A primary cause of long intercalving intervals in Brahman-cross cows is postpartum anoestrus. This study was undertaken to determine how the length of the interval from calving to first oestrus varies with liveweight changes in cows and their suckled calves during the postpartum period.

Twenty Brahman-cross cows (¾ Brahman, ¼ Hereford, ¼ Shorthorn) varying from 4 to 13 years of age were maintained on improved pasture of good quality from calving to weaning (180 days). The cows were not mated but were run with two vasectomized bulls equipped with chinball markers for use in detecting oestrus. Cows and calves were weighed at monthly intervals during the trial.

Postpartum intervals (PPI) to first oestrus varied from 38 to 177 days. During the first 60 days postpartum 9 cows gained while 10 cows lost weight (Table 1). From 60 to 180 days gains for both groups were similar and averaged 0.13 ± 0.02 kg/day. The mean PPI of cows that gained during the first 60 days (89 days) was significantly lower (P < 0.01) than that (143 days) in cows that lost weight.

The calves were divided into two groups according to whether they fell above or below the mean weaning weight (Table 1). Weaning weights were corrected for birth day, sex of calf, and age of dam. Dams of calves with weaning weights that exceeded the mean had PPI (145 days) significantly longer (P < 0.01) than those (92 days) of dams of calves having weaning weights below the mean. Correlations were -0.68 between PPI and cow gains and 0.41 between PPI and weaning weights of calves. In this small study, the correlation (r = -0.26) between calf and dam gains was not significant but has been shown to be strongly negative in other studies (Seifert 1975) in this environment.

These results imply that higher milk production reflected by weight losses during early lactation in dams and by higher weaning weights of calves is an important factor in extending the interval from calving to first oestrus. Since milk production and PPI both have heritabilities of about 0.3 (Olds and Seath 1953) long intercalving intervals may be promoted by breeding programmes that use weaning weight as a major component in bull selection.


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