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Production performance of Murrah and Surti buffalo breeds in DL_5 agro-ecological region of Sri Lanka

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Buffalo plays a significant role in agriculture in the Low Country Dry Zone (DL regions). Genetic improvement of local buffaloes through repeated mating to Indian breeds requires performance evaluation of those under DL regions. This study was conducted in a Government farm located in the DL_5 region in Southern Province to evaluate performance of Murrah and Surti breeds with respect to 305-day standardized milk yield (**SD-Milk**) in different lactations, adjusted monthly yields during lactation (**adj-MY**), lactation length (**LL**) and length of dry period (**LDP**). Management included daytime grazing and night paddocking. Lactation records of over 30 years were edited to obtain a complete set of lactation records (7069 monthly yields) from 129 Murrah and 51 Surti cows. Information on breed and identification number of cow, date of calving, lactation number (parity), total milk yield, LL, date of drying and milk yield for every month was extracted. Monthly yields were adjusted to 30-day yields from records of calendar months. Total milk yield was standardized to 305-day length by truncating excess records. Short records were not extrapolated. Analysis of variance procedure was used to determine the significance of breed effect (within parity) on mean of adj-MY, SD-Milk, LL and LDP. Means were compared using Duncan's new multiple range test (at P=0.05).

The SD-Milk of the first 8 lactations for Murrah buffaloes were 1020.8, 1041.0, 1102.4, 1122.6, 1184.3, 923.2, 720.3 and 1250.5 litres, respectively. Corresponding values for Surti breed were 1084.4, 1090.6, 1121.3, 974.6, 1016.2, 945.8, 1073.7 and 653.1 litres, respectively. However the breed effect was not significant for any parity ($P>0.05$) which indicates that both breeds perform similarly under the harsh conditions prevailing in the DL_5 region. The adj-MY for first lactation Surti cows were 130.6, 116.4, 112.7, 107.0, 104.4, 104.8, 99.0, 86.4, 80.8 and 66.3 litres, respectively. Respectively, Murrah cows registered 87.7, 95.8, 102.4, 103.0, 107.0, 103.1, 99.5, 91.2, 87.8, and 78.7 litres. The breed difference was significant only in the first two months. Thus lactation curves appeared to be different with Surti breed reaching the peak early. The first three lactations of Murrah (346.3, 313.8 and 314.4 days, respectively) were significantly longer than those of Surti cows (290.0, 268.0, and 254.9 days, respectively). Average LDP of Murrah (224.4 days) and Surti (203 days) were not significantly different. Thus both breeds could be recommended for the region with improvements in non-genetic factors.

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