

IMPACT OF TEMPERATURE AND HUMIDITY ON FEEDING REGIME OF WAD GOATS

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ABSTRACT

This study was carried out to determine the effects of microclimate in West African dwarf (WAD) goats pen. Trinal variation of ambient temperature (AT) and relative humidity (RH) were recorded at four hours intervals inside goat pen and temperature humidity index (THI) was calculated for the period of six(6) weeks. Twenty-eight WAD bucks aged 5 months with an average body weight of 7.00 ± 0.2 kg were fed cocoa pod, cassava pulp and Acacia leaf in a completely randomized experiment. The goats were randomly assigned to seven dietary treatments in different ratios of 0:60:40 (T1); 10:50:40 (T2); 20:40:40 (T3); 30:30:40 (T4); 40:20:40 (T5); 50:10:40 (T6) and 60:0:40 (T7) g/kg DM respectively. They were fed experimental diets once daily 8:00-9:00h, 1:00-2:00h and 6:00-7:00h in the morning, afternoon and evening, respectively. Data collected was subjected to analysis of variance using SPSS. The results obtained shown that the excursion ranges of temperature of morning, afternoon and evening-fed bucks was 29-31°C, 31-34°C, 31-33°C respectively. Relative humidity of 94-97%, 81-87.5%, 84-86% and Temperature Humidity Index (THI) was 85-87, 86-92 and 86-90 respectively for the week 1. This study showed that period of time can entrain body temperature and physiological rhythm of an animal. In conclusion, feeding goats in the morning and evening may be an effective strategy to manage heat stress in the pen. Feeding in the afternoon should be avoided so as to avoid increased ambient temperature for the animals..

KEYWORDS: Acacia Leaf, Cassava Pulp, Cocoa Pod, Goats, Microclimate