

MILK PRODUCTION COSTS in 2001 on Selected WISCONSIN DAIRY FARMS

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Introduction

The good news is that higher milk prices in 2001 caused an increased of almost \$40,000 in the average dairy farm's income, when compared to 2000. The bad news is expenses were up approximately \$27,000. Feed purchases accounted for \$9,000 of that increase and the remainder was spread over almost all cost categories.

In 2001, the U.S. Average Milk Price (\$14.94) was less than the study farms' total economic cost of milk production (\$15.08); creating a loss of \$0.13 per hundredweight equivalent of milk produced. In 2000, there was a loss of \$0.87 per hundredweight equivalent of milk produced. These two years of losses follow two years in which the total economic cost was less than the U.S. Average Milk Price. However, in 1999 the U.S. Average Milk Price was only \$0.10 more than the costs and 1998 was the first year in our analysis where the milk price exceeded total economic costs. In 1998, the U.S. Average Milk Price exceeded total economic cost by \$0.53 per hundredweight equivalent.

In this study of 2001 records, 627 dairy farms (averaging 106 cows and 20,454 milk sold per cow) had a basic cost of \$9.03 per hundredweight equivalent (CWT EQ) on income of \$14.94 (U.S. average per hundredweight milk price in 2001). In 2000, there were 605 dairy farms included in our cost of production study and the basic cost was \$7.75 per CWT EQ. There are now 843 dairy farms in our 2000-year records². With the addition of 238 more farms, the basic cost decreased only \$0.13 per CWT EQ to \$7.62. The total economic cost of production for fiscal year 2000 was \$13.20 per hundredweight equivalent in the initial study subsequently with the addition of 238 farms the total cost is \$0.29 lower at \$12.91³

Data Source

Lakeshore Farm Management Association, Fox Valley Management Association, Wisconsin County Agents and Wisconsin Technical College System Instructors⁴ originally collected this data. Personnel affiliated with these associations helped individual farm managers reconcile their financial data. Individual farm managers used a number of different manual and computerized record keeping systems to enter the initial financial records, including the Agricultural Accounting and Information Management System (AAIMS©).

Results

Table 1 shows the average cost of production and net farm income in 2001 using three different report basis. They are whole farm, per cow and per hundredweight (CWT) equivalent. They show an economic loss averaging \$3,406 per dairy farm in 2001. This means that either the farm manager's labor and management or the equity capital did not receive a market rate in 2001. The cost assigned to the farm manager's unpaid labor

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² AgFA (Agriculture Financial Advisor) – <http://cdp.wisc.edu/agfa>

³ The Center for Dairy Profitability uses an active/real time database for collecting and analyzing data. Thus the number of records will most likely increase throughout the course of the year.

⁴ The authors wish to thank members of the Lakeshore Farm Management Association, Fox Valley Farm Management Association and various county agents and WTCS instructors for their cooperation.

