
**Farm Business Management Education Programs**  
**Minnesota State Colleges and Universities**  
**(Dairy Farms Sorted by Gross Farm Income)**

	Avg. Of <u>All Farms</u>	50,001 - <u>100,000</u>	100,001 - <u>250,000</u>	250,001 - <u>500,000</u>	500,001 - <u>1,000,000</u>	Over <u>1,000,000</u>
Number of farms	491	33	176	153	78	46
<b><u>Income Statement</u></b>						
Gross cash farm income	459,194	79,532	178,282	346,292	670,765	1,868,411
Total cash farm expense	361,500	63,308	131,976	262,457	523,937	1,543,204
Net cash farm income	97,694	16,224	46,306	83,835	146,827	325,207
Inventory change	22,163	4,818	9,314	19,070	16,765	105,025
Depreciation and capital adjust	-27,521	-8,768	-10,905	-18,914	-34,146	-124,549
Net farm income	92,336	12,274	44,715	83,992	129,446	305,684
<b><u>Profitability (cost)</u></b>						
Labor and management earnings	70,386	7,428	32,510	63,823	98,315	242,140
Rate of return on assets	10.30%	2.30%	8.60%	10.50%	10.20%	11.80%
Rate of return on equity	16.20%	-4.30%	11.60%	15.60%	16.00%	21.50%
Operating profit margin	22.40%	7.20%	23.00%	25.50%	21.80%	21.20%
Asset turnover rate	46.00%	31.40%	37.20%	41.00%	46.80%	55.60%
<b><u>Liquidity</u></b>						
Ending current ratio	1.53	1.29	1.68	1.58	1.5	1.45
Ending working capital	42,379	5,684	23,698	38,458	56,401	133,269
End working capital to gross inc	9.20%	7.10%	13.30%	11.10%	8.40%	7.10%
Term debt coverage ratio	177.20%	125.40%	154.20%	170.90%	168.90%	202.60%
Expense as a percent of income	74.90%	75.10%	70.20%	71.50%	76.10%	78.00%
Interest as a percent of income	5.10%	8.90%	5.70%	5.50%	4.90%	4.60%
<b><u>Solvency (market)</u></b>						
Number of farms	491	33	176	153	78	46
Ending farm assets	1,037,531	285,158	553,606	920,399	1,398,840	3,298,089
Ending farm liabilities	520,012	151,501	243,386	433,316	701,401	1,873,496
Ending total assets	1,130,287	370,618	645,355	1,010,349	1,494,990	3,405,977
Ending total liabilities	538,631	182,037	258,526	452,140	717,308	1,900,695
Ending net worth	591,656	188,581	386,829	558,209	777,682	1,505,282
Net worth change	78,597	14,814	31,948	78,221	116,439	247,233
Ending farm debt to asset ratio	50%	53%	44%	47%	50%	57%
Beg total debt to asset ratio	50%	49%	40%	48%	52%	59%
End total debt to asset ratio	48%	49%	40%	45%	48%	56%
<b><u>Nonfarm Information</u></b>						
Net nonfarm income	11,429	20,139	10,427	12,803	8,842	8,278
Farms reporting living expenses	170	6	69	56	26	10
Total family living expense	32,981	29,637	28,375	34,086	41,377	40,498
Total living, invest, & capital	47,639	54,899	39,252	44,875	62,898	75,671
<b><u>Crop Acres</u></b>						
Total acres owned	198	144	169	200	196	355
Total crop acres	292	109	172	275	382	813
Total crop acres owned	129	53	108	139	145	215
Total crop acres cash rented	161	56	62	134	236	595
Total crop acres share rented	2	1	1	2	0	2

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**Financial Standards Measures**  
**Farm Business Management Education Programs**  
**Minnesota State Colleges and Universities**  
**(Dairy Farms Sorted by Gross Farm Income)**

