

## **Analysis of Productive and Reproductive Traits of Murrah Buffaloes in a Large-scale Farm in North Western Province of Sri Lanka**

S.T.D. De Silva<sup>1</sup>, M.D.A.G. Randeniya<sup>1</sup>, W.A.S.M. Premaratne<sup>2</sup>, W.T.L. Fonseka, C.J. Gajaweera<sup>1</sup> and I.N. Pathirana<sup>1\*</sup>

<sup>1</sup>Department of Animal Science, Faculty of Agriculture, University of Ruhuna, Sri Lanka

<sup>2</sup>National Livestock Development Board, Narahenpita, Sri Lanka

\*indunilvet@agri.ruh.ac.lk

The buffalo milk production contributed to 15.9% of the Sri Lankan fresh milk production in 2019. The scarcity of updated information on buffalo production and reproduction leads to problems in farm decision-making which results in reduced productivity. The objective of the present study was to analyze some selected milk production and reproduction parameters of a large-scale farm in North Western Province of Sri Lanka. Farm records of semi-intensively managed, 132 crossbred Murrah buffaloes (ages ranged from 4.15 to 16.55 years) at Marandawila farm from 2007-2019 were used in the analysis. The following production and reproduction parameters were calculated for the first five lactations: (i) The average milk yield per buffalo per day (MYD; Liters) (ii) average milk yield per buffalo per lactation (MYL; Liters) (iii) average lactation length (LL; days) (iv) age at first calving (AFC; months) (v) average calving intervals (ACI; days) (vi) stillbirth (SBR) (vii) abortions (ABR). The average values  $\pm$  SEM obtained for the above parameters were: (i)  $5.40 \pm 0.21$ , (ii)  $1561.76 \pm 60.33$ , (iii)  $285.90 \pm 8.07$ , (iv)  $59.95 \pm 0.79$ , (v)  $462.34 \pm 21.14$  (vi) 6.77% (vii) 2.26%. The MYD was higher ( $p < 0.05$ ) in 4<sup>th</sup> lactation compared with the rest of the lactations. The first LL and the first ACI were longer ( $p < 0.05$ ) than that of subsequent lactations. A weak negative correlation ( $r = -0.221$ ;  $p < 0.05$ ) was observed between the birth weight (BW) and AFC of the same buffalo cow. Among 532 births recorded, 91% were healthy calves. The average BW was not statistically significant between male and female calves. In conclusion, the productive and reproductive parameters were slightly substandard when the optimum local production standards are considered. It can be speculated that the adoption of proper husbandry practices including improved feeding management may improve the tested production and reproduction parameters up to the optimum level.

**Keywords:** Buffalo, Lactation curve, Murrah, Productive parameters, Reproductive parameters