

Effect of Different Lands on Heat Tolerance Coefficient and Body Weight Gain of Ram Fat Tailed Sheep

Rachmawati, A.¹, H. Nugroho² and E. Y. Wanto¹

¹ Animal Physiology Laboratory, Animal Production Department, Faculty of Animal Husbandry,
University of Brawijaya, Jalan Veteran Malang-65144, East Java, Indonesia

² Beef Cattle and Drought Laboratory, Animal Production Department, Faculty of Animal
Husbandry, University of Brawijaya, Jalan Veteran Malang-65144, East Java, Indonesia

Corresponding email: achadiyah.rachmawati@mail.ugm.ac.id

ABSTRACT : Livestock productivity is influenced by genetic and environmental factors. Genetic factors contribute 30% and 70% environmental factors. Environmental factors, including: rearing management, feed, and livestock shelter (different lands). Different lands, the highlands and low, affected Ram Fat Tailed Sheep adaptability, especially daily body weight gain. Another influential factor was the availability of feed in the two altitudes. This research was conducted in the DEG's Ranch, Solokuro village, Lamongan Residence (lowland, 30 m asl) and Agri Ranch, District Karang Ploso, Malang (highland, 700 m asl). The purpose of this study was to analyse the effect of different lands on Heat Tolerance Coefficient (HTC) and body weight gain. Research materials were DEG males aged 9-12 months with 10 rams at each land. Research methods were experimental and direct observation. Data were analyzed by unpaired t-test. The variables measured were HTC and body weight gain. The result showed that the altitude difference affect the body temperature, respiratory rate and body weight gain ($P < 0.05$), but not it influenced the value of the HTC. The next research was suggested using Fat Tailed Sheep males and feed the same in altitude to accurately determine their adaptability.

Keywords: Adaptability, respiratory rate, body temperature, lowland, highland.