Table 1 – Cost of Production in 2001

Income		Whole Farm	per Head	per CWT EQ
	Total Income	377,530	3,573.28	14.94
Expenses				
Basic Cost	Cost of Items for Resale	129	1.22	0.01
	Breeding Fees	4,558	43.14	0.18
	Car and Truck Expenses	1,768	16.73	0.07
	Chemicals	5,192	49.14	0.21
	Conservation Expenses	12	0.11	0.00
	Custom Heifer Raising Expenses	587	5.56	0.02
	Custom Hire (Machine Work)	11,539	109.21	0.46
	Feed Purchase	68,512	648.46	2.71
	Fertilizer and Lime	8,172	77.34	0.32
	Freight and Trucking	4,369	41.35	0.17
	Gasoline, Fuel, and Oil	7,920	74.96	0.31
	Farm Insurance	4,370	41.37	0.17
	Rent/Lease Equipment	3,314	31.37	0.13
	Rent/Lease Other	13,980	132.32	0.55
	Repairs and Maintenance	1,665	15.76	0.07
	Building and Fence Repairs	6,018	56.95	0.24
	Machinery Repairs	13,331	126.18	0.53
	Seeds and Plants Purchased	7,883	74.61	0.31
	Supplies Purchased	12,006	113.63	0.48
	Taxes - Other	4,923	46.60	0.19
	Taxes - Payroll	56	0.53	0.00
	Utilities	7,303	69.12	0.29
	Veterinary Fees and Medicine	10,712	101.39	0.42
	Other Farm Expenses	3,348	31.68	0.13
	Marketing & Hedging	4,149	39.27	0.16
	Other Crop Expenses	2,319	21.95	0.09
	Other Livestock Expenses	13,239	125.29	0.52
	- Change in Prepaid Expenses	(2,455)	(23.24)	(0.10)
	Change in Accounts Payable	(216)	(2.04)	(0.01)
	Depreciation on Purchased Breeding Livestock	9,477	89.70	0.38
	Total Basic Cost	228,178	2,159.68	9.03
Interest Cost	Mortgage Interest	8,258	78.16	0.33
	Other Interest	13,764	130.28	0.54
	Total Interest Cost	22,022	208.44	0.87
Labor Cost	Employee Benefits - Dependents	4,885	46.23	0.19
	Employee Benefits - Non-Dependents	4,488	42.48	0.18
	Labor Hired - Dependents	8,743	82.75	0.35
	Labor Hired - Non-Dependents	21,670	205.11	0.86
	Value of Unpaid Labor & Management	27,217	257.60	1.08
	Total Labor Cost	67,003	634.17	2.65
Depreciation & Equity Cost	Machinery, Equipment, Building Depreciation	32,593	308.49	1.29
	Interest on Equity Capital	31,140	294.74	1.23
	Total Depreciation & Equity Cost	63,733	603.23	2.52
	Total Expenses	380,936	3,605.52	15.08
	Total Income - Total Expenses	(3,406)	(32.24)	(0.13)

Table 1 also shows the average costs per CWT EQ for selected expense categories that closely match the expense categories on the Schedule F Federal tax form. It also shows opportunity cost for unpaid labor and management, and interest on equity capital.

Table 1 shows the average per cow costs for all farms in the study. The purchased feed per cow increased in 2001 after declining for two years. Feed Costs per cow were \$649, \$518, \$581, \$663, \$657 and \$662 in 2001, 2000, 1999, 1998, 1997 and 1996 respectively). Supplies have remained fairly stable with \$104 per cow in 2001 versus \$99 per cow in 2000.

Interest costs per cow in 2001 were nearly identical to 2000 and have been relatively consistent over the last several years. They were \$208, \$207, \$197, \$226, \$218, \$212 and \$205 in 2001, 2000, 1999, 1998, 1997, 1996, and 1995, respectively. Paid labor costs per cow increased marginally in 2001, but have been relatively constant since 1998. They were: \$376, (2001) \$344, (2000) \$366 (1999), \$353 (1998), \$323 (1997), \$300 (1996) and \$237 (1995)

Look at Table 1 to see if your costs are competitive. You can use “per Cow” or the “per CWT EQ” column on Table 1 to help you identify categories of your expenses that are above average.⁴ For instance, suppose your fuel and oil costs are \$110 per cow, is this okay? How do you know? Use the “per Cow” column on Table 1 or select the herd size similar to your herd size from Table 4 to help you make that judgment. If your farm’s cost is NOT at or below the average you should find out why this is occurring and do what you can to decrease the costs in that category.

Table 2
Net Farm Income in 2001

	Whole Farm	Per Cow	Per CWT EQ
Net Farm Income From Operations (NFIFO)	54,579	520.10	2.17
Gain (Loss) on Sale of All Farm Capital Assets	2,515	23.81	0.10
Net Farm Income (NFI)	57,466	543.91	2.27

Table 2 shows the average Net Farm Income in 2001. You may wonder how a farm can be unprofitable and have a positive net farm income. The answer lies in the definition of net farm income. Net Farm Income is total farm income minus all farm expenses except Value of Unpaid Labor and Management and Interest on Equity Capital. Net Farm Income is sometime referred to as the farm manager’s wage, but this is not totally true. Net Farm Income is the return to the farm manager’s (and the family’s) unpaid labor and management and equity capital.

