



## Fact Sheet #3 : Comparing Herds by Size, Less than 100 Cows vs. 100 Cows or More

# Regional Multi-State Interpretation of Small Farm Financial Data from the Fourth Year Report on 2003 Great Lakes Grazing Network Grazing Dairy Data April 2005

### Overview

The data and conclusions of this paper are derived from the report with the above title from a USDA Initiative for Future Agricultural and Food Systems (IFAFS) Grant project #00-52101-9708. Some strengths of this work include standardized data handling and analysis procedures, combined actual farm data of ten states and one province to provide financial benchmarks to help farm families and their communities be successful and sustainable. The main report is also based upon work supported by Smith Lever funds from the Cooperative State Research, Education and Extension Service, U.S. Department of Agriculture. The full report is available at <http://cdp.wisc.edu/Great%20Lakes.htm>.

Participating grazing dairy farms must typically obtain 85% or more of gross income from milk sales, or 90% of gross income from dairy livestock sales plus milk sales, harvest over 30% of grazing season forage by grazing and must provide fresh pasture at least once every three days.

Management Intensive Rotational Grazing (MIRG) has become a more common dairy system in the northern U. S. This analysis of actual farm financial data from 102 graziers in 2003, 103 in 2002, 126 in 2001, and 92 in 2000, most from the Great Lakes region provides some insight into the economics of grazing as a dairy system in the northern U.S.:

- There is a range of profitability amongst graziers. The most profitable half had an advantage of \$2.48 in Net Farm Income From Operations per Hundredweight Equivalent (NFIFO/CWT EQ) over the least profitable half. This result is similar to the three previous years, but the difference between the higher and lower profit herds was greater in the years with lower milk prices. For more information, see Fact Sheet #2 of this series.
- The average grazing herd with less than 100 cows had a higher NFIFO per cow and per CWT EQ than the average grazing herd with more than 100 cows. The \$0.24 advantage in NFIFO/CWT EQ for the smaller herds was a result of a \$0.74 per CWT EQ advantage in the cost of paid labor. This result is similar to the three previous years.
- Careful examination of the data suggests that achieving a given level of NFIFO per cow or per CWT EQ is more difficult in a seasonal (stops milking at least one day each calendar year) system. The average seasonal herd had a smaller range of financial performance within a year, but experienced more variability of financial performance from year to year. Seasonal herds had a slight advantage in NFIFO/Cow and per CWT EQ in 2003 and a large advantage in 2001. The non-seasonal herds had nearly a two-to-one advantage in NFIFO/Cow and per CWT EQ in 2000 and 2002. For more information, see Fact Sheet #4 of this series.
- The graziers in the study were economically competitive with confinement herds in the states that had comparable data from both groups in four consecutive years. For more information, see Fact Sheet #5 in the series.
- While breed of cattle is a minor factor affecting profitability, the Holstein herds in the data had better financial performance in three years of comparisons. For more information, see Fact Sheet #6 of this series.

The study also confirms that accounting methodology and financial standards are important both in the accuracy and in the standardization of comparison values across large geographic areas that involve different combinations of production assets and management skills. In comparing the results of this study with other data, it will help to understand the measures used here but not in all places in the country.

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### Comparing Herds by Size: Less Than 100 Cows vs. 100 Cows or More

The average "large" herd in 2003 had about three times as many cows, produced about ten percent less milk per Cow, and was less profitable on a per Cow and a per CWT EQ basis. The average "large" farm produced more total dollars of NFIFO per farm. For most basic cost items, the larger herds spent less per CWT EQ than the smaller herds except for purchased feed, fertilizer and lime, gasoline, fuel and oil, repairs, seed, marketing, other crop, farm and livestock expenses, and changes in accounts payable.

Overall, the smaller herds had a \$0.25 disadvantage in basic cost per CWT EQ but a \$0.49 per CWT EQ advantage in the four non-basic cost categories that are added to the basic cost category to create the allocated cost category. More specifically, the smaller herds spent \$0.04 per CWT EQ more for interest, \$0.74 per CWT EQ less for paid labor and management, and \$0.21 more per CWT EQ for depreciation than the large herds.

This accounts for the \$0.24 (\$2.23-\$1.99) overall advantage that the smaller herds had in NFIFO per CWT EQ.

Because of rounding, some small mathematical differences might be found in the summary tables below.

<b>Comparing Herds by Size: Less Than 100 vs. 100 Cows or More/ Most</b>	<b>Less than 100 Cows</b>	<b>100 Cows or More</b>	<b>2003 Average</b>
Number of Herds	77	25	102
Number of Cows per Herd	57	180	87
Average Lbs. Milk per Cow	16,081	14,691	15,381
Average Lbs. Milk per Herd	924,568	2,638,474	1,344,643
Group Average Mailbox Milk Price	\$14.22	\$14.58	\$14.39
U.S. All Milk Price (used to calculate CWT EQ)*	\$12.50	\$12.50	\$12.50
Average Basic Cost per CWT EQ	\$7.91	\$7.66	\$7.79
Allocated Cost per CWT EQ	\$10.27	\$10.51	\$10.39
Non-Basic Cost per CWT EQ (Allocated Minus Basic)	\$2.36	\$2.85	\$2.60
NFIFO per Cow (without deducting any labor compensation)	\$648	\$689	\$662
NFIFO per CWT EQ (without deducting any labor compensation)	\$2.83	\$3.33	\$3.07
NFIFO per Farm	\$29,335	\$74,215	\$40,335
<b>NFIFO per Cow</b>	<b>\$510</b>	<b>\$413</b>	<b>\$461</b>
<b>NFIFO per CWT EQ</b>	<b>\$2.23</b>	<b>\$1.99</b>	<b>\$2.11</b>

\*See Chapters IX and X of the full report for more information about CWT EQ and cost categories. <http://cdp.wisc.edu/>

The larger herds cost of paid labor, which is \$0.74 per CWT EQ higher, provides the smaller herds all of their advantage in NFIFO per CWT EQ. For the first time in four years if all labor expenses were omitted, the smaller herd size would have a lower NFIFO per CWT EQ and per Cow as shown above.

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