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	<u>Avg. Of All Farms</u>	<u>50,001 - 100,000</u>	<u>100,001 - 250,000</u>	<u>250,001 - 500,000</u>	<u>500,001 - 1,000,000</u>	<u>Over 1,000,000</u>
Number of farms	491	33	176	153	78	46
<b><u>Liquidity</u></b>						
Current ratio	1.53	1.29	1.68	1.58	1.5	1.45
Working capital	42,379	5,684	23,698	38,458	56,401	133,269
<b><u>Solvency (market)</u></b>						
Farm debt to asset ratio	50%	53%	44%	47%	50%	57%
Farm equity to asset ratio	50%	47%	56%	53%	50%	43%
Farm debt to equity ratio	100%	113%	78%	89%	101%	132%
<b><u>Profitability (cost)</u></b>						
Rate of return on farm assets	10.30%	2.30%	8.60%	10.50%	10.20%	11.80%
Rate of return on farm equity	16.20%	-4.30%	11.60%	15.60%	16.00%	21.50%
Operating profit margin	22.40%	7.20%	23.00%	25.50%	21.80%	21.20%
Net farm income	92,336	12,274	44,715	83,992	129,446	305,684
<b><u>Repayment Capacity</u></b>						
Term debt coverage ratio	177%	125%	154%	171%	169%	203%
Capital replacement margin	48,781	4,700	14,920	38,731	59,912	231,325
<b><u>Efficiency</u></b>						
Asset turnover rate (cost)	46.00%	31.40%	37.20%	41.00%	46.80%	55.60%
Operating expense ratio	69.80%	66.20%	64.40%	66.00%	71.10%	73.40%
Depreciation expense ratio	5.80%	10.40%	5.90%	5.20%	5.00%	6.40%
Interest expense ratio	5.10%	8.90%	5.70%	5.50%	4.90%	4.60%
Net farm income ratio	19.30%	14.50%	24.00%	23.20%	18.90%	15.60%

State Database <b>Dairy Cow Enterprise</b> (Sorted by Herd Size) 2004	Sorted by Average Number of Dairy Cows				
	Up to 50 Cows	51 to 100 Cows	101 to 200 Cows	201 To 500 Cows	Over 500 Cows

\*\*\*\*\* Per Cow \*\*\*\*\*

Number Of Farms	133	229	109	49	13
Milk sold (lb)	\$2,759.11	\$3,107.31	\$3,229.91	\$3,559.54	\$3,633.75
Milk used in home (lb)	\$4.42	\$2.19	\$0.70	\$0.15	\$0.40
Milk fed to animals (lb)	\$8.01	\$11.40	\$8.66	\$3.63	\$2.31
Dairy Calves sold (hd)	\$11.57	\$20.20	\$24.24	\$38.81	\$39.59
Transferred out (hd)	\$124.86	\$114.24	\$112.86	\$81.14	\$99.93
Cull sales (hd)	\$159.56	\$159.53	\$146.28	\$146.63	\$159.52
Butchered (hd)	\$6.13	\$5.12	\$3.52	\$1.47	\$1.24
Less purchased (hd)	-\$146.22	-\$64.52	-\$145.52	-\$145.98	-\$187.55
Less transferred in (hd)	-\$344.63	-\$374.30	-\$406.05	-\$354.94	-\$470.47
Inventory change (hd)	\$98.72	\$55.01	\$75.48	\$62.85	\$113.90
Total production	\$2,681.53	\$3,036.20	\$3,119.07	\$3,393.31	\$3,392.63
Other income	\$56.93	\$35.71	\$37.84	\$29.14	\$23.13
<b>Gross return</b>	<b>\$2,738.45</b>	<b>\$3,071.91</b>	<b>\$3,156.92</b>	<b>\$3,422.45</b>	<b>\$3,415.76</b>
<b>Direct Expenses</b>					
Corn (bu.)	148.09	159.63	173.20	160.66	149.73
Corn Silage (lb.)	114.35	125.00	127.68	150.11	162.5
Hay, Alfalfa (lb.)	228.18	188.37	158.55	187.04	100.17
Hay, Grass & Other (lb.)	36.81	15.07	15.75	6.39	15.08
Haylage, Alfalfa (lb.)	55.44	94.10	94.69	77.24	128.61
Complete Ration (lb.)	101.1	116.63	144.20	187.02	142.48
Protein Vit Minerals (lb.)	297.29	368.19	410.48	428.82	525.26
Other feed stuffs	42.51	42.00	47.75	39.82	53.45
Breeding fees	30.14	36.89	35.23	41.09	33.58
Veterinary	79.06	88.53	96.94	113.97	136.01
BST	8.42	10.94	19.28	33.80	56.03
Supplies	138.95	126.62	130.78	144.03	138.73
DHIA	14.65	16.94	15.87	14.89	7.50
Fuel & oil	41.20	40.23	45.42	50.82	46.11
Repairs	116.13	112.04	109.53	108.36	114.97
Custom hire	9.54	14.12	22.06	35.52	51.03
Hired labor	4.79	9.64	13.94	25.00	79.15
Hauling and trucking	45.03	38.32	29.23	27.20	22.96
Marketing	39.01	40.57	31.81	52.19	96.09
Bedding	11.62	22.49	31.91	48.87	49.68
<b>Total direct expenses</b>	<b>\$1,562.30</b>	<b>\$1,666.34</b>	<b>\$1,754.30</b>	<b>\$1,932.85</b>	<b>\$2,109.13</b>
Return over direct expense	\$1,176.16	\$1,405.57	\$1,402.62	\$1,489.60	\$1,306.63
<b>Overhead Expenses</b>					
Custom hire	8.92	8.82	14.52	15.30	24.07
Hired labor	47.68	104.57	206.7	337.75	351.64
Machinery & bldg leases	11.89	19.26	23.62	36.05	59.40
Farm insurance	38.83	34.97	33.41	30.76	28.15
Utilities	80.42	72.92	61.97	52.97	48.13
Interest	84.48	95.97	112.17	120.22	143.03
Mach & bldg depreciation	106.02	110.98	131.84	134.62	104.71
Miscellaneous	52.29	45.69	53.35	49.11	45.24
<b>Total overhead expenses</b>	<b>\$430.53</b>	<b>\$493.18</b>	<b>\$637.59</b>	<b>\$776.78</b>	<b>\$804.35</b>
<b>Total dir &amp; ovhd expenses</b>	<b>\$1,992.83</b>	<b>\$2,159.52</b>	<b>\$2,391.88</b>	<b>\$2,709.63</b>	<b>\$2,913.48</b>
<b>Net return</b>	<b>\$745.62</b>	<b>\$912.39</b>	<b>\$765.03</b>	<b>\$712.81</b>	<b>\$502.28</b>
Labor & management charge	\$293.12	\$244.52	\$184.10	\$163.24	\$118.70
<b>Net return over lbr &amp; mgt</b>	<b>\$452.50</b>	<b>\$667.87</b>	<b>\$580.93</b>	<b>\$549.58</b>	<b>\$383.58</b>
<b>Cost of Production per CWT</b>					
Total direct expense per cwt.	\$9.17	\$8.68	\$8.88	\$8.85	\$9.62
Total dir & ovhd expense per cwt.	\$11.70	\$11.24	\$12.10	\$12.41	\$13.28
With labor and management	\$13.42	\$12.52	\$13.03	\$13.16	\$13.82
With other revenue adjustments	\$13.61	\$12.77	\$13.45	\$13.81	\$14.83
Est. labor hours per unit	48.54	41.51	38.72	40.15	43.39
<b>Other Information</b>					
<b>Avg. number of Cows</b>	<b>38.0</b>	<b>70.6</b>	<b>137.8</b>	<b>292.6</b>	<b>751.2</b>
Milk produced per Cow	17,038	19,207	19,762	21,828	21,935
Culling percentage	25.7	24.9	24.9	25.5	30.5
Turnover rate	34.6	32.9	33.7	33.9	38.9
Percent of barn capacity	88.3	107.1	105.8	104.9	115.3
Lbs. milk/lb grain & conc.	2.2	2.4	2.3	2.3	2.1
Feed cost per cwt of milk	\$6.01	\$5.77	\$5.93	\$5.67	\$5.82
Feed cost per Cow	\$1,023.77	\$1,109.00	\$1,172.30	\$1,237.10	\$1,277.27
Avg. milk price per cwt.	\$16.29	\$16.26	\$16.41	\$16.33	\$16.58

