

Reproductive and Production Performances of Exotic Dairy Cows Managed under Intensive System in Dry Zone, Sri Lanka

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This study was conducted to assess the reproductive and production performances of exotic pure and crossbred dairy cows managed under intensive management system in the dry zone of Sri Lanka. A total of 436 Jersey and 664 Jersey × Friesian cows were selected from a large-scale National Livestock Development Board (NLDB) farm. Reproductive and productive parameters were determined using data obtained for the period from 2015 to 2020. Age at first calving (AFC), average calving interval (ACI), number of services per conception (NSC) and calving to first service interval (CFSI) were the reproductive parameters considered. Meanwhile, total milk yield per lactation (TMYL), average daily milk yield (ADMY) and lactation length (LL) were tested under production parameters. The data were analysed using General Linear Models (GLM). The results indicated that AFC was influenced by breed and age ($P<0.05$). The AFC values were significantly higher in crossbred cows (25.80 ± 0.60 months) compared to purebred cows (24.44 ± 0.22 months). There was a significant effect on both breed and parity ($P<0.05$) for ACI and NSC, while CFSI was independent from both breed and parity. Jersey cows had significantly higher ACI and NSC (634.78 ± 14.06 days, 5.29 ± 0.11) than crossbred cows (505.25 ± 4.44 days, 4.04 ± 0.15). Except ADMY, all milk production related parameters were significantly associated with breed and parity. Jersey cows showed significantly higher LL and TMYL (418.91 ± 10.38 days, 5116.66 ± 211.69 L) compared to crossbred cows (353.11 ± 3.35 days, 4312.07 ± 68.20 L). The highest LL and TMYL were recorded in cows at 2nd parity. The findings of the present study indicate that purebred Jersey cows are superior to Jersey x Friesian cows with respect to TMYL and LL, while crossbreds are superior to purebred Jerseys with respect to ACI and NSC in the context of the cow population studied at the particular dry zone dairy farm of Sri Lanka.

Keywords: Exotic dairy cows, Milk yield, Reproduction, Breed, Parity

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