



FACT SHEET # 3: COMPARING HERDS BY SIZE, LESS THAN 100 COWS VS. MORE THAN 100 COWS

Regional Multi-State Interpretation of Small Farm Financial Data from the First Year Report on 2000 Great Lakes Grazing Network Grazing Dairy Data July 2002

Overview

The data and conclusions of this paper are derived from the report titled Regional Multi-State Interpretation of Small Farm Financial Data, the first year report of a USDA Integrated Food and Agricultural Systems (IFAS) grant project #00-52501-9708. 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 first enterprise analyzed in this project is dairy grazing. To be considered a dairy farm for the study, 85% or more of gross income must be from milk sales, or 90% of gross income must typically be from dairy livestock sales plus milk sales. Additionally, to be considered a grazer for the study, one must harvest over 30 % of grazing season forage needs 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 ninety-two graziers in 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. A comparison of the most profitable half with the least profitable half shows that the top herds had an advantage of \$2.41 in Net Farm Income From Operations per Hundred Weight Equivalent (NFIFO/CWT EQ). This is examined specifically in 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 smaller herds have a \$0.54 per CWT EQ advantage in the cost of paid labor, which accounts for more than the \$0.44 NFIFO/CWT EQ overall advantage that the smaller herds have. See Fact Sheet #3 in this series for more on this point.
- The average grazer in the study who is fully seasonal (stops milking at least one day each year), has a less desirable financial performance than the average non-seasonal herd, whether NFIFO/cow, NFIFO/CWT EQ or total NFIFO is used as the yardstick. Despite having access to data from many states, only seven seasonal herds' data were available for analysis. Fact Sheet #4 in the series investigates seasonal milking at greater length.
- The graziers in the study were economically competitive with confinement herds in the states that had comparable data from both groups. Fact Sheet # 5 in the series focuses on the comparisons between grazing and confinement dairy farming.

The study also confirms that accounting methodology and financial standards are important both in the accuracy and the standardization of comparison values across large geographic areas involving different combinations of production assets and management skills. Any comparison between the measures in this report and data based on the current market value (CMV) of assets will be misleading. Here, the measures of profitability are calculated in this report using the historic cost asset valuation method (HC) to provide a better measure of profit levels generated by operating the farm business.

Comparing Herds by Size: Less Than 100 Cows VS. More than 100 Cows

The average "large" herd has almost three times as many cows, selling slightly less milk per cow, and is less profitable on a per cow and a per CWT EQ basis. The average "large" farm does provide many more total dollars of NFIFO per farm. In the basic cost category, the larger herds have a higher cost per CWT EQ for chemicals, custom hire, feed purchased, rent, repairs, seed, vet and medical expenses and change in prepaid expenses.

The smaller herds have a basic cost per CWT EQ that is \$0.13 higher than the larger herds. However, the larger herds have a

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cost of paid labor that is \$0.54 per CWT EQ higher. This provides the smaller herds much of their advantage in NFIFO per CWT EQ. If all labor expenses were added back to NFIFO, the larger herd size would have a slightly higher NFIFO per CWT EQ as shown below.

The smaller herds have a \$0.57 per CWT EQ advantage in the four cost categories (paid labor, paid management, depreciation and interest) that are added to basic cost to create the allocated cost category (allocated costs equals total income minus NFIFO).

This accounts for the \$0.44 per CWT EQ overall advantage that the smaller herds have in NFIFO per CWT EQ.

| Comparing Herds by Size: More Than 100 vs. Less than 100 | | | |
|---|--------------------|--------------------|------------------------|
| | Less than 100 Cows | More than 100 Cows | Average of 92 Graziers |
| Number of Herds | 68 | 24 | 92 |
| Number of Cows per Herd | 59 | 176 | 90 |
| Average Lbs. Milk per Cow | 16,900 | 16,744 | 16,836 |
| Average Lbs. Milk per Herd | 1,000,211 | 2,959,249 | 1,511,264 |
| Average Basic Cost per CWT EQ | \$7.90 | \$7.77 | \$7.83 |
| Allocated Cost per CWT EQ | \$10.44 | \$10.88 | \$10.67 |
| Allocated Minus Basic Cost per CWT EQ | \$2.54 | \$3.11 | \$2.84 |
| NFIFO per Cow | \$428.00 | \$365.00 | \$395.00 |
| NFIFO per CWT EQ | \$1.89 | \$1.45 | \$1.66 |
| NFIFO per Farm | \$24,256.00 | \$58,150.00 | \$33,098.00 |
| NFIFO per CWT EQ** (without deducting any labor compensation) | \$2.55 | \$2.65 | \$2.60 |

If paid labor and management compensation were added back, the larger herds would have a slight NFIFO per CWT EQ and per cow advantage.

**NFIFO (without deducting any labor compensation) is not a common measure. It is used in this project because some comparisons are made between farms that rely mainly on hired labor and farms that rely entirely on unpaid labor. In such cases, this uncommon measure provides additional insight to the comparisons.

Tom Kriegl from the U.W. Center for Dairy Profitability is the lead author of this report. You may contact him at (608) 263-2685, via e-mail at tskriegl@facstaff.wisc.edu or by writing the UW Center for Dairy Profitability, 277 Animal Science Bldg., 1675 Observatory Drive, Madison, WI 53706. The following researchers are leading the project in their respective states: Jim Endress (Illinois), Larry Tranel and Robert Tigner (Iowa), Ralph Booker (Indiana), Bill Bivens and Sherrill Nott (Michigan), Margot Rudstrom (Minnesota), Greg Bishop-Hurley (Missouri) Jim Grace (New York), Thomas Noyes and Clif Little (Ohio), Jack Kyle and John Molenhuis (Ontario, Canada), J. Craig Williams (Pennsylvania), and Tom Kriegl and Gary Frank (Wisconsin). Any opinions, findings, conclusions or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the U.S. Department of Agriculture.