

RINGKASAN

KHARISMA NUR KHASANA. Penelitian berjudul “Penambahan Sulfur dalam Fementasi Onggok Sebagai Upaya Meningkatkan Kecernaan Protein dan Serat Kasar Pakan Kambing Secara *In Vitro*”. Penelitian bertujuan mengkaji pengaruh penambahan sulfur dalam fermentasi onggok terhadap kecernaan protein dan serat kasar pakan kambing. Penelitian dilaksanakan di Laboratorium Ilmu Nutrisi dan Makanan Ternak Fakultas Peternakan Universitas Jenderal Soedirman, Purwokerto mulai tanggal 27 Desember 2016 sampai 25 Januari 2017.

Materi penelitian adalah cairan rumen kambing Jawa Randu jantan sebanyak 3 ekor yang diambil di Rumah Pemotongan Hewan (RPH) Sokaraja. Perlakuan yang diberikan yaitu P_0 = Pakan yang mengandung onggok tidak difermentasi, P_1 = Pakan yang mengandung onggok fermentasi tanpa ditambah sulfur (0%), P_2 = Pakan yang mengandung onggok fermentasi ditambah sulfur 0,2%, dan P_3 = Pakan yang mengandung onggok fermentasi ditambah sulfur 0,4%. Metode penelitian yang digunakan adalah eksperimental *in vitro*, menggunakan Rancangan Acak Lengkap. Data yang diperoleh dianalisis variansi dan dilakukan uji beda nyata jujur (BNJ).

Hasil penelitian menunjukkan bahwa semakin tinggi taraf sulfur dalam fermentasi onggok kecernaan protein kasar semakin meningkat ($P < 0,05$) tetapi kecernaan serat kasar semakin menurun. Kecernaan protein kasar berkisar antara $25,80 \pm 6,25$ (P_0) sampai $37,93 \pm 6,66$ (P_3), sedangkan kecernaan serat kasar berkisar antara $44,22 \pm 4,85$ (P_3) sampai $53,85 \pm 2,26$ (P_0).

Penggunaan onggok fermentasi yang ditambah dengan 0,4 % sulfur mampu meningkatkan kecernaan protein namun menurunkan kecernaan serat kasar pakan kambing. Disarankan untuk meningkatkan kecernaan protein kasar pada pakan kambing yang diberikan perlu penambahan onggok fermentasi yang ditambah 0,4% sulfur, sedangkan untuk mendapatkan kecernaan serat kasar yang tinggi tidak perlu perlakuan fermentasi maupun penambahan sulfur

Kata kunci : Onggok fermentasi, sulfur, kecernaan, kambing.

SUMMARY

Kharisma Nur Khasana. A study, entitled "Supplementation of Sulphur in Cassava by Product Fermentation to Increase Protein and Crude Fiber Digestibility Goat Ration by In Vitro Method". This experimental study was conducted to investigate the effect of adding sulphur in the fermentation of cassava by product on the digestibility of protein and crude fiber feed for goats. The research was conducted at the Laboratory of Nutrition and Feed Sciences, Faculty of Animal Science, Jenderal Soedirman University, Purwokerto start from December 27th 2016 until January 25rd 2017.

The materials in this experiment were rumen fluids of 3 male Jawa Randu goats from Slaughter House of Sokaraja taken immediately after being slaughtered. The treatments consisted of P₀ = Feed containing unfermented cassava by product, P₁ = Feed containing fermented cassava by product without sulphur addition (0%), P₂ = Feed containing fermented cassava by product + sulphur 0,2%, dan P₃ = Feed containing fermented cassava by product + sulphur 0,4%. The experiment used in vitro method, was designed with Completely Randomized Design. The data were analyzed variance and do a further test of honestly significant difference.

The results showed that the higher level of sulphur in fermentation cassava by product increasing digestibility of crude protein ($P < 0,05$), but the crude fiber digestibility decreases. Digestibility of crude protein ranged from $25,80 \pm 6,25$ (P₀) to $37,93 \pm 6,66$ (P₃), while the crude fiber digestibility ranged from $44,22 \pm 4,85$ (P₃) to $53,85 \pm 2,26$ (P₀).

The use of fermented cassava by product which added 0,4% sulfur can improve the digestibility of protein but decreased digestibility of crude fiber feed for goats. It is advisable to improve the digestibility of crude protein in the feed given goats need additional fermented cassava by product which added 0.4% sulfur, whereas to obtain a high digestibility of crude fiber, do not need sulphur supplementation.

Keywords : Cassava by product, fermentation, sulfur, digestibility, goat.