

## Performance and Breeding Potency of Local Buffalo in Kangean Island, Sumenep, East Java, Indonesia

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**Abstract :** This research was done to identify the performance and breeding potency of Local Buffalo in Kangean Island, Sumenep, East Java, Indonesia. Materials used were buffalo and farmer in Kangean Island. Method used was survey with purposive sampling method. Qualitative trait and existing breeding system including the type of production system were directly observed. Quantitative trait consisted of chest girth, body weight and wither height were measured and recorded. Data were analyzed using analysis of variance applying software GENSTAT 14. Results showed the purposes of buffalo breeding in Kangean Island were for production of calves, saving, religion tradition, and buffalo racing. The combination between grazing and cut and carry system were applied in Kangean Island. Forage, grass and agricultural waste product were available abundantly especially, during the wet season. Buffalo in Kangean Island was categorized as swamp buffalo with 48 chromosomes. Observation on qualitative trait indicated that there were three skin color types: gray (81.25%), red (10.42%) and white/albino (8.33%). Analysis on quantitative trait showed that there was no significant difference between male and female buffalo. The performance of male buffalo was 132.56 cm, 119.33 cm and 174.11 cm, for the mean of body length, wither height and chest girth, respectively. The performance of female buffalo were 129.8 cm, 114.0 cm and 166.2 cm, for mean of body length, wither height and chest girth (CG), respectively. The performance of local buffalo in Kangean Island was categorized well. Kangean Island could be promoted as center of buffalo breeding and conservation. For optimal improvement of population number and its genetics value, government policy in buffalo breeding program should be implemented.

**Keywords :** chromosome, qualitative trait, quantitative trait, swamp buffalo

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