Net Farm Income is sometimes used as a proxy for the dollars the farm manager has available to pay family living expenses and income and social security taxes. This is fine as a proxy, but is not very accurate because some of the incomes and expenses used to calculate net farm income are non-cash (like depreciation). Also some wages and benefits deducted as a business expense are paid to family members. In addition, farm managers have other demands on the cash the farm operation generates such as debt repayment and down payments on new capital purchases, so the money available for family living will not usually equal Net Farm Income.

⁴ Frank, Gary G. “Calculating Your Milk Production Costs and Using the Results to Manage Your Expenses”, August 1996. Available on the Center for Dairy Profitability website: <http://cdp.wisc.edu>

Table 3
Milk Production Costs per Farm in 2001

Range in Herd Size	<=50 Cows	51 to 75	76 to 100	101 to 150	151 to 250	> 250 Cows
Number of Farms	156	200	103	78	44	46
Average Cows per Farm	41	63	87	121	193	442
Milk Sold per Cow (lbs)	17,782	19,383	19,732	19,800	21,075	22,335
Crop Acres per Cow	4.7	4.5	4.9	4.0	3.0	2.1
Total Crop Acres Farmed	193	284	426	485	581	928
Cost of Items for Resale	0	278	73	231	0	0
Breeding Fees	1,798	2,859	3,769	5,302	7,508	19,044
Car and Truck Expenses	1,438	1,705	1,865	1,880	1,628	2,897
Chemicals	1,766	3,394	5,603	6,240	10,102	17,306
Custom Heifer Raising Expenses	9	90	173	566	2,717	3,646
Custom Hire (Machine Work)	2,880	5,080	10,876	11,245	23,278	59,925
Feed Purchased	20,886	32,153	47,044	69,364	136,025	371,186
Fertilizer and Lime	3,516	5,980	9,017	10,640	12,211	23,646
Freight and Trucking	1,463	2,202	2,710	4,401	6,837	25,005
Gasoline, Fuel, and Oil	3,284	4,896	7,645	9,089	13,752	29,948
Farm Insurance	2,322	3,238	4,499	5,203	6,808	12,252
Rent/Lease Equipment	294	832	2,330	4,624	7,750	20,154
Rent/Lease Other	3,448	7,301	13,612	17,373	29,435	59,255
Repairs and Maintenance	1,039	1,343	2,773	1,564	1,704	2,853
Building and Fence Repairs	2,566	3,695	5,764	8,394	10,899	19,762
Machinery Repairs	5,423	8,984	12,631	17,410	20,656	46,868
Seeds and Plants Purchased	3,288	4,727	8,715	9,982	17,651	22,520
Supplies Purchased	5,676	7,994	11,557	14,223	18,236	42,337
Taxes - Other	2,825	3,948	5,010	5,471	7,407	12,826
Utilities	3,473	4,902	6,723	8,730	12,343	24,869
Veterinary Fees and Medicine	3,636	6,106	8,307	10,928	17,882	53,052
Other Farm Expenses	2,931	5,850	10,417	17,924	37,381	134,098
Marketing & Hedging	1,438	2,193	3,269	5,104	6,689	19,831
- Change in Prepaid Expenses	(256)	-1,113	-2,231	-1,755	-6,586	-13,538
Change in Accounts Payable	532	-179	-909	-1,447	-107	607
Depr on Purchased Livestock	1,840	3,956	5,215	10,764	25,767	51,326
Basic Costs	77,516	122,418	186,458	253,450	427,973	1,061,674
Mortgage Interest	3,397	3,878	7,913	8,449	18,075	34,955
Other Interest	3,991	7,248	9,369	13,972	29,631	69,764
Labor Hired (Dependents)	4,370	8,166	9,454	8,073	16,060	18,719
Labor Hired (Non-dep)	917	4,058	11,934	27,167	49,724	154,719
SST & Emp Bens (Dep)	3,595	5,804	6,097	4,753	3,855	3,783
SST & Emp Bens (Non-dep)	365	857	2,169	4,786	12,649	31,234
Dpr - Mach, equip, build	15,928	21,912	31,125	33,925	61,090	109,680
Total Allocated Costs	110,079	174,341	264,520	354,575	619,057	1,484,527
Total Farm Incomes	129,920	211,262	315,862	414,922	718,694	1,693,888
NFIFO*	19,841	36,921	51,342	60,347	99,637	209,361

*Net Farm Income from Operations

Table 3 shows the per farm cost of production averages in six herd size categories. To assist in your understanding of the entire table, the “Range in Herd Size – 101 to 150” column is used as an example. (NOTE: Table 3 should not be used to compare costs among farms; however, Tables 4 and 5 can be used to compare costs among farms in the different size categories.)

There were 78 herds in the data set that had more than 100 cows and less than 151 cows. Those herds averaged 121 cows and sold on average of 19,800 pounds of milk per cow. They had an average of 4.0 crop acres per cow and farmed 485 acres of cropland.

The average amount of purchased feed was \$69,364 per farm. In addition, they paid \$6,240 for crop chemicals, \$10,640 for fertilizer, \$27,369 for repairs, and \$10,928 for vet & medicine. All were higher than in 2000, with repairs almost \$5,000 higher. There was an increase in prepaid expenses of \$1,755 and a decrease in accounts payable of \$1,447. This reverses the trend in the last couple years where farm managers were using stock piled prepaid expenses.

Total Basic Costs, for the 101 to 150 herd size farms, were \$253,450 per farm in 2001 versus \$232,125 per farm in 2000. In addition to Basic Costs, this group of farms had \$35,239 in paid labor costs (\$8,073 to dependents and 27,167 to non-dependents). Social Security Taxes plus Benefits equaled \$9,539 (\$4,753 to dependents and 4,786 to non-dependents). There was also \$22,421 (8,449 plus 13,972) of interest expense and \$44,689 of depreciation. Some of that depreciation (\$10,764) was on taken on purchased livestock.

The Total Allocated Costs are \$354,575 per farm versus \$327,453 per farm in 2000. The Total Income per farm was \$414,922 versus \$375,163 in 2000. The Net Farm Income from Operations (NFIFO) in 2001 was \$60,347 versus \$47,710 in 2000. Note: this is not the total return to the owner-operator-manager’s (and family’s) labor, management and equity capital. To obtain that number you need to add the amount paid to dependents to the NFIFO.

Table 4 is divided into six herd size categories for 2001 and shows per cow averages. The 46 farms in the “>250 cows” category have more than twice as many total cows than the 78 farms in the “101 to 150” category. Also, the 46 farms in the “>250 cows” category have almost four times as many total cows as the 156 farms in the “<=50 cows” category.

Table 4 shows that the larger farms (based on cow numbers) have fewer crop acres and lower property taxes (Taxes – other) per cow. However, larger farms have higher purchased feed costs per cow (\$841 versus \$504 for the smallest size category). Also, larger farms have much higher “Other Expenses” per cow, \$304 versus \$71. “Other Expenses” includes a “miscellaneous livestock expense” category that accounts for about \$255 of this cost (versus \$16 on the smallest farms). This could be related to BST use as other data has suggested that larger farms use BST on a higher percentage of their herd.

Basic Costs in the largest herd size category exceeded the Basic Costs in the smallest category by \$533 per cow (\$2,404 versus \$1,871). This amount appeared to be narrowing in 2000 as the difference had fallen to only \$335 per cow, but it widened again in 2001. This is largely due to the difference in purchased feed cost, miscellaneous livestock expenses and livestock depreciation. As you move from the smallest herd-size category to the largest, livestock depreciation per cow more than doubles (\$44 to \$116). Notice also that the interest paid per cow increases slightly in the larger herd sizes.

The paid labor costs per cow increases from \$300 in the “51 to 75” category to \$472 in the “>250 cows” category. (In 2000 those values were \$301 and \$459; in 1999, \$293 and \$505; and 1998, \$251 and \$490.)

Total Allocated Costs per cow are \$594 (3,836 minus 3,354) higher in largest farm size category than in the “51 to 75” size category. Again this gap appeared to be narrowing in 2000, but has returned to the pre-2000 level in 2001. Larger farms generate approximately \$482 more income per cow and they have lower per cow unpaid labor (family living) draws (\$114 versus \$339).

Table 4
Milk Production Costs per Cow in 2001

Range in Herd Size	≤50 Cows	51 to 75	76 to 100	101 to 150	151 to 250	> 250 Cows
Number of Farms	156	200	103	78	44	46
Total Number of Cows	6,396	12,600	8,961	9,438	8,492	20,332
Average Cows per Farm	41	63	87	121	193	442
Milk Sold per Cow (lbs)	17,782	19,383	19,732	19,800	21,075	22,335
Dairy Livestock Sales per Cow	\$ 236	\$ 244	\$ 224	\$ 187	\$ 175	\$ 190
Crop Acres per Cow	4.7	4.5	4.9	4.0	3.0	2.1
Cost of Items for Resale	0.00	4.42	0.83	1.90	0.00	0.00
Breeding Fees	43.40	45.39	43.27	43.69	38.85	43.13
Car and Truck Expenses	34.72	27.06	21.42	15.49	8.42	6.56
Chemicals	42.63	53.88	64.33	51.43	52.27	39.20
Custom Heifer Raising Expenses	0.22	1.44	1.99	4.67	14.06	8.26
Custom Hire (Machine Work)	69.52	80.66	124.87	92.67	120.44	135.72
Feed Purchased	504.20	510.49	540.13	571.65	703.80	840.68
Fertilizer and Lime	84.88	94.95	103.53	87.69	63.18	53.55
Freight and Trucking	35.32	34.97	31.11	36.27	35.37	56.63
Gasoline, Fuel, and Oil	79.26	77.73	87.78	74.91	71.16	67.83
Farm Insurance	56.06	51.41	51.66	42.88	35.23	27.75
Rent/Lease Equipment	7.09	13.21	26.76	38.11	40.10	45.65
Rent/Lease Other	83.23	115.92	156.28	143.17	152.30	134.21
Repairs and Maintenance	25.08	21.32	31.84	12.89	8.82	6.46
Building and Fence Repairs	61.94	58.67	66.18	69.18	56.39	44.76
Machinery Repairs	130.91	142.63	145.02	143.48	106.87	106.15
Seeds and Plants Purchased	79.38	75.05	100.06	82.27	91.33	51.00
Supplies Purchased	137.02	126.93	132.69	117.21	94.35	95.89
Taxes - Other	68.19	62.69	57.52	45.09	38.33	29.05
Utilities	83.83	77.82	77.19	71.95	63.86	56.33
Veterinary Fees and Medicine	87.77	96.94	95.38	90.07	92.52	120.16
Other Farm Expenses	70.77	92.88	119.60	147.72	193.41	303.71
Marketing & Hedging	34.72	34.82	37.53	42.06	34.61	44.91
- Change in Prepaid Expenses	(6.18)	(17.67)	(25.62)	(14.47)	(34.07)	(30.66)
Change in Accounts Payable	12.84	(2.84)	(10.44)	(11.93)	(0.55)	1.38
Depr on Purchased Livestock	44.42	62.81	59.87	88.71	133.32	116.25
Basic Costs	1,871.24	1,943.62	2,140.78	2,088.77	2,214.35	2,404.54
Mortgage Interest	82.00	61.58	90.85	69.63	93.52	79.17
Other Interest	96.34	115.07	107.57	115.15	153.31	158.01
Labor Hired (Dependents)	105.49	129.65	90.85	66.53	83.10	42.40
Labor Hired (Non-dep)	22.14	64.43	107.57	223.89	257.28	350.42
SST & Emp Bens (Dep)	86.79	92.15	90.85	39.17	19.94	8.57
SST & Emp Bens (Non-dep)	8.81	13.61	107.57	39.45	65.44	70.74
Dpr - Mach, equip, build	384.51	347.90	357.36	279.59	316.08	248.41
Total Allocated Costs	2,657	2,768	3,093	2,922	3,203	3,362
Total Farm Incomes	3,136.29	3,354.19	3,626.51	3,419.51	3,718.55	3,836.42
NFIFO*	478.97	586.19	533.11	497.34	515.53	474.17

