

ABSTRAK

PENGARUH PENAMBAHAN TEPUNG BUNGKIL KEDELAI DAN MINERAL MIKRO ORGANIK (Zn dan Cr) TERHADAP KADAR VFA DAN NH₃ CAIRAN RUMEN KAMBING RAMBON JANTAN

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Penelitian ini bertujuan untuk mengetahui pengaruh serta perlakuan terbaik dalam ransum pada penambahan tepung bungkil kedelai dan mineral organik (Zn dan Cr) terhadap kadar *Volatile Fatty Acid* (VFA) dan amonia (NH₃) cairan rumen kambing rambon jantan. Penelitian ini dilaksanakan November 2022-Januari 2023 di Jurusan Peternakan, Fakultas Pertanian, Universitas Lampung. Penelitian ini dilakukan menggunakan Rancangan Acak Kelompok (RAK) yang terdiri dari 4 perlakuan dan 3 ulangan, dengan menggunakan 12 kambing rambon jantan. Perlakuan yang diberikan yaitu P1; ransum basal 100%, P2; 90% ransum basal + 10% tepung bungkil kedelai, dan P3; 100% ransum basal + mineral organik (Zn 40 ppm dan Cr 0,3 ppm), P4; 90% ransum basal + 10% tepung bungkil kedelai + mineral organik (Zn 40 ppm dan Cr 0,3 ppm). Variabel yang diamati meliputi kadar volatile fatty acid (VFA) dan amonia (NH₃) cairan rumen kambing rambon jantan. Data yang diperoleh dianalisis menggunakan Analisis Ragam pada taraf 5% dan dilanjutkan dengan uji lanjut Beda Nyata Terkecil (BNT). Hasil penelitian ini menunjukkan bahwa kadar *volatile fatty acid* (VFA) (P1: 62,44 mM; P2: 60,59 mM; P3: 80,82 mM; P4: 80,50 mM), kadar amonia (NH₃) (P1: 2,57mM; P2: 4,84 Mm; P3: 3,64 mM; P4: 3,83 mM) berpengaruh nyata ($P < 0,05$) diantara perlakuan (P1, P2, P3, dan P4). Pemberian ransum dengan tambahan mineral organik (Zn 40 ppm dan Cr 0,3 ppm) memberikan pengaruh terbaik ($P < 0,05$) terhadap kadar *volatille fatty acid* (VFA), dan pemberian ransum dengan tambahan tepung bungkil kedelai 10% dari ransum basal, memberikan pengaruh terbaik ($P < 0,05$) terhadap kadar amonia (NH₃) cairan rumen kambing rambon jantan.

Kata kunci: Amonia, Kambing Rambon jantan, Mineral Organik (Zn dan Cr), Tepung Bungkil Kedelai, dan *Volatile Fatty Acid*.

ABSTRACT

EFFECT OF ADDITION OF SOYABEAN MEAL AND MICRO ORGANIC MINERALS (Zn and Cr) ON VFA AND NH₃ LEVELS RUMEN FLUID OF MALE RAMBON GOAT

By

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This research aimed to determine the effect and the best treatment in the ration on the addition of soybean meal and organic minerals (Zn and Cr) on the levels of Volatile Fatty Acid (VFA) and ammonia (NH₃) of rumen fluid of male rambon goats. This research was conducted from November 2022 to January 2023 at the Department of Animal Husbandry, Faculty of Agriculture, University of Lampung. This study was conducted using a Randomized Group Design which consisted of 4 treatments and 3 replications, using 12 male rambon goats. The treatments provided were P1; 100% basal ration, P2; 90% basal ration + 10% soybean meal flour, and P3; 100% basal ration + organic minerals (Zn 40 ppm and Cr 0.3 ppm), P4; 90% basal ration + 10% soybean meal flour + organic minerals (Zn 40 ppm and Cr 0.3 ppm). Variables measured were volatile fatty acid (VFA) and ammonia (NH₃) levels in the rumen fluid of male rambon goats. The data obtained were analyzed using Analysis of Variance at the 5% level and continued by Least Significant Difference (BNT) further test. The results showed that volatile fatty acid (VFA) levels (P1: 62.44 mM; P2: 60.59 mM; P3: 80.82 mM; P4: 80.50 mM), ammonia (NH₃) levels (P1: 2.57 mM; P2: 4.84 mM; P3: 3.64 mM; P4: 3.83 mM) significantly influenced ($P < 0.05$) among treatments (P1, P2, P3, and P4). Giving rations with additional organic minerals (Zn 40 ppm and Cr 0.3 ppm) gave the best effect ($P < 0.05$) on volatile fatty acid (VFA) levels, and giving rations with additional soybean meal 10% of the basal ration, gave the best effect ($P < 0.05$) on ammonia levels (NH₃) of rumen fluid of male rambon goats.

Keywords: Ammonia, Male Rambon goats, Organic Minerals (Zn and Cr), Soybean meal and, Volatile Fatty Acid.