

## **Productive performance of Jersey and Jersey x Holstein Friesian crosses in the dry zone of Sri Lanka under a sophisticated intensive management system**

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The study was undertaken to evaluate the productive performance of imported Jersey and Jersey x Holstein Friesian cattle over a period of 9 years (2015 – 2023) at the National Livestock Development Board (NLDB) farm Ridiyagama, located in the dry zone of Sri Lanka. The records on productive traits viz. lactation milk yield, daily individual milk yield, birth weight, lactation length, and calving interval of 4806 records of 1356 cows were used. Data were analyzed using a general linear model with SAS online version. The overall least square means ( $\pm$ SEM) of lactation milk yield, daily individual milk yield, lactation length, calving interval, and birth weight were  $3392.97 \pm 0.67$  kg/lactation,  $8.89 \pm 0.002$  kg/day/cow,  $375.58 \pm 0.06$  days,  $16.91 \pm 0.003$  months and  $22.62 \pm 0.004$  kg, respectively. The overall abortion and stillbirth were 2.99% and 3.48%, respectively. The least-square means ( $\pm$  SEM) of lactation milk yield, daily individual milk yield, lactation length, calving interval, and birth weight of Jersey and Jersey x Holstein Friesian crosses were  $3163.77 \pm 74.32$  kg/lactation,  $8.63 \pm 0.019$  kg/day/cow,  $369.55 \pm 6.11$  days,  $15.62 \pm 0.51$  months,  $20.84 \pm 0.28$  kg;  $3430.07 \pm 67.59$  kg/lactation,  $9.30 \pm 0.017$  kg/day/cow,  $375.23 \pm 5.54$  days,  $15.65 \pm 0.51$  months and  $21.62 \pm 0.25$  kg, respectively. The current study revealed that Jersey x Holstein Friesian crosses outperformed pure Jerseys in key productive traits viz. lactation milk yield, daily individual milk yield, lactation length, calving interval, and birth weight. Breed differences, lactation numbers, calving interval, year of calving, season of calving, dry period, calving to service period, and number of services per conception influenced identified productive traits, and leveraging these differences offers the potential to enhance productive performance at Ridiyagama NLDB farm.

**Keywords:** Dry zone, Holstein Friesian cattle, intensive management, Jersey cattle strain, productive performance

**Acknowledgement:** *Authors express their sincere gratitude to the Chairman NLDB for granting permission to collect data from Ridiyagama NLDB farm, as well as to Mr. T. Vidanapathirana, Farm Manager, and the entire staff of the Ridiyagama farm for their invaluable support and assistance during the data collection process.*

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