*Net Farm Income from Operations

The “51 to 75 cow” herd size category has the highest return per cow to the owner-operator-manager’s (and family’s) labor and equity capital at \$808 (\$586 plus \$130 plus \$92). In the largest herd size category it equals \$525. However, when the number of cows is multiplied by these values, the owner-operator-managers of the larger herds average \$232,111 for family living and a return to equity capital versus \$50,903 for the farms in the “51 to 75 cow” category and only \$27,521 in the under 50 cow herd-size category.

Cost of Production per Unit Calculation Method Used

There are three commonly used methods to calculate the cost of production per unit. They are “Cost per Unit of Primary Product Sold,” “Cost per Unit of Equivalent Production,” and “Residual Cost per Unit of Primary Product Sold.” All three of these methods will yield the same answer if the production process has just a single product. However, if the production process has joint products the results can be quite different. Dairy farms producing milk have numerous joint products: cull cows, calves, CCC milk assessment refund, cooperative dividends, property tax credit on income taxes, crop-related government payments, etc. *Therefore, knowing the cost of production per unit calculation method used in a study is essential.*

Each method of calculating the cost of production per unit has some advantages and disadvantages.⁵ This study uses the “Cost per Unit of Equivalent Production” method to calculate the cost of producing milk. *It was chosen because in using this method, the cost of milk production can be compared directly to the price of milk.* This method also permits the calculation of cost per hundredweight equivalent on individual expense items.

Table 5 shows the cost of milk per CWT EQ for six herd size ranges. Purchased feed costs increase by \$0.87 (\$2.40 versus \$3.27) per CWT EQ as herd sizes increase from the smallest to the largest. This is offset by a decrease in Fertilizer & Lime (-\$0.20), Gasoline, Fuel and Oil (-\$0.09), Machinery Repairs (-\$0.21), and Plants and Seed Purchased (-\$0.18).

Vet. & Medicine costs are approximately 20 percent higher per CWT EQ in herds over 250 cows versus herds of 76 to 100 cows. Other Expenses increase by \$0.85 or more than 300 percent per CWT EQ from the smallest to the largest herd size groups. It is presumed this is the cost of BST.

The “51 to 75 cow” farms have the lowest Basic Costs per CWT EQ (\$8.66). The range in per CWT EQ costs among farm size groups is \$0.71 versus \$0.82 in 2000. Livestock depreciation is only \$0.21 per CWT EQ in the smallest herd size group but \$0.54 and \$0.45 per CWT EQ in the two largest herd-size categories.

Paid labor costs per CWT EQ range from \$1.06 to \$1.83 as you move from the smallest to the largest herd-size group. Labor cost paid to non-dependents per CWT EQ range from \$0.15 to \$1.64, showing that most of the paid labor on small farms is to dependents (family members).

The “51 to 75 cow” and “76 to 100 cow” farms tied for the highest NFIFO per CWT EQ in 2000, but in 2001 the “51 to 75 cow” farms again were in sole possession of first place at \$2.61. The “76 to 100 cow” farms were in second place at \$2.43. The smallest herd-size category was in third place at \$2.28. The largest herd size had the lowest NFIFO per CWT EQ at \$1.85. However, when the amount paid to family members is added back in and multiplied by the number of CWT EQ per farm, the return to the owner-operator-managers tell a different story. The larger herds have an average of \$232,111 for family living and a return to equity capital versus \$50,903 for the farms in the “51 to 75 cow” category and only \$27,521 for those in the under 50 cow herd-size category. Note: this was stated above but because of its importance is mentioned again.

