Physiological Status of Indoor Sheep in the Tropical Rain Forest (HPGW) Environment

Agik Suprayogi[1] and D.A. Astuti[1]

Abstract

As an ottempt to improve the animal health and production, agrosilvopastural (ASP) system has been introduced in the tropical countries. ASP system usually was established as a pasture of animals in the agriculture land or forestry environment, otherwise development ASP system with indoor animal in the tropical rain forest environment are still scare. Establishing of the animal production system in the tropical forest environment has a certain consequence related to the influence of physiological status and animal health. The objective of the study is to evaluate the physiological status of indoor sheep in the Gunung Walat Education Forest (HPGW)-IPB, Sukabumi-west Java-Indonesia which has tropical rain forest climatic type. Ten Javanese thin-tailed ewes, average body weight of 25 kg, in the indoor stable system were feed and water ad libitum under 24 hours continues monitoring of stable humidity and temperature. Measurement of hearth rate, respiration rate, and body temperature were carrying out to the each ewe in the morning and afternoon. This study reveals that the average humidity in the stable a day in the HPGW-IPB is (97.52 ± 4.87) % rel. and average temperature a day is (22.26 ± 1.62) °C. The consequence of bioclimatic condition is directly to the physiological status of the ewes, such as hearth rate by (71.00 ± 10.51), respiration rate by (29.25 ± 5.39) and body temperature by (38.73 ± 0.56) °C. The average humidity a day in the stable shows uncomfortable for the animal health and production system, although the stable temperature is still comfortable enough. The condition is dominantly influenced by density and diversity of vegetation in the tropical rain forest. The high humidity in the stable affects enhancing of respiration rate of the ewes, although hearth rate and body temperature tend to the normal physiological value.

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[1] Faculty of Veterinary Medicine, Bogor Agricultural University (IPB)
Jl. Agatis-Kampus IPB Darmaga-Bogor-16680, Indonesia
Phone/Fax: 0062-251-629462, email:asupray@yahoo.com