



## 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 Sixth Year Report on 2005 Great Lakes Grazing Network Grazing Dairy Data October 2007

### 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:

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 115 graziers in 2005, 101 in 2004 102 in 2003, 103 in 2002, 126 in 2001, and 92 in 2000 (more than 251 farms supplied at least one year of data), mainly 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 ratio between the most profitable half and the least profitable half's Net Farm Income from Operations (NFIFO) per cow and per Hundredweight Equivalent (CWT EQ) was greater in the lower profit years (usually with lower milk prices) than in the higher profit years. 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 100 cows or more. The smallest margin appeared in the 2003 data. For more information, see Fact Sheet #3 of this series.
- Non-seasonal herds had a large NFIFO per cow and per CWT EQ advantage in 2000 and 2002. The seasonal herds (stop milking at least one day each calendar year) had a large NFIFO per cow and per CWT EQ advantage in 2001 and 2004 and a very small advantage in 2003. In 2005, non-seasonal herds had a NFIFO/Cow advantage and slight NFIFO/CWT EQ disadvantage. **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 system.** The seasonal group had a smaller range of financial performance within a year but experienced more variability of financial performance from year to year. Less than 15 percent of the herds in the data were seasonal. 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. For more information, see Fact Sheet #5 of the series.
- While breed of cattle is a minor factor affecting profitability, the Holstein herds in the data had better financial performance in NFIFO per cow in five of five years and NFIFO per CWT EQ in four of five years of comparisons with other breeds. For more information, see Fact Sheet #6 of this series.
- The ranking of major cost items is remarkably similar between grazing and confinement herds. For more information, see Fact Sheet #7 and #8, of this series.
- Relatively consistent differences in financial performance between states have appeared in all years. These differences must be considered when interpreting the data.

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 2005 had over three times as many cows, produced about three percent less milk per cow, and was less profitable on a per cow and a per CWT EQ basis than the smaller herds. The average "large" farm produced more total dollars of NFIFO per farm. For about half of the basic cost items, the larger herds spent more per CWT EQ than the smaller herds.

Overall, the smaller herds had a \$0.09 disadvantage in basic cost per CWT EQ and an \$0.84 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 \$0.06 per CWT EQ less for interest, \$0.89 per CWT EQ less for paid labor and management, but \$0.11 more per CWT EQ for depreciation than the large herds.

This accounts for the \$0.75 (\$3.36-\$2.61) 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 Cows vs. 100 Cows or More</b>	<b>Less than 100 Cows</b>	<b>100 Cows or More</b>	<b>2004 Average</b>
Number of Herds	73	28	101
Number of Cows per Herd	56	190	93
Average Lbs. Milk per Cow	16,337	15,156	15,671
Average Lbs. Milk per Herd	919,975	2,875,625	1,462,136
Group Average Mailbox Milk Price	\$17.61	\$17.74	\$17.68
U.S. All Milk Price (used to calculate CWT EQ)*	\$16.10	\$16.10	\$16.10
Average Basic Cost per CWT EQ	\$9.26	\$9.37	\$9.32
Allocated Cost per CWT EQ	\$11.88	\$12.91	\$12.44
Non-Basic Cost per CWT EQ (Allocated Minus Basic)	\$2.62	\$3.54	\$3.12
NFIFO per Cow (if all labor was unpaid)	\$1,038	\$938	\$981
NFIFO per CWT EQ (if all labor was unpaid)	\$4.77	\$4.67	\$4.74
NFIFO per Farm	\$51,195	\$121,520	\$70,691
NFIFO per Cow	\$909	\$640	\$758
NFIFO per CWT EQ	\$4.22	\$3.19	\$3.66

The larger herds' cost of paid labor, which was \$0.89 per CWT EQ higher in 2005, provides the smaller herds with most of their advantage in NFIFO per CWT EQ from 2000 to 2005. If all labor expenses were unpaid, the smaller herd size would still have a higher NFIFO per cow in three years and a higher NFIFO per CWT EQ in two years.

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