⁵ Frank, Gary G. “Cost of Production versus Cost of Production”, July 1998. Available on the UW Center for Dairy Profitability website at: <http://cdp.wisc.edu>.

Table 5
Milk Production Cost per CWT EQ in 2001

	Range in Herd Size					
	<=50 Cows	51 to 75	76 to 100	101 to 150	151 to 250	> 250 Cows
Number of Farms	156	200	103	78	44	46
Total Number of Cows	6,396	12,600	8,961	9,438	8,492	20,332
Average Cows per Farm	41	63	87	121	193	442
Milk Sold per Cow (lbs)	17,782	19,383	19,732	19,800	21,075	22,335
Crop Acres per Cow	4.7	4.5	4.9	4.0	3.0	2.1
Cost of Items for Resale	0.00	0.02	0.00	0.01	0.00	0.00
Breeding Fees	0.21	0.20	0.18	0.19	0.16	0.17
Car and Truck Expenses	0.17	0.12	0.09	0.07	0.03	0.03
Chemicals	0.20	0.24	0.26	0.22	0.21	0.15
Custom Heifer Raising Expenses	0.00	0.01	0.01	0.02	0.06	0.03
Custom Hire (Machine Work)	0.33	0.36	0.51	0.40	0.48	0.53
Feed Purchased	2.40	2.27	2.23	2.50	2.83	3.27
Fertilizer and Lime	0.40	0.42	0.43	0.38	0.25	0.21
Freight and Trucking	0.17	0.16	0.13	0.16	0.14	0.22
Gasoline, Fuel, and Oil	0.38	0.35	0.36	0.33	0.29	0.26
Farm Insurance	0.27	0.23	0.21	0.19	0.14	0.11
Rent/Lease Equipment	0.03	0.06	0.11	0.17	0.16	0.18
Rent/Lease Other	0.40	0.52	0.64	0.63	0.61	0.52
Repairs and Maintenance	0.12	0.09	0.13	0.06	0.04	0.03
Building and Fence Repairs	0.30	0.26	0.27	0.30	0.23	0.17
Machinery Repairs	0.62	0.64	0.60	0.63	0.43	0.41
Seeds and Plants Purchased	0.38	0.33	0.41	0.36	0.37	0.20
Supplies Purchased	0.65	0.57	0.55	0.51	0.38	0.37
Taxes - Other	0.32	0.28	0.24	0.20	0.15	0.11
Utilities	0.40	0.35	0.32	0.31	0.26	0.22
Veterinary Fees and Medicine	0.42	0.43	0.39	0.39	0.37	0.47
Other Farm Expenses	0.34	0.41	0.49	0.65	0.78	1.18
Marketing & Hedging	0.17	0.16	0.15	0.18	0.14	0.17
- Change in Prepaid Expenses	(0.03)	(0.08)	(0.11)	(0.06)	(0.14)	(0.12)
Change in Accounts Payable	0.06	(0.01)	(0.04)	(0.05)	(0.00)	0.01
Depr on Purchased Livestock	0.21	0.28	0.25	0.39	0.54	0.45
Basic Costs	8.91	8.66	8.82	9.13	8.90	9.36
Mortgage Interest	0.39	0.27	0.37	0.30	0.38	0.31
Other Interest	0.46	0.51	0.44	0.50	0.62	0.62
Labor Hired (Dependents)	0.50	0.58	0.45	0.29	0.33	0.17
Labor Hired (Non-dep)	0.11	0.29	0.56	0.98	1.03	1.36
SST & Emp Bens (Dep)	0.41	0.41	0.29	0.17	0.08	0.03
SST & Emp Bens (Non-dep)	0.04	0.06	0.10	0.17	0.26	0.28
Dpr - Mach, equip, build	1.83	1.55	1.47	1.22	1.27	0.97
Total Allocated Costs	12.66	12.33	12.51	12.77	12.87	13.09
Total Farm Incomes	14.94	14.94	14.94	14.94	14.94	14.94
NFIFO*	2.28	2.61	2.43	2.17	2.07	1.85
*Net Farm Income from Operations						