Farm Business Management Education Programs

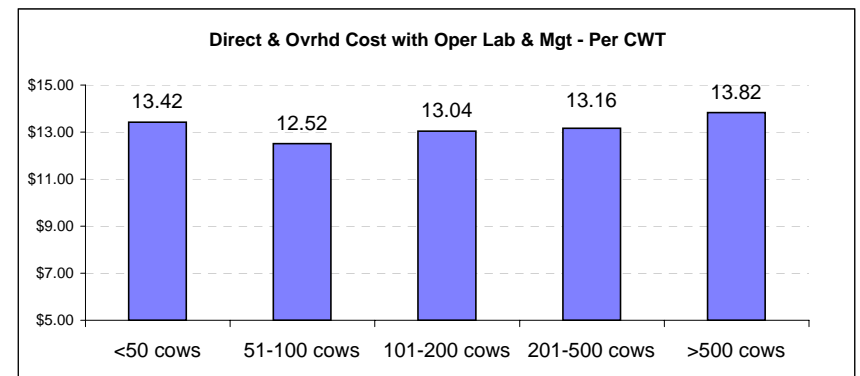
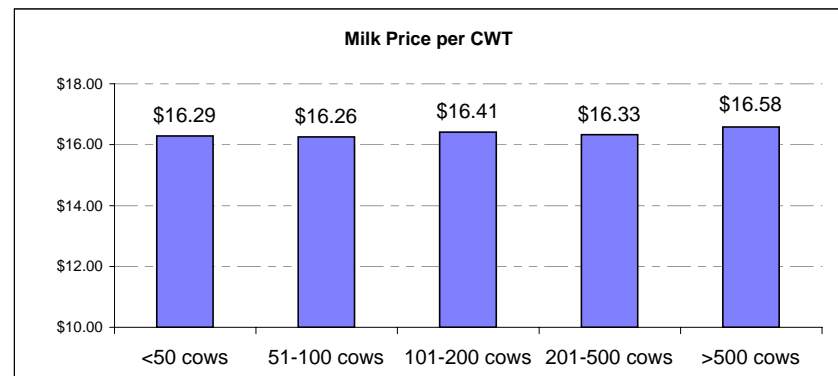
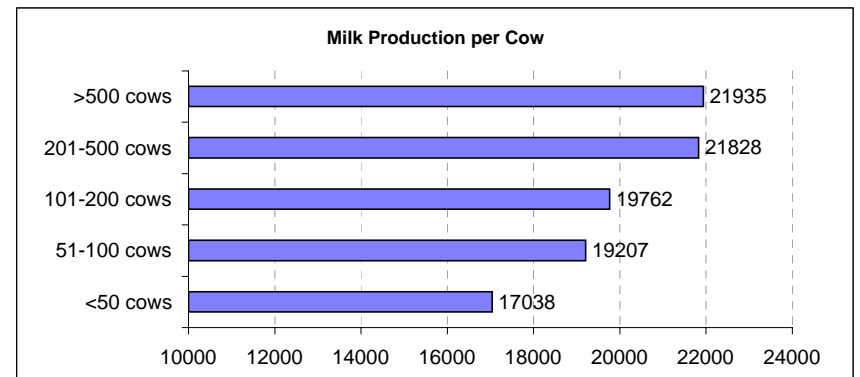
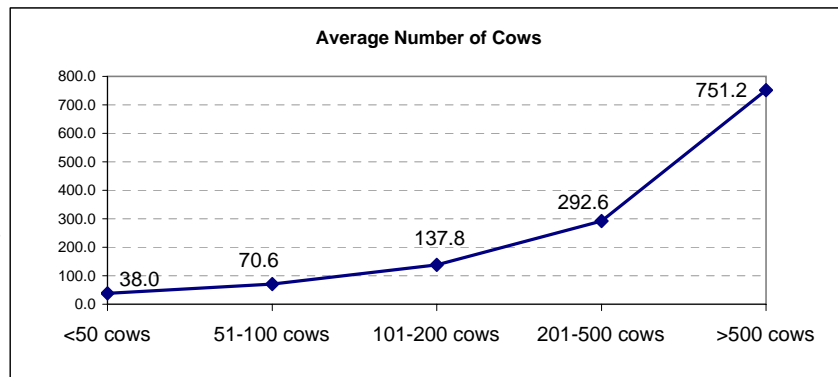
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Dairy Farm Sort

