

RINGKASAN

NURONIYAH MAULANI. Penelitian berjudul Suplementasi Tepung Bawang Putih Dan Mineral Organik (Cr Dan Zn Lysinat) Terhadap Kecernaan Bahan Kering Dan Kecernaan Bahan Organik Pada Pakan Sapi Madura. Penelitian ini bertujuan mengkaji pengaruh pemberian tepung bawang, Cr organik dan Zn-lysinat terhadap kecernaan bahan kering dan kecernaan bahan organik pada pakan sapi Madura. Penelitian dilaksanakan pada 28 April 2018 sampai dengan 23 September 2018 di Kandang Dawuhan Multifarm, Kedungbanteng, Banyumas dan Laboratorium Ilmu Bahan Makanan Ternak, Fakultas Peternakan, Universitas Jenderal Soedirman, Purwokerto, Jawa Tengah. Materi yang digunakan terdiri atas 18 ekor sapi Madura jantan dengan rata-rata bobot awal $253 \pm 18,97$ kg, pakan yang terdiri atas 25% jerami, 25% tebon jagung dan 50% konsentrat, air minum, mineral chromium organik 0,75 ppm, zink-lysinat 40 ppm, tepung bawang putih (*Allium sativum*) 250 ppm, ember, timbangan analitik dengan ketelitian 0,05 kg, timbangan analitik dengan ketelitian 0,001 kg serta seperangkat alat analisis kadar air dan kadar abu. Metode penelitian yang digunakan adalah eksperimen secara *in vivo* dengan Rancangan Acak Lengkap (RAL) menggunakan 3 perlakuan dan 6 ulangan. Perlakuan terdiri atas R0 : kontrol (pakan basal) ; R1 : pakan basal + 250 ppm tepung bawang putih ; R2 : pakan basal + 250 ppm tepung bawang putih + 40 ppm Zn Lysinat + 0,75 ppm Cr Organik.

Hasil penelitian menunjukkan bahwa kecernaan bahan kering (BK) sapi Madura dengan perlakuan R0, R1 dan R2 masing-masing sebesar $55,05 \pm 8,77$; $58,42 \pm 5,63$ dan $57,94 \pm 8,68$. Rataan kecernaan bahan organik (BO) perlakuan R0, R1 dan R2 masing-masing $41,57 \pm 11,03$; $47,82 \pm 7,37$ dan $47,10 \pm 10,56$. Suplementasi tepung bawang putih dan mineral organik Cr dan Zn lysinat pada pakan sapi potong mampu meningkatkan kecernaan bahan kering sebesar 5,24 – 6,12 %, sementara kecernaan bahan organik sebesar 13,30 – 15,03 % dari pakan kontrol.

Kata kunci : bawang putih, *Allium sativum*, Zn lysinat, Cr organik, kecernaan bahan kering, kecernaan bahan organik, sapi Madura.

SUMMARY

NURONIYAH MAULANI. The study entitled Supplementation of Garlic Powder and Organic Minerals (Cr and Zn Lysinate) for Dry Matter and Organic Matter Digestibility, in Madura Cattle's Feed. The study aims to assess the amount of dry matter and organic matter intake of Madura's cattle feed that was supplemented with garlic powder (*Allium sativum*) and organic minerals (Zn-Lysinate and Cr Organic). The study was conducted on April 28th to September 23rd 2018 at Dawuhan Multifarm, Kedungbanteng, Banyumas and Laboratory of Animal Feedstuff Science, Faculty of Animal Science, Jenderal Soedirman University, Purwokerto, Central Java. Materials used on this study are 18 Madura's cattle with an average initial weight of 253 ± 18.97 kg, feed consisting of 25% hay, 25% fodder by product and 50% concentrate, drinking water, organic chromium 0.75 ppm, zinc-lysinate 40 ppm, garlic powder (*Allium sativum*) 250 ppm, bucket, analytical scales with accuracy of 0.05 kg, analytical scales with accuracy of 0.001 kg and a set of water content and ash content analysis tools. The study method was used an experiment *in vivo* with a completely randomized design (CRD) using 3 treatments and 6 replicates. Treatment consists of R0: control (basal feed); R1: basal feed + 250 ppm garlic powder; R2: basal feed + 250 ppm garlic powder + 40 ppm Zn-Lysinate + 0.75 ppm Cr Organic.

The results showed that the dry matter digestibility (DMD) of Madura's cattle with treatments R0, R1 and R2 were $55.05 \pm 8.77\%$; $58.42 \pm 5.63\%$ dan $57.94 \pm 8.68\%$. The result of organic matter digestibility (OMD) treatments R0, R1 and R2 were $41.57 \pm 11.03\%$; $47.82 \pm 7.37\%$ dan $47.10 \pm 10.56\%$. Supplementation of garlic powder and organic minerals (Zn-lysinate and Cr organic) increase dry matter digestibility (DMD) 5.24 – 6.12 %, while organic matter digestibility (OMD) 13.30 – 15.03 % respectively.

Keywords: garlic powder, *Allium sativum*, Zn-lysinate, Cr organic, dry matter digestibility (DMD), organic matter digestibility (OMD), Madura cattle