

Estimates of Phenotypic and Genetic Parameters for Ewe Productivity Traits of Lohi Sheep, in District Okara, Pakistan

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Abstract: The aims of the study were to investigate the fixed effects which are considered to influence ewe productivity and to estimate the genetic parameters for ewe productivity traits of Lohi sheep. Genetic parameters were estimated by REML procedure using the GENSTAT program. The effects of year and age of ewe were significant for fertility, litter size at birth (LSB), litter size at weaning (LSW), litter weight at birth (LWB) and litter weight at weaning (LWW). The least squares means of fertility, LSB, LSW, LWB and LWW were 0.904, 1.422, 1.358, 6.689 kg and 41.577 kg, respectively. The means of total number of lambs born (TLB), total number of lambs weaned (TLW), total birth weight of lambs (TWB) and total weight of lambs weaned (TWW) per ewe over four lambing opportunities were 5.48, 5.25, 25.61 kg and 162.47 kg, respectively. Estimates of heritability for fertility, LSB, LSW, LWB and LWW were 0.0250, 0.0533, 0.0430, 0.0462 and 0.0255, respectively; and estimates of repeatability for these traits were 0.1242, 0.0787, 0.0772, 0.0882 and 0.0715, respectively. The low estimates of heritability and repeatability obtained in the current study for ewe productivity traits indicate that selection based on the ewe's own performance may result in slow genetic improvement.

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