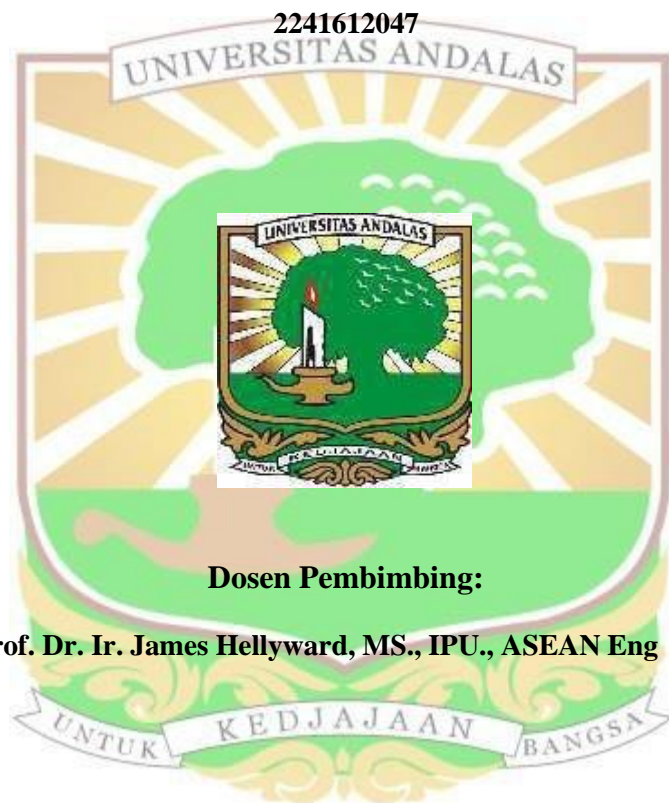


**TEKNOLOGI PAKAN TERNAK BERBASIS *INDIGOFERA*
ZOLLINGERIANA TERHADAP NILAI GIZI PADA KAMBING
PERANAKAN ETAWAH SECARA *IN VIVO***

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TEKNOLOGI PAKAN TERNAK BERBASIS *INDIGOFERA ZOLLINGERIANA* TERHADAP NILAI GIZI PADA KAMBING PERANAKAN ETAWAH SECARA *IN VIVO*

Evitayani & James Hellyward

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh level pemberian *Indigofera zollingeriana* terbaik sebagai pengganti konsentrat dalam ransum yang ditinjau dari ketersediaan mineral Kalsium (Ca), Fosfor (P), Magnesium (Mg), dan Sulfur (S) serta pencernaan fraksi serat (NDF, ADF, Selulosa dan hemiselulosa) pada kambing Peranakan Etawa. Penelitian ini dilakukan secara eksperimen menggunakan Rancangan Acak Kelompok (RAK) dengan 3 perlakuan dan 4 kelompok sebagai ulangan. Perlakuan yang diuji adalah (P1): 60% rumput lapangan + 10% *Indigofera zollingeriana* + 30% konsentrat, (P2): 60% rumput lapangan + 20% *Indigofera zollingeriana* + 20% konsentrat dan (P3): 60% rumput lapangan + 30% *Indigofera zollingeriana* + 10% konsentrat. Peubah yang diamati adalah ketersediaan mineral Ca, P, Mg dan S. Hasil penelitian menunjukkan bahwa penggantian konsentrat dengan *Indigofera zollingeriana* memberikan pengaruh yang berbeda tidak nyata ($P > 0,05$) terhadap ketersediaan mineral Ca, P dan S, tetapi berpengaruh sangat nyata ($P < 0,01$) terhadap ketersediaan mineral Mg serta memberikan pengaruh tidak nyata ($P > 0,05$) dengan pencernaan NDF, ADF, selulosa dan hemiselulosa. Rataan ketersediaan mineral Ca yaitu berkisar antara 90,81%-92,12%, mineral P antara 75,39%-79,29%, mineral Mg berkisar antara 68,84%-82,55%, dan mineral S antara 95,51%-96,30% serta dengan pencernaan NDF, ADF, selulosa dan hemiselulosa masing-masing adalah 71,55 – 68,15%, 56,06% – 50,59, 75,41% – 72,38%, 91,15 – 92,57%. Dari hasil penelitian dapat disimpulkan bahwa penggantian konsentrat dalam ransum dengan *Indigofera zollingeriana* sampai 30% dapat mempertahankan ketersediaan mineral Kalsium (Ca), Fosfor (P) dan Sulfur (S), tetapi menurunkan ketersediaan mineral Magnesium (Mg). Serta pencernaan NDF, ADF, selulosa dan Hemiselulosa Secara umum, *Indigofera zollingeriana* dapat digunakan hingga 30% untuk menggantikan konsentrat di dalam ransum.

Kata kunci - *Indigofera zollingeriana*, kambing PE, ketersediaan mineral (Ca, P, Mg dan S), Kecernaan Fraksi Serat (NDF, ADF, Selulosa dan Hemiselulosa)

INDIGOFERA ZOLLINGERIANA BASED ANIMAL FEED TECHNOLOGY ON NUTRITIONAL VALUE OF IN VIVO ETAWAH GOATS

Evitayani & James Hellyward

ABSTRACT

This study aims to determine the effect of the best level of *Indigofera zollingeriana* as a substitute for concentrate in rations in terms of the availability of the minerals Calcium (Ca), Phosphorus (P), Magnesium (Mg), and Sulfur (S) as well as the digestibility of the fiber fