INTISARI

PENGARUH PERUBAHAN ASUPAN PAKAN TERHADAP KADAR KALSIUM DARAH PADA KAMBING PERANAKAN ETTAWA (PE) JANTAN

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Penelitian ini bertujuan untuk mengetahui pengaruh perubahan asupan pakan terhadap kadar kalsium darah pada kambing Peranakan Ettawa (PE) Jantan. Sebanyak empat ekor kambing peranakan jantan yang berusia rata-rata 1 tahun dan secara klinis sehat digunakan dalam penelitian ini. Kambing dipelihara pada kandang panggung individual yang bertempat di Fakultas Peternakan Universitas Gadjah Mada. Penelitian berlangsung selama tiga periode yaitu periode I (*fullfeeding*) dengan pemberian pakan secara *ad libitum* selama 36 hari, periode II (*restriction*) dengan penurunan jumlah pakan 50% dari *maintenance* selama 32 hari dan periode III (*refeeding*) yaitu pemberian pakan kembali secara *adlibitum* selama 30 hari. Pemberian pakan dilakukan sehari dua kali pada pagi dan sore, kemudian jumlah pakan yang dikonsumsi dicatat setiap hari selama penelitian berlangsung. Pengambilan sample darah dilakukan pada setiap akhir periode dan dilanjutkan pemeriksaan kadar kalsium darah menggunakan alat *Ortho Analyse Chemistry* model *Synchron CX®* dan *CX Multi^{TM} calibator.*. Analisis statistik dilakukan dengan metode ANOVA dan dilanjutkan dengan uji berjarak *Duncan*, serta analisis regresi dan korelasi digunakan untuk mengetahui hubungan antara asupan pakan dengan kadar kalsium darah. Hasil penelitian menunjukkan bahwa pada periode I konsumsi bahan kering adalah 1.31± 0.14 kg/hari, kemudian mengalami penurunan pada periode II (0.66 ± 0.02 kg/hari) dan meningkat pada periode III (1.16 ± 0.09 kg/hari). Rata-rata kadar kalsium darah kambing PE pada periode I adalah 2.38 ± 0.07 mmol/L, kemudian mengalami penurunan secara signifikan pada periode II (2.13 ± 0.10 mmol/L) ($p<0.05$), dan kembali meningkat secara signifikan pada periode III (2.25 ± 0.04 mmol/L) ($p<0.05$). Analisis statistika menunjukkan ada hubungan yang nyata ($p<0.05$) antara konsumsi bahan kering dengan level kalsium darah kambing PE. Berdasarkan penelitian dapat disimpulkan bahwa penurunan jumlah asupan pakan yang menyebabkan penurunan *intake* kalsium, mengakibatkan turunnya kadar kalsium darah mendekati batas bawah normal kadar kalsium darah kambing tersebut, kemudian level kalsium darah meningkat seiring dengan peningkatan konsumsi bahan kering dan *intake* kalsium.

Kata kunci: *asupan pakan, intake Ca, kambing PE jantan, level kalsium darah, restriction*

ABSTRACT

EFFECT OF CHANGES IN FEED INTAKE ON BLOOD CALCIUM LEVELS OF PERANAKAN ETTAWA (PE) GOAT MALE

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The study aims to determine the effect of changes in amount of feed intake on blood calcium levels in male Peranakan Ettawa (PE) goat. The materials used were four healthy male PE goats aged average of one year. Goats kept on Slat System at Faculty of Animal Husbandry, Universitas Gadjah Mada. The study was divided in three periods, the first period (fullfeeding) that giving ad libitum feeding during 36 days, second period (restriction) that reducing volume of feed until 50% on maintenance during 32 days, and third period (refeeding) that feeding back the ad libitum during 30 days. Feeding twice a day in the morning and afternoon, and the amount of feed consumpted that noting everyday on researching. Blood sampling taken at the end of each period and use *Ortho Analyse Chemistry* model *Synchron CX®* and *CX Multi^{TM} calibrator* to examine the blood calcium. Statistic use ANOVA and *Duncan* test. *Regresion and Korelation test* used to know the relation of feed intake on blood calcium level. The results of this study showed that in the first period consumption of dry matter was 1.31 ± 0.14 kg/day, then decreased in period II (0.66 ± 0.02 kg/day) and increased in period III (1.16 ± 0.09 kg/day). Average goat blood calcium levels in the first period was 2.38 ± 0.07 mmol/L, and then decreased significantly in period II (2.13 ± 0.10 mmol/L) ($p<0.05$), and increased again significantly in period III (2.25 ± 0.04 mmol/L) ($p<0.05$). Based on statistical analysis there is significant in *corelation test* ($p<0.05$) between consumption of dry matter with goat blood calcium levels. Based on the research can be concluded that the decrease in feed intake value was due to decrease on calcium intake, and was due to the reduction in calcium serum, but decrease was not over threshold of normal goat blood calcium levels. then the blood calcium level increases with increased consumption of dry matter.

Keywords : feed intake, Ca intake, PE goat male, blood calcium levels, restriction