



Cost of Producing Milk

per
Hundredweight Equivalent

Prepared by Gary Frank, Center for Dairy Profitability – Madison, WI

Work Sheet:	An Example Farm	Your Farm
1. Total Schedule F Income <small>(Schedule F, line 11)</small>	\$126,161	_____
2. Form 4797 Income ¹	\$ 12,143	_____
3. Change ² in Feed Inventory	-\$ 4,127	_____
4. Change ² in Dairy Livestock Inventory	\$ 10,500	_____
5. Change in Acc. Rec. Other Lst Inv., Etc.	\$0	_____
6. Total Farm Income <small>(On this worksheet, add lines 1 through 5.)</small>	\$144,677	_____
7. Average Milk Price ³	\$ 12.91	_____
8. Hundredweight Equivalent (CWT EQ) of Milk Produced Crucial Value⁴ <small>(On this worksheet, divide line 6 by line 7)</small>	11,250	_____
9. Total Schedule F Expenses <small>(Schedule F, line 35)</small>	\$122,521	_____
10. Change ² in Accounts Payable	\$ 1,543	_____
11. Change ² in Prepaid Expenses	\$ 1,200	_____
12. Total Allocated Costs <small>(On this worksheet, add lines 9 and 10, then subtract line 11)</small>	\$122,864	_____
13. Total Interest Paid <small>(Add Schedule F lines 23a and 23b)</small>	\$ 8,470	_____
14. Wages and Benefits Paid <small>(Only those reported on Schedule F; to obtain this value add Schedule F lines 17, 24, and 25)</small>	\$ 12,682	_____
15. Depreciation Claimed <small>(Schedule F line 16 minus Depr. claimed on livestock)</small>	\$ 15,346	_____
16. Total Basic Costs <small>(On this worksheet, line 12 minus lines 13, 14, and 15)</small>	\$ 86,366	_____
17. Basic Cost per CWT EQ ⁵ <small>(On this worksheet, line 16 divided by line 8)</small>	\$ 7.68	_____ Goal <= \$8.00
18. Total \$'s available for other costs ⁶ <small>(On this worksheet, line 6 minus line 16)</small>	\$58,311	_____
19. Basic Cost Margin per COW <small>(On this worksheet, divide line 18 by average number of cows, both milking and dry, in herd.)</small>	\$1,166	_____ Goal => \$1,200
20. Total Allocated Costs per CWT EQ <small>(On this worksheet, divide line 12 by line 8)</small>	\$ 10.92	_____
21. Total \$'s available to cover unallocated costs ⁷ <small>(On this worksheet, (line 7 minus line 20) times line 8)</small>	\$21,825	_____
22. Unpaid labor & management charge per CWT EQ <small>(Unpaid labor & management charge divide by line 8) (In this example, the opportunity cost of all family labor & management was set at \$35,000. This minus wages paid to family members of \$12,682 = \$22,318. This divided by line 8 equals \$1.98.)</small>	\$1.98	_____
23. Total Allocated plus unpaid labor & management <small>(On this worksheet, add lines 20 and 22.)</small>	\$12.90	_____ Goal <= line 7

Footnotes

1. When Form 4797 contains only income from the sale of culled raised dairy livestock, enter the income reported. If it contains the sale of purchased dairy livestock and the "one-time" sale of some other asset(s), such as an old plow adjustments must be made.

Note: in the case of the "one-time" sale, that income must be subtracted from the Total Form 4797 income before a value is entered. In the case where purchased breeding livestock are included, enter the net amount. This net will take into account the unrecovered basis that was claimed against this sale.

2. Change equals the ending amount minus the beginning amount. The best way to get this value is to ask your self if there was any change in this item during the year in question. If the answer is "yes" then follow with the question, "how much?" This method avoids having to determine the absolute inventory level at the beginning and end of the year in question.
3. If you wish to compare your costs to the costs on other farms, use the U.S. average all milk price for the year in question.

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
13.68	12.24	13.09	12.80	12.97	12.74	14.88	13.34	15.43	14.37
2000	2001	2002	2003	2004	2005	2006			
12.33	14.98	12.09	12.53	16.06	15.14	12.91			

Or you can divide your total milk income (before any deductions for hauling, marketing, etc.) by the number of hundredweight of milk you sold during the year to calculate the average milk price on your farm. However, then you can only accurately compare your costs this year to your costs in previous years.

4. The Critical Value should be divided into the total cost of an expense item to obtain its Cost of Production per Hundredweight Equivalent (CWT EQ). Example, your purchased feed costs are \$34,871 and you Critical Value is 12,842. Then, your purchased feed costs are \$2.72 (34871 / 12842) per CWT EQ. You can then compare your costs to those on the tables.
5. The average Basic Cost on selected Wisconsin dairy farms was

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
7.54	7.68	7.11	7.41	8.55	7.86	8.23	7.72	7.75	9.03	7.91	7.70
2000	2001	2002	2003	2004	2005	2006					
7.75	9.03	7.91	7.68	9.53	9.09						

Farmers should calculate this value each year to monitor changes in their basic production costs. This value allows farm managers to compare their cost to previous years, other dairy businesses, and the price without regard to herd size, production level, debt position, and percent of total labor paid.

6. The "other" cost items are: Interest (both that actually paid and the opportunity cost interest on your equity in the business), Capital Consumed (reduction in the value of your machinery, equipment, etc. caused by using it and/or by it becoming obsolete), Labor and Management Paid, and the Opportunity Cost of Unpaid Labor and Management. Any return above all these costs is an economic profit.
7. Unallocated costs, for most farm managers, are their (and their family's) Labor and Management plus a Return to Equity Capital. However, some farm managers pay their family members (or themselves) some

wages and benefits that are deductible on Schedule F. In those cases, this margin will not be as large as when the return to the entire farmer's (and family's) labor, management, and equity capital are imbedded in it.

In the example, the farm's margin available for unallocated costs is \$21,825; this is not the return to the farmer's (and family's) Labor, Management, and Equity Capital. The Return to Labor, Management, and Equity Capital is the amount calculated above plus the Wages and Benefits paid to family members. In the example, if all the Wages and Benefits paid were to family members, the total return to their Labor, Management, and Equity Capital is \$34,507 (\$21,825 plus \$12,682).