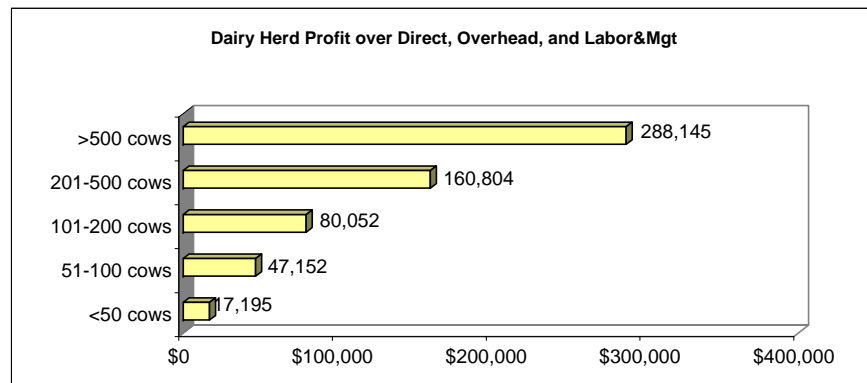
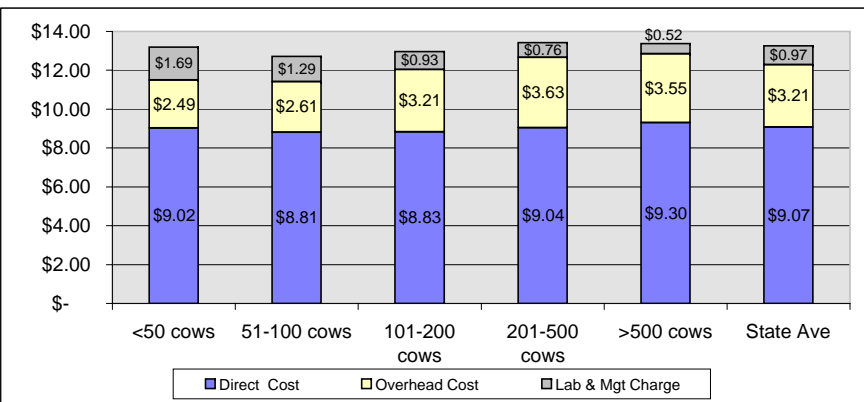
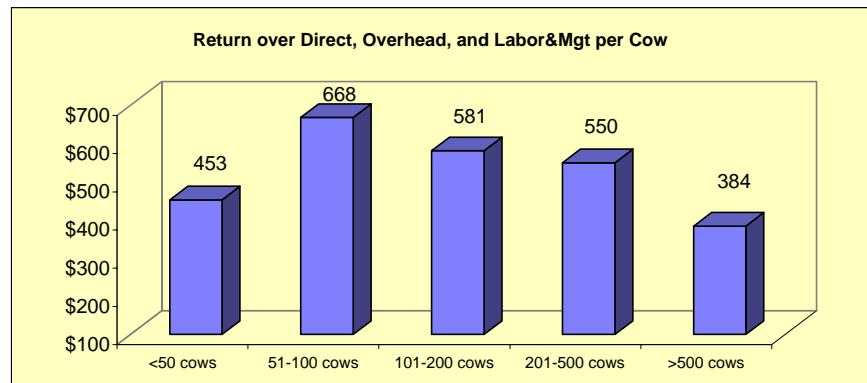
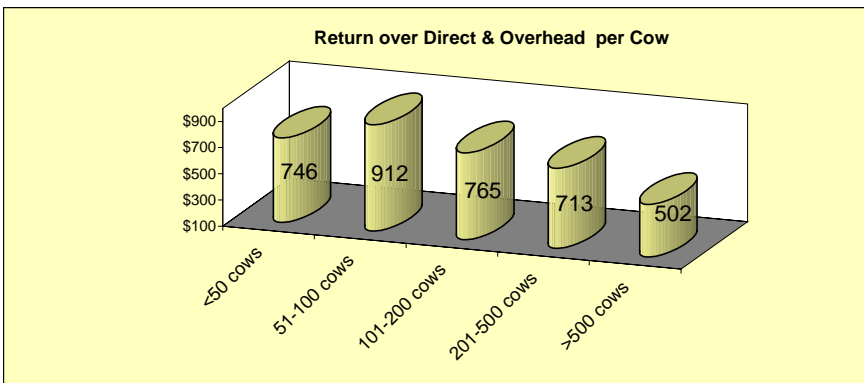
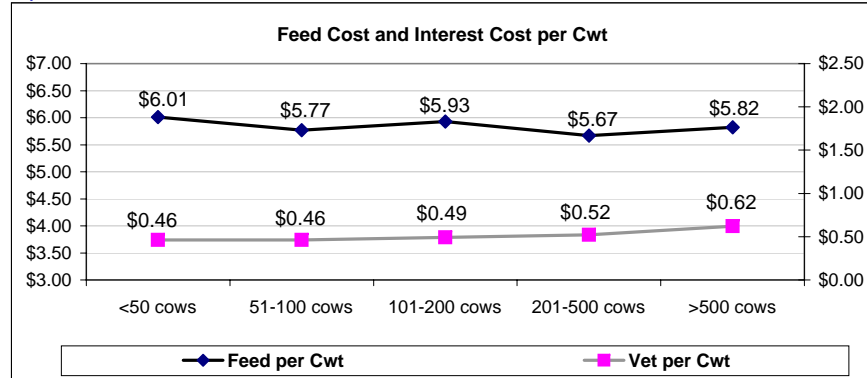
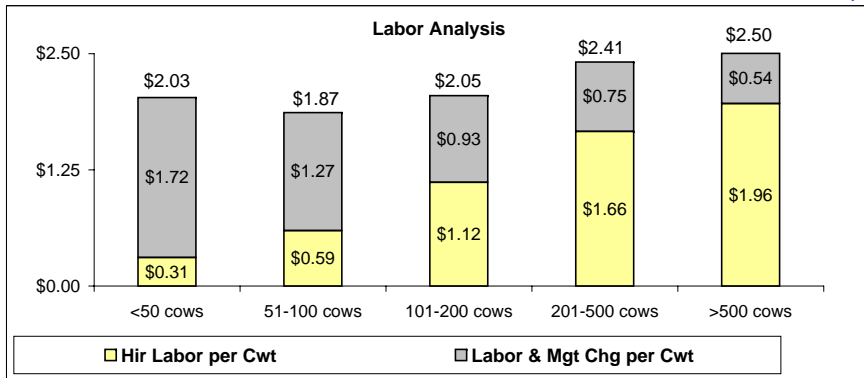
April, 2005

