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Bali Cattle Performance in Smallholder Mixed Systems of Indigenous and Transmigrant Farmers on Ceram Island, Indonesia

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Abstract

Bali cattle production in smallholder mixed farming systems on Ceram Island, Maluku (Indonesia), was chosen by the government to be the backbone of meat production in the region to satisfy the demand of Maluku, North Maluku and Papua provinces. The increasing demand in recent years created however pressure on the Bali cattle population resulting in decreasing animal numbers. Development programmes meant to increase the population and its production on the island should take into account the performance and objectives of the current cattle production systems. This study assessed the performance of Bali cattle on Ceram according to districts and management systems, assuming that the management is largely influenced by farmers' migratory status, which may represent a proxy for further development planning. A total of 479 cattle from 121 households in three districts on Ceram Island, Maluku, were measured for live weight. Progeny history questionnaires were used to collect data on 121 breeding females and their calves. Structured interviews were conducted to collect data for triangulation. The effects of district and migratory status were tested by two-factorial analysis of variance for reproductive performance parameters, while multivariate analysis of variance was used for live weight analysis. Statistically significant differences among districts appeared in bull age at first mating and adult mortality rates. Live weight also differed significantly between districts and sex. Cattle live weight in transmigrant farms showed a tendency towards higher weights than in indigenous farms although the difference was not significant. No significant differences of the reproductive traits studied were found between the indigenous and transmigrant farms. The existing, but low variation in performance of Bali cattle could still be attributed to more site-specific differences in management practices, and environmental and economic frame conditions, which were not covered here but may be more decisive than migratory status alone.

Keywords: Bali cattle, Ceram, Indonesia, Performance