Basic Cost of Production per Hundredweight Equivalent

"Basic Costs" are Total Allocated Expenses minus interest paid, all wages and benefits paid, and depreciation expenses. "Total Allocated Expenses" are Total Expenses minus value of unpaid labor and management minus a return to equity. Basic Cost is a useful measure when comparing one farm to another, because it is not influenced by the milk's composition, price premiums, farm's debt structure, the amount of paid versus unpaid labor or the capital consumption claimed (depreciation).

An average Basic Cost of \$9.03 per CWT EQ was calculated by summing the total basic costs on all farms and dividing by the total number of CWT EQ produced. Only 30 percent of the farms had a basic cost of \$8.00 per CWT EQ or less, - a decrease from the 65 percent who had Basic Costs of \$8.00 or less in 2000- and 63 percent 1999 - and 49 percent in 1998. In Table 6 selected ranges of basic costs are presented. It shows the number and percent of farms in each range.

The \$9.03 average basic cost means that the average farmer in this study had \$5.91 (versus \$4.58 in 2000) of income available per CWT EQ to use for other costs (US average milk price in 2001 = \$14.94 minus basic expenses of \$9.03 per CWT EQ). Other costs are items such as hired labor, scheduled principal and interest payments, a down payment when purchasing assets, and/or a family living draw.

Table 6
Number of Herds in Basic Cost Production Ranges in 2001

Expenses per CWT EQ	Number of Farms	Percent of Farms *
Less than 6.00	26	4
6.01 - 7.00	55	9
7.01 - 8.00	104	17
8.01 - 9.00	165	26
9.01 - 10.00	131	21
10.01 - 11.00	69	11
Greater than 11.00	77	12

* Percent column may not add to 100 due to rounding.

Summary

The average herd size in our study group of farms was 106 cows. The milk sold per cow averaged 20,454 pounds. The average herd size of our study group was 109 in 2000 and the average milk sold per cow was 20,546.

Total economic cost of production per hundredweight equivalent of milk was \$0.13 (rounded to the nearest penny) more than the US average milk price in 2001. Since our study of milk production costs began in 1992, in only two years (1998 and 1999) did the milk price exceed total economic costs.

Purchased feed costs still remains the largest cost item. Having declined in 2000 and 1999 after several years of being almost constant they increased to pre-1999 levels in 2001. Purchased feed costs per cow were \$649, \$518, \$581, \$663, \$657 and \$662 in 2001, 2000, 1999, 1998, 1997 and 1996 respectively. Purchased feed costs per CWT EQ were \$2.71, \$2.11, \$2.30, \$2.77, \$2.76 and \$2.94, in 2001, 2000, 1999, 1998, 1997 and 1996 respectively.

The wages paid to dependent family members was \$79, \$113, \$118 \$125, \$112 per cow in 1996, 1997 and 1998, 1999, 2000 respectively and rose again to \$129 per cow in 2001.

Total allocated expenses per cow in 2001 averaged \$3,053 versus \$2,735 in 2000. The return to the farmer's (and family's) unpaid labor, management, and equity capital (Net Farm Income from Operations (NFIFO)) was \$520 per cow in 2001. This is less than in 1999 and 1998 (\$657 and \$716) but nearly double the NFIFO in 2000 (\$296).

In 2001, total allocated expenses per CWT EQ averaged \$12.77 and basic costs averaged \$9.03. The ROROA for the study farms was 5.63%, which is an increase from 3.51% in 2000 although still a drop from 7.56% in 1999, and 1998's ROROA of 9.20%. For more details on the financial status of these 627 farms refer to "2001 Financial Benchmarks on Selected Wisconsin Dairy Farms" (August 2002). This paper will benchmark the 16 Farm Financial Standard Task Force measures and others.