ABSTRAK

PENGARUH SUPLEMENTASI MINERAL ORGANIK (Cu-Lisinat dan Zn-Lisinat) DAN ASAM AMINO PEMBATAS (Metionin) DALAM RANSUM BERBASIS LIMBAH SINGKONG TERHADAP RESPONS FISIOLOGIS PADA KAMBING *CROSS* BOER JANTAN

Oleh

Nadira

Penelitian ini bertujuan untuk mengetahui pengaruh dan perlakuan terbaik suplementasi mineral organik (Zn-lisinat dan Cu-lisinat) dan asam amino pembatas (metionin) dalam ransum berbasis limbah singkong terhadap respons fisiologis kambing *cross* Boer jantan. Penelitian dilaksanakan pada November 2025—Desember 2025 di Kahfi Farm, Jati Agung, Lampung Selatan, menggunakan 12 ekor kambing *cross* Boer jantan dengan Rancangan Acak Lengkap (RAL) tiga perlakuan dan empat ulangan. Perlakuan yang diterapkan yaitu P0: ransum basal, P1: ransum basal + 40 ppm Zn-lisinat dan 10 ppm Cu-lisinat, dan P2: ransum basal + 40 ppm Zn-lisinat dan 10 ppm Cu-lisinat + metionin 0,1%. Peubah yang diamati meliputi frekuensi respirasi, denyut jantung, dan suhu rektal, yang dianalisis menggunakan *Analysis of Variance* (Anova). Hasil penelitian menunjukkan bahwa suplementasi mineral organik dan metionin tidak berpengaruh nyata ($P>0,05$) terhadap seluruh parameter respons fisiologis, dengan semua nilai masih berada dalam kisaran normal yang mengindikasikan mekanisme termoregulasi ternak berfungsi dengan baik selama penelitian.

Kata kunci: Kambing *cross* boer, metionin, mineral organik, respons fisiologis.

ABSTRACT

THE EFFECT OF ORGANIC MINERAL SUPPLEMENTATION (Cu-Lysinate and Zn-Lysinate) AND LIMITING AMINO ACID (Methionine) IN CASSAVA WASTE-BASED RATION ON PHYSIOLOGICAL RESPONSES IN MALE CROSS BOER GOATS

By

Nadira

This study aimed to determine the effect and best treatment of organic mineral supplementation (Zn-lysinate and Cu-lysinate) and limiting amino acid (methionine) in cassava waste-based ration on the physiological responses of male cross Boer goats. The study was conducted from November 2025—Desember 2025 at Kahfi Farm, Jati Agung, South Lampung, using 12 male cross Boer goats arranged in a Completely Randomized Design (CRD) with three treatments and four replications. The treatments applied were P0: basal ration, P1: basal ration + 40 ppm Zn-lysinate and 10 ppm Cu-lysinate, and P2: basal ration + 40 ppm Zn-lysinate and 10 ppm Cu-lysinate + 0.1% methionine. The variables observed included respiration rate, heart rate, and rectal temperature, which were analyzed using Analysis of Variance (Anova). The results showed that organic mineral and methionine supplementation had no significant effect ($P>0.05$) on all physiological response parameters, with all values remaining within the normal range, indicating that the thermoregulation mechanism of the livestock functioned well throughout the study.

Keywords: cross boer goats, methionine, organic minerals, physiological responses.