## Selected Dairy Enterprise Factors from the 2004 Farm Business Management Program Database

Sort Criteria Herd Size	Number of Farms	Ave # of Cows	Milk Prod. per Cow	Feed per Cwt	Interest per Cwt	Vet per Cwt	Hir Labor per Cwt	Deprec/ Lease per Cwt	Milk Price per Cwt	Dir&Ovhd Cost per Cwt	Return to Dir&Ovhd per Cow	Dairy Herd Profit over Dir & Ovhd	Labor & Mgt Chg per Cwt	Net/Cow after Labor&Mgt	Herd Profit after Labor&Mgt
<50 cows	133	38.0	17038	\$6.01	\$0.50	\$0.46	\$0.31	\$0.69	\$16.29	\$11.70	\$746	\$28,334	\$1.72	\$453	\$17,195
51-100 cows	229	70.6	19207	\$5.77	\$0.50	\$0.46	\$0.59	\$0.68	\$16.26	\$11.24	\$912	\$64,415	\$1.27	\$668	\$47,152
101-200 cows	109	137.8	19762	\$5.93	\$0.57	\$0.49	\$1.12	\$0.79	\$16.41	\$12.10	\$765	\$105,421	\$0.93	\$581	\$80,052
201-500 cows	49	292.6	21828	\$5.67	\$0.55	\$0.52	\$1.66	\$0.78	\$16.33	\$12.41	\$713	\$208,568	\$0.75	\$550	\$160,804
>500 cows	13	751.2	21935	\$5.82	\$0.65	\$0.62	\$1.96	\$0.75	\$16.58	\$13.28	\$502	\$377,313	\$0.54	\$384	\$288,145
State Ave.	533	113.2	20,228	\$5.81	\$0.56	\$0.51	\$1.22	\$0.80	\$16.37	\$12.14	\$748	\$84,671	\$0.96	\$554	\$62,723

