

NITROGEN BALANCE OF MERINO SHEEP WITH FORAGE AND CONCENTRATE RATIO

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ABSTRACT

This research was aimed to find out the nitrogen balance of Merino sheep fed with different forage and concentrate ratio. Twelve males of Merino sheep were used. King grass as forage and wheat pollard for concentrate. Sheep were divided into three treatments, namely 80 forage : 20 concentrate, 70 forage : 30 concentrate, and 60 forage : 40 concentrate. The adaptation period was conducted in two weeks and one week after that is the collection period. The given and its refusal feed was weighed and stored as a sample as well as excreted urine and feces. Samples were analyzed with Kjeldahl method for nitrogen levels. The variables are N consumption, fecal N excretion, N digestibility, and urinary N excretion. The data results were analyzed using One-Way ANOVA. The results showed significance difference in nitrogen consumption and urinary nitrogen excretion, which is described from increase in metabolical body weight, as increase of percentage of concentrate ratio ($P < 0,05$), while nitrogen consumption, fecal nitrogen excretion, and nitrogen digestibility are not significantly different.. In conclusion, the best percentage of forage and concentrate ratio for Merino sheep is 80 : 20.

Keywords: Merino sheep, nitrogen balance, forage, and concentrate ratio.