GREAT LAKES GRAZING NETWORK

Linking Farmers with Knowledge and Resources

FACT SHEET #4: COMPARING SEASONAL CALVING WITH NON-SEASONAL HERDS

Regional Multi-State Interpretation of Small Farm Financial Data from the Second Year Report on 2001 Great Lakes Grazing Network Grazing Dairy Data May 2003

Summary

The data and conclusions of this paper are derived from the report titled Regional Multi-State Interpretation of Small Farm Financial Data , the second 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 grazier 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 126 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 $2.81 in Net Farm Income From Operations per Hundred Weight Equivalent (NFIFO/CWT EQ). This result is similar to 2000. 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 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. For more information see Fact Sheet #3 of this series.

- The average grazier in the 2001 data that used the seasonal calving strategy (stops milking at least one day each year), had more desirable financial performance than the average non-seasonal herd in 2001, whether NFIFO/cow, NFIFO/CWT EQ or total NFIFO is used as the yardstick. **This is a sharp contrast** to the 2000 comparison and with multiple years of other calving strategy comparisons. The average grazier in the 2000 data that used the seasonal calving strategy, had substantially less desirable financial performance than the average non-seasonal herd, whether NFIFO/cow, NFIFO/CWT EQ or total NFIFO is used as the yardstick.

- The graziers in the study were economically competitive with confinement herds in the states that had comparable data from both groups. For more information on the comparisons between grazing and confinement dairy farming see Fact Sheet # 5 in the 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.

Why the Dramatic Change in the Calving Strategy Comparison from 2000 to 2001?
In this study, a herd is considered to be employing the seasonal calving/milking system if they stop milking at least one day or more each calendar year (like in New Zealand). They may be referred to as simply "seasonal" hereafter. A semi-seasonal calving herd milks at least one cow every day of the year (and many more on most days) **and** make a serious attempt to "bunch" their calving to one or two times of the year, but don't sacrifice healthy, productive animals that don't quite fit that mold. Continuous calving herds distribute calving among most months of the year. Any calving strategy not meeting the seasonal definition is referred to as non-seasonal in this analysis.

In the seasonal versus non-seasonal herd comparison in 2000, the non-seasonal herds had more than twice the NFIFO per CWT EQ and NFIFO per cow. Also, in six previous years of comparing seasonal with non-seasonal herds in Wisconsin data, the non-seasonal herds generated an average of about twice as much NFIFO/cow compared to seasonal herds. However, in the 2001 multi-state data, the seasonal herds had almost 1.5 times the NFIFO per cow and NFIFO per CWT EQ than the non-seasonal herds.

In 2001 and 2000 multi-state data, and in six previous years of comparing seasonal with non-seasonal herds in Wisconsin data, there were more non-seasonal herds (than total seasonal herds) with NFIFO/Cow and NFIFO/CWT EQ values higher than the average NFIFO/Cow and NFIFO/CWT EQ values for the seasonal herds. The highest of the seasonal performance was still not as high as the highest of the non-seasonal performance in 2001. When all the collected data is considered, it is more likely a non-seasonal herd will perform better than a seasonal herd in terms of economic profitability (NFIFO/cow and NFIFO/CWT EQ).

Challenge Of Seasonal Calving
The biggest challenge in managing a seasonal dairy herd is maintaining a 12 month calving interval. There are three ways of maintaining the 12-month interval; (1) Breeding cows back at 60 days in milk to maintain the 305-day lactation, (2) Shorten the lactation for cows that were late in breeding back and (3) Cull cows that do not fit the seasonal caving strategy and buying back cows that are due to freshen in the appropriate calving window. Many have tried to achieve this objective once or more times (at great expense) and have decided not to pursue a seasonal system (one in which all the cows are dry at the same time).

Selection Bias Appears To Be A Major Factor In Explaining The Year-to-Year Differences.
The number of summarized seasonal farms increased from 7 in 2000 to 18 in 2001. Of all the seasonal herds summarized in 2001, twice as many were new to the summary than were repeats from 2000. Since one of the seasonal herds in 2000 became semi-seasonal in 2001, twelve of the seasonal herds summarized in 2001 were not part of the 2000 seasonal summary. The twelve new herds tended to be well-established seasonal herds. This group of experienced seasonal graziers understood how to make the seasonal system function efficiently.

Unless both groups were perfectly randomized samples, some variation in comparison results is to be expected due to this change in participating farms. Primarily because the sharing of farm financial data is a voluntary act, data is not collected via a random selection procedure. It is difficult to know if one year has a more representative sample than the other. In general, the larger the group, the more likely that the group is a representative sample. Also in general, most groups of less than 30 are not totally representative of the larger population that they came from.

The 2001 milk price pattern was more favorable for a spring seasonal herd (versus a fall seasonal or non-seasonal herd) than in most if not all earlier years. Milk prices in 2001 were lowest in January, February, November and December – the months of lowest milk output for most spring seasonal herds.

So why does the comparison look so different in 2001? It may not be possible to fully explain the whole difference.
In a few words, the financial performance of the average seasonal grazier in the 2001 data is likely to be a better indicator of what can be achieved under favorable conditions by experienced and highly capable managers committed to the seasonal system.

Furthermore, the financial performance of the average seasonal grazier in the 2001 data probably does not represent the kind of financial performance that less experienced or less capable managers could expect to achieve quickly and consistently while working toward the establishment of a seasonal system.

This comparison of seasonal and non-seasonal calving systems illustrates the challenge in reaching confident conclusions from small groups of data and it reminds us of the danger in reaching confident conclusions from testimonials. It emphasizes the importance of using standardized and complete financial documentation to compare different farms and systems. It also begs for a careful ongoing examination to understand what is happening and what factors can result in profitability shifts.

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