

**PENGARUH PENAMBAHAN BUNGKIL JINTAN HITAM  
(*Nigella sativa* L.) DALAM PAKAN TERHADAP  
KESEIMBANGAN NITROGEN  
PADA DOMBA MERINO**

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**INTISARI**

Penelitian ini bertujuan untuk mengetahui dan mengkaji pengaruh penambahan bungkil jintan hitam dalam pakan terhadap keseimbangan nitrogen domba Merino. Penelitian ini menggunakan 12 ekor domba Merino jantan, umur antara 10 hingga 12 bulan, berat badan berkisar 29 hingga 35 kg. Pakan yang diberikan adalah rumput raja dan *pollard* dengan perbandingan 70:30. Perlakuan dalam penelitian ini yaitu penambahan saponin dari bungkil jintan hitam sebanyak 0%, 0,0275% dan 0,055% dari BK pakan. Penelitian dilakukan dalam dua periode yaitu periode adaptasi selama 14 hari, dan periode koleksi selama 7 hari. Sampel pakan pemberian, pakan sisa, dan feses dianalisis bahan kering dan protein kasar, sedangkan sampel urin dianalisis kadar nitrogen menggunakan metode Kjeldahl. Data yang diperoleh dianalisis variansi pola searah. Hasil penelitian menunjukkan bahwa tidak terdapat perbedaan yang nyata di tingkat konsumsi nitrogen, ekskresi nitrogen feses, nitrogen tercerna, ekskresi nitrogen urin, dan keseimbangan nitrogen. Domba Merino yang diberi penambahan saponin sebanyak 0%, 0,0275% dan 0,055% terhadap konsumsi nitrogen berturut-turut 1,45; 1,41; dan 1,37g/W<sup>0,75</sup>/hari. Persentase ekskresi nitrogen feses terhadap konsumsi nitrogen berturut-turut 0,33; 0,36; dan 0,38%/W<sup>0,75</sup>/hari. Persentase nitrogen tercerna terhadap konsumsi nitrogen berturut-turut 0,33; 0,36; dan 0,38%/W<sup>0,75</sup>/hari. Persentase ekskresi nitrogen urin terhadap konsumsi nitrogen berturut-turut 0,15; 0,16; dan 0,16%/W<sup>0,75</sup>/hari. Persentase keseimbangan nitrogen terhadap konsumsi nitrogen berturut-turut 66,88; 63,27; dan 59,78%/W<sup>0,75</sup>/hari. Berdasarkan hasil penelitian ini dapat disimpulkan bahwa penambahan saponin dari bungkil jintan hitam dalam pakan hingga 0,055% BK pakan tidak berdampak positif terhadap keseimbangan nitrogen domba Merino.

(Kata kunci: Domba Merino, Bungkil Jintan Hitam, Keseimbangan Nitrogen)

## EFFECT OF BLACK CUMIN MEAL (*Nigella sativa* L.) ADDITION IN FEED ON NITROGEN BALANCE OF MERINO SHEEP

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### ABSTRACT

The aim of this research was to determine the effect of black cumin meal addition in feed on nitrogen balance of Merino sheep. The animal used were 12 males Merino sheep, the age was between 10 to 12 months old, the live weight was between 29 kg to 35 kg. Feedstuff used were king grass and pollard with 70:30 in ratio. The treatment in this study was the addition of saponin of black cumin meal as much as 0%, 0,0275 % and 0,055% of feed dry weight. The study was conducted in two periods, namely the adaptation period for 14 days, and the collection period for 7 days. The given feed and its refusal, and excreted feces samples were analyzed for dry matter and crude protein content, while urine samples were analyzed for nitrogen levels according to Kjeldahl method. The data obtained were analyzed using the One-way. The results showed that there were no significant differences in nitrogen consumption, fecal nitrogen excretion, nitrogen digestibility, urinary nitrogen excretion, and nitrogen retention. Nitrogen consumption of control, 0,0275% and 0,055% of saponin added treatment group were 1,45; 1,41; and 1,37g/W<sup>0,75</sup>/day respectively. Percentage of fecal nitrogen excretion to nitrogen consumption were 0,33; 0,36; and 0,38%/W<sup>0,75</sup>/day respectively. Percentage of nitrogen digestibility to nitrogen consumption were 0,33; 0,36; and 0,38%/W<sup>0,75</sup>/day respectively. Percentage of urinary nitrogen excretion to nitrogen consumption were 0,15; 0,16; and 0,16%/W<sup>0,75</sup>/day respectively. Percentage of nitrogen retention to nitrogen consumption were 66,88; 63,27; and 59,78%/W<sup>0,75</sup>/day respectively. Based on the results it could be concluded that the addition of saponin of black cumin meal until 0,055% of feed dry weight does not affect the nitrogen balance of Merino positively.

(Key Words: Merino Sheep, Black Cumin Meal, Nitrogen Balance)