RELATIONSHIP BETWEEN MONTH OF CALVING AND LACTATION CURVES IN NSW HOLSTEIN-FRIESIAN COWS

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Most lactation curve studies have been carried out in the northern hemisphere on limited lactation numbers, and have described a standard curve (Wood 1967; Jamrozik and Schaeffer 1997). The study reported here looked at the shape of lactation curves by month of calving, under NSW conditions.

Milk yields of Holstein-Friesian cows were used to study the effects of month of calving on the shape of lactation curves in 7 separate NSW regions. The data were from Holstein-Friesian cows in their first lactation, selected by region and month of calving, and using milk yield of individual animals on test days. A total of 380,546 test day yields over a 5-year period, from 39,454 cows, formed the data set.

The data set allowed identification of strong seasonal impacts on the lactation curve, and showed that region and month of calving can modify the standard lactation curve shape. Figure 1 provides an example of seasonal curves for cows from the mid-North Coast in pasture-based production systems. The spring, summer and autumn curves highlight the difference between the accepted curve (mainly generated from northern hemisphere data, and typified by the winter curve) and the results obtained in NSW. This could significantly affect anticipated responses to current practices and proposed changes to management in NSW herds. There appears to be considerable potential to adjust management practices to maximise the biological production potential of the cow in early lactation. The shape of the curve may not be important as a determiner of lactation yield or profitability.


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