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Agriculture
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PROVINCE OF KWAZULU-NATAL

SMALL SCALE DAIRY SYSTEM

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Objectives

1. To demonstrate the management system, fodder flow and effective use of waste in a small-scale dairying system.
2. To test the milk production of the Nguni x Jersey cross-bred cow in a small scale system using restricted suckling.
3. Compare the milk production of the Jersey x Nguni cross cows with that of the Nguni x Friesland cross cows.

Materials and Methods

In the report period, eleven cross bred cows were milked by using a two point milking machine. One quart was not stripped of milk – left for the calf to suckle. Inter calving periods, milk yields and lactation periods were recorded. During the report period, two Friesland cows and three Nguni x Friesland heifers were acquired from Cedara. These animals were tested and compared to the production of the Nguni x Jersey currently on the Research station. Throughout the year milk samples was taken and sent to Allerton Veterinary Laboratory to test for Contagious Abortion and Tuberculosis. Somatic cell counts were also monitored from individual animals and animals with high counts were treated. Income from the dairy and expenditure regarding the cost of on-farm produced feed and bought feeds are taken into account.

Discussion

The newly acquired Friesland x Nguni crossbred from Cedara is comparing well to one of the Jersey x Nguni crossbreds during the same period: The FxN cross peaked in April at 248.4 litres month^{-1}. In the same month (April) the Jersey crossbred achieved 291.1 litres month^{-1}. To date of this report, these cows are still in lactation. For the report period high ICP's were recorded because of an infertile bull.

Completed lactation periods (x3) were:

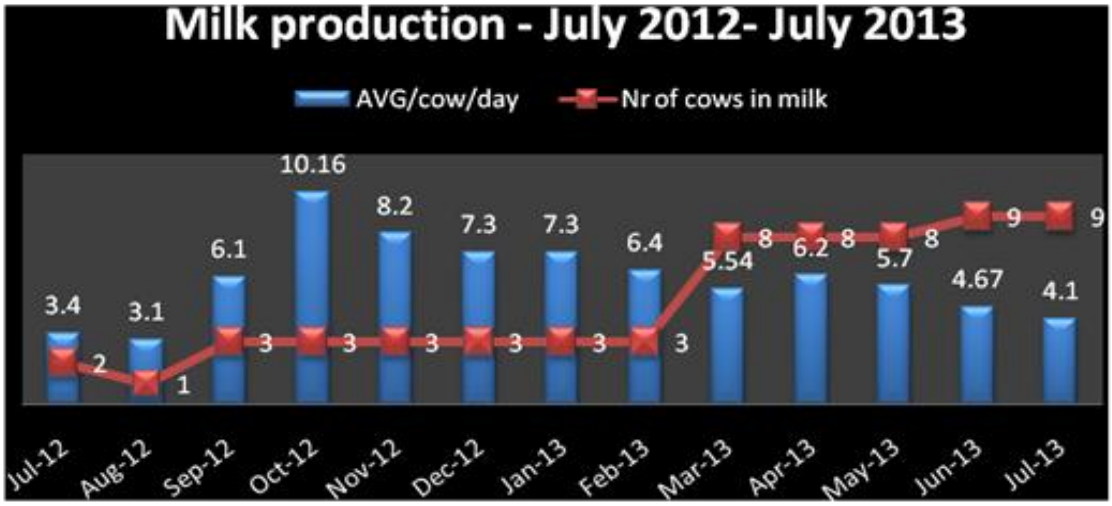
152 days with 1640 litres produced,

197 days and 1383 litres produced and

213 days with 1265 litres produced.

Cows are dried when production falls below 1 litre per milking.

TABLE 1 Monthly average milk production from July 2012 to July 2013



A potential income of R33 695 can be expected from these 11 cows if one litre of fresh milk can be sold for R3.50 (rural going rate price for milk). The feasibility of purchased feed to increase milk production must be evaluated. Calves are reared by the mothers, but were not taken into monetary account.

Conclusions

In this system, the cow rears her own calf, which brings down costs in the dairy. Continuous selection against low producers must be done to cull such animals. This is not a breeding project so the numbers of breeding stock does not allow for the breeding of a high producing crossbred, but indications are there that some of the crossbred cows can obtain yields of more than 10 litres day^{-1}. If calves are reared properly, young weaners can be sold at a profit with the minimum of input. Sale of milk alone will not make any profit, but value adding to the product, as well as the sale of young animals might prove profitable.