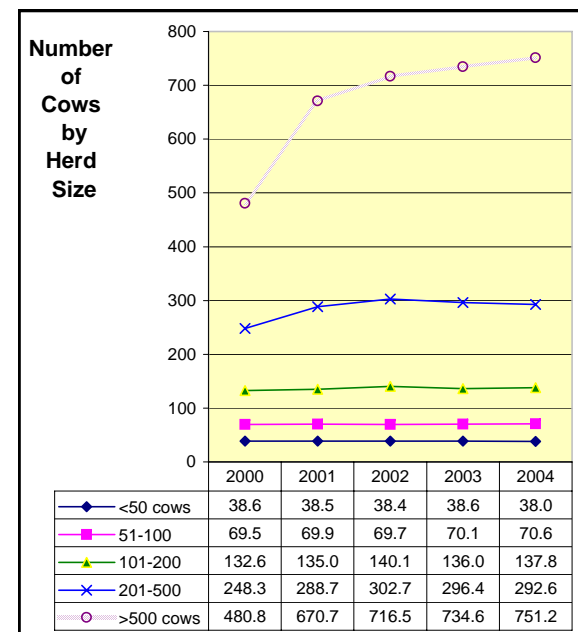
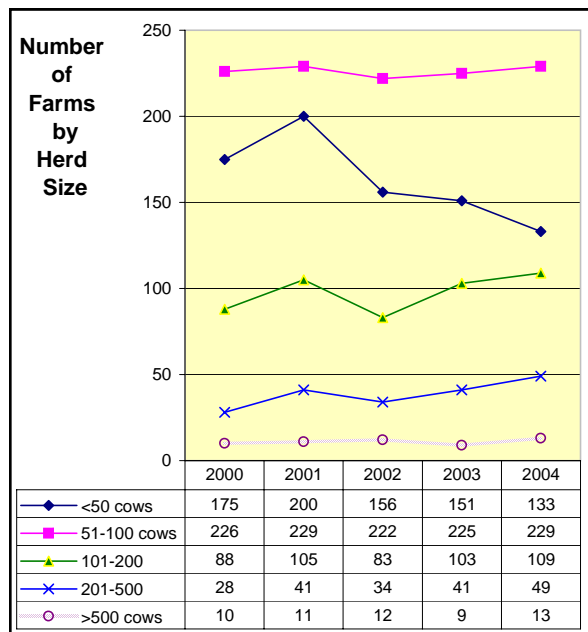
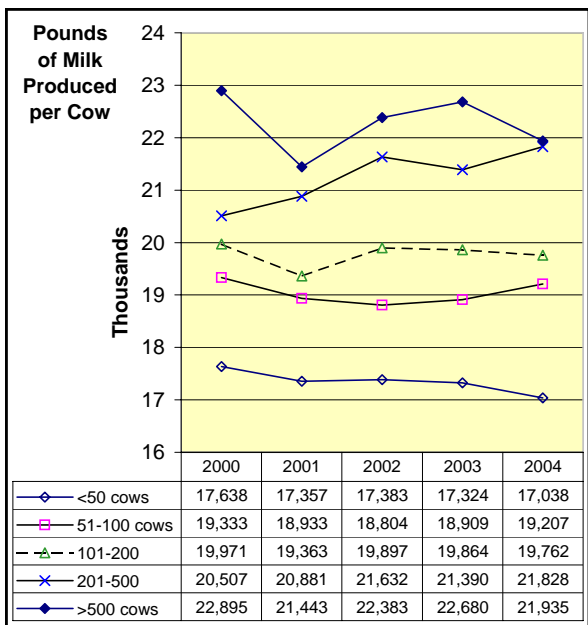


## Selected Dairy Enterprise Factors from the 2004 Farm Business Management Program Database (continued)

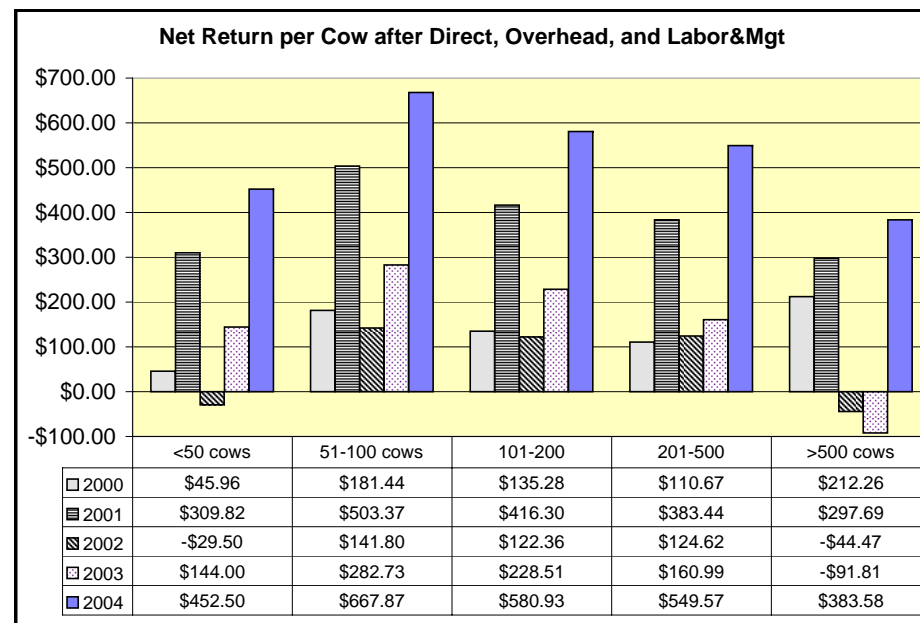
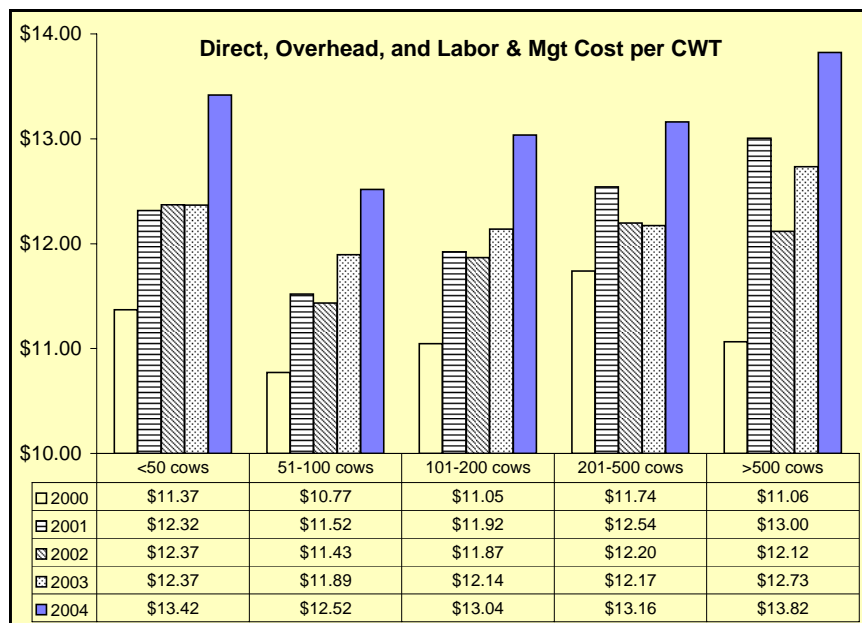


## Selected Dairy Sort Trends - Enterprise Factors

### 2004 Farm Business Management Program Database



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## Average Dollars Spent by a Dairy Farm totals \$495,366 in 2004

