

**PENGARUH TINGKAT UNDEGRADED PROTEIN DAN TINGKAT ENERGI
TERHADAP KONSUMSI DAN KECERNAAN NUTRIEN PADA SAPI PERAH
PERANAKAN FRIESIAN HOLSTEIN**

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh tingkat *undegraded protein* (UDP) dan tingkat energi (tinggi 1,2 dan rendah 0,7 kebutuhan) terhadap konsumsi dan pencernaan nutrisi pada sapi perah Peranakan Friesian Holstein (PFH). Empat ekor sapi PFH berfistula diberi empat macam ransum (R1 = UDP 20 + 0,7; R2 = UDP 20 + 1,2; R3 = UDP 30 + 0,7; R4 = UDP 30 + 1,2) dengan menggunakan rancangan *latin square* 4 x 4 dan air diberikan secara *ad libitum*. Variabel yang diamati meliputi konsumsi dan pencernaan bahan kering dan nutrisi (BK, BO, PK, NDF dan ADF). Data yang diperoleh dianalisis variansi dan dilanjutkan uji orthogonal kontras. Hasil penelitian menunjukkan bahwa konsumsi BK, BO, PK, NDF dan ADF berbeda tidak nyata pada kedua tingkat UDP (20 vs 30) sedangkan pada tingkat energi 1,2 konsumsi BK, BO, PK, NDF dan ADF nyata ($P < 0,01$) lebih tinggi dibandingkan tingkat energi 0,7. Pencernaan BK, BO, PK, NDF dan ADF pada kedua tingkat UDP berpengaruh tidak nyata sedangkan pencernaan BK dan BO nyata ($P < 0,05$) lebih tinggi pada tingkat energi 1,2 dibandingkan dengan tingkat energi 0,7 dan pencernaan PK, NDF dan ADF berbeda tidak nyata pada kedua tingkat energi. Dari hasil penelitian ini dapat disimpulkan bahwa tingkat UDP tidak berpengaruh pada konsumsi dan pencernaan BK, BO, PK, NDF dan ADF. Pencernaan BK dan BO pada tingkat energi 1,2 lebih tinggi dibandingkan tingkat energi 0,7 sedangkan pencernaan PK, NDF dan ADF berbeda tidak nyata.

Kata kunci : *Undegraded protein*, Energi, Konsumsi, Pencernaan, Sapi PFH

THE EFFECTS OF LEVELS OF UNDEGRADED PROTEIN AND LEVELS
OF ENERGY ON FEED INTAKE AND NUTRIENT DIGESTIBILITY IN
FRIESIAN HOLSTEIN CROSSBRED COWS

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Abstract

This research was conducted to study the effect of levels of undegraded protein (UDP) and levels of energy (high : 1,2 and low : 0,7) on feed intake and digestibility of nutrient in Friesian Holstein crossbred cows. Four fistulated cows were fed four diets (R1 = UDP 20 + 0,7; R2 = UDP 20 + 1,2; R3 = UDP 30 + 0,7; R4 = UDP 30 + 1,2) using latin square 4 x 4 design. Water was given ad libitum. Variables measured were feed intake and dry matter (DM), organic matter (OM) crude protein, neutral detergent fiber (NDF) and acid detergent fiber (ADF) digestibility. All data were analyzed of variance, followed by orthogonal contrast. The results indicated that DM, OM, CP, NDF and ADF feed intake were not significantly affected by levels of UDP (20 vs 30), whereas at levels of energy 1.2, DM, OM, CP, NDF and ADF feed intake were significantly higher ($P < 0.01$) compared with that on levels of energy 0.7. Digestibility of DM, OM, CP, NDF and ADF on levels of UDP are not significantly, but DM and OM digestibility are significantly ($P < 0.05$) higher energy for level of 1.2 compared with 0.7 and digestibility CP, NDF and ADF were not significantly different on both energy level. It could be concluded that level of UDP have not affect on feed intake and digestibility of DM, OM, CP, NDF and ADF. Digestibility of DM and OM on energy level of 1.2 was higher compared to energy level of 0.7 and digestibility of CP, NDF and ADF were not significantly different.

Key words : Undegraded protein, Energy, Feed intake, Digestibility, Friesian Holstein Crossbred Cows