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MILK PRODUCTION EFFICIENCY OF DIARA, GRADED MURRAH, AND NON-DESCRIPT BUFFALOES IN SOUTH GANGETIC ALLUVIAL PLAINS OF BIHAR*

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ABSTRACT

A unique variety of buffalo breed, evolved through natural selection in “Diara” region of Bihar is rapidly losing its genetic identity in its home tract due to indiscriminate grading with Murrah buffaloes to improve milk production. The milk production efficiency traits *viz.*, milk yield (kg) per day of lactation Length (MYLL), milk yield (kg) per day of calving interval (MYCI), milk yield (kg) per kg body weight at calving (MYWC), and milk yield (gm) per kg body weight per day of lactation length (MYCL) in 920 buffaloes, comprising 221 Diara, 331 graded Murrah, and 368 non-descript buffaloes, reared under conventional management in Diara region, were evaluated in the present study. The experimental animals belonged to three genetic groups *viz.*, Diara, graded Murrah, and local non-descript, three regions *viz.*, North West Patna, South West Patna, and East Patna, two farming systems *viz.*, mixed farming (animal husbandry integrated with agriculture) and only animal husbandry, and four parities *i.e.*, 1st to 4th lactation. The overall population means (μ) for MYLL, MYCI, MYWC, and MYWL were 4.22±0.02 kg, 2.84±0.01 kg, 2.62±0.01 kg, and 8.60±0.055 g respectively. The effect of genotype was significant ($P\leq 0.01$) on all the traits. The performance of Murrah grades was significantly ($P\leq 0.01$) better than Diara with respect to MYLL and MYCI, while the performance of Diara was better ($P\leq 0.01$) than Murrah grades with respect to MYWC, and MYWL. The effect of location of the animals was significant ($P\leq 0.05$) on all the traits. The animals of South West Patna had significantly better performance than the animals in other two regions. The effect of farming system was significant ($P\leq 0.01$) on MYLL and MYCI, but non-significant ($P\geq 0.05$) on MYWC, and MYWL. The performance of the animals maintained by land-owning farmers was better than the animals of landless dairy farmers. The effect of parity was significant ($P\leq 0.01$) on all the traits. The performance of the animals reached its peak at third lactation in all the three genotypes. It is concluded from this study that Diara buffaloes were more efficient milk producers (MYWC) than Murrah grades, and thus more economical.

KEY WORDS

Bihar, Buffalo, Diara, Murrah grade, Milk production efficiency

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