PENGARUH PEMUPUKAN NITROGEN PADA RUMPUT RAJA TERHADAP KONSUMSI, KECERNAAN DAN NERACA NITROGEN PADA SAPI PERANAKAN FRIESIAN HOLSTEIN

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Intisari

Penelitian ini bertujuan untuk mengetahui pengaruh aras pemupukan nitrogen pada rumput Raja terhadap konsumsi, kecernaan nutrien dan neraca Nitrogen (N) pada sapi peranakan Friesian Holstein (PFH). Tiga ekor sapi PFH kering diberi tiga macam pakan rumput Raja dengan aras pemupukan N yang berbeda. Pakan I terdiri 70% rumput Raja dengan aras pemupukan 100 kg N/ha/th + 30% konsentrat (N_{100}), pakan II terdiri 70% rumput Raja dengan aras pemupukan 200 kg N/ha/th + 30% konsentrat (N_{200}), pakan III terdiri 70% rumput Raja dengan aras pemupukan 400 kg N/ha/th + 30% konsentrat (N_{400}). Air minum diberikan secara *ad libitum*. Pakan diberikan dua kali sehari yaitu pukul 08.00 dan 16.00. Data yang diperoleh dianalisis variansi dengan rancangan *Latin Square* dan dilanjutkan dengan uji DMRT. Hasil penelitian menunjukkan bahwa perlakuan pakan N_{100}, N_{200} dan N_{400} menampakkan pengaruh yang nyata ($P < 0.00$) terhadap konsumsi BK, BO dan PK, sedangkan pada konsumsi NDF dan ADF tidak menunjukkan pengaruh yang nyata. Kecernaan BK, BO, NDF dan ADF tidak terdapat perbedaan yang nyata antar perlakuan, tetapi untuk kecernaan PK terdapat perbedaan ($P < 0,05$). Retensi N dan N feces tidak menunjukkan perbedaan yang nyata, sedangkan pada N urine terdapat perbedaan yang nyata ($P < 0,05$). Pemupukan 200 kg N/ha/th ternyata memberikan konsumsi dan kecernaan terbaik. Dengan demikian dari penelitian yang dilakukan dapat disimpulkan bahwa pemupukan 200 kg N/ha/th pada rumput Raja paling efisien pemanfaatannya oleh ternak dibanding 100 dan 400 kg N/ha/th.

Kata Kunci : Sapi PFH, Neraca Nitrogen, Kecernaan, Konsumsi, Rumput Raja, Pupuk Nitrogen.

THE EFFECT NITROGEN FERTILIZER OF KING GRASS ON THE CONSUMPTION, DIGESTIBILITY AND NITROGEN BALANCE ON FRIESIAN HOLSTEIN GRADE

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Abstract

This study was conducted to determine the effect of nitrogen (N) fertilizer levels of King grass to consumption, digestibility and balance of nitrogen on Friesian Holstein grade. Three dry Friesian Holstein grade dairy cattle were fed with three kinds of King grass fertilized with three levels of nitrogen. Ration I consisted of 70% King grass with nitrogen fertilizer level of 100 kg N/ha/year + 30% concentrate (N100), ration II consisted of 70% King grass with nitrogen fertilizer level of 200 kg N/ha/year + 30% concentrate (N200), and ration III consisted of 70% King grass with nitrogen fertilizer level of 400 kg N/ha/year + 30% concentrate (N400). Water was given *ad libitum.* Feeds distributed twice a day at 08.00 and 16.00. Data obtained from this study were analysed with *Latin square method*, continued with *Duncan's Multiple Range Test.* The results showed that there were significant effect (P < .05) of feeds on consumption of DM, OM and CP, but there were no significant effect on consumption of NDF and ADF. There were no significant effect of fertilizer levels on the DM, OM, NDF and ADF digestibility, but there were significant (P < .05) on CP digestibility. There were no significant effect on nitrogen retention and nitrogen excreted in feces, but there were significant effect on nitrogen excretion by urine (P < .05). Fertilizing of 200 kg N/ha/year gave the best consumption and digestibility values, so the study was concluded that fertilizer level of 200 kg N/ha/year on King grass gave the best efficiency for dairy cattle.

Key Words : Dairy Cattle, Nitrogen Balance, Digetibility, Consumption, King Grass, Nitrogen fertilizer.