ABSTRAK

STATUS KALSIUM DAN MAGNESIUM SERUM PADA KAMBING KACANG BETINA (*Capra aegagrus hircus*) YANG TERINFEKSI NEMATODA GASTROINTESTINAL SECARA ALAMI

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Infestasi nematoda gastrointestinal pada kambing merupakan salah satu penyebab terjadinya defisiensi mineral. Penelitian ini bertujuan untuk mengkaji status kalsium (Ca) dan magnesium (Mg) serum pada kambing Kacang betina yang terinfeksi cacing nematoda gastrointestinal. Sepuluh kambing Kacang betina dengan rata-rata *Body Condition Score (BCS)* 1-1,5 dibagi menjadi dua kelompok, lima kambing Kacang terinfeksi nematoda gastrointestinal secara alami dan lima kambing Kacang tidak terinfeksi sebagai kontrol. Kambing dipelihara selama satu bulan dalam kandang individu. Hewan diberi pakan jerami kangkung. Air minum disediakan secara *ad libitum*. Pengambilan sampel feses dan sampel darah dilakukan pada minggu keempat sebelum kambing diberi pakan di pagi hari. Sampel feses digunakan untuk pemeriksaan parasitologik, sementara sampel darah diambil sebanyak 3 ml melalui vena jugularis untuk pemeriksaan makromineral. Kadar kalsium dan magnesium di dalam serum darah dianalisis menggunakan *automated blood chemistry analyzer*. Hasil penelitian menunjukkan bahwa kadar Ca dan Mg serum pada kelompok kambing Kacang betina yang terinfeksi cacingan masing-masing sebesar 2,28±0,05 mmol/L dan 2,48±0,08 mg/dL, dan secara signifikan lebih rendah dibanding kadar Ca dan Mg kelompok kontrol yaitu 2,59±0,03 mmol/L dan 2,83±0,12 mg/dL ($P<0,05$). Dapat disimpulkan bahwa infeksi nematoda gastrointestinal berpotensi mengganggu metabolisme Ca dan Mg pada kambing Kacang.

Kata kunci: *kalsium, kambing Kacang, nematoda gastrointestinal, magnesium, serum*

ABSTRACT

SERUM CALCIUM AND MAGNESIUM STATUS OF FEMALE KACANG GOATS (*Capra aegagrus* hircus) NATURALLY INFECTED WITH GASTROINTESTINAL NEMATODES

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Gastrointestinal nematodes infection is one of the causing factors of macromineral deficiency on goats. The aim of this study was to investigate the serum calcium (Ca) and magnesium (Mg) status of female Kacang goats naturally infected with gastrointestinal nematodes. Ten female Kacang goats with the body condition score 1-1,5 were divided into two groups, five goats were naturally infected by gastrointestinal nematodes and the other five goats were not infected as the control group. All goats were kept in individual cages for a month and fed with kangkong hay. Water were provided ad libitum throughout the study. Faeces and blood samples were taken in the fourth week before the goats were fed in the morning. Faeces samples were collected for parasitological examination, meanwhile the blood samples of 3 ml were collected from the jugular vein for blood chemistry analyses. The serum concentration of Ca and Mg were analyzed using automated blood chemistry analyzer. The results showed that the serum concentration of Ca and Mg of the infected goats were 2.28±0.05 mmol/L and 2.48±0.08 mg/dL and therefore significantly lower than those of the uninfected goats i.e. 2.59±0.03 mmol/L and 2,83±0,12 mg/dL ($P<0,05$). It could be concluded that gastrointestinal nematodes could potentially disrupted Ca and Mg metabolisms in goats.

Keywords: *calcium, gastrointestinal nematode, Kacang goat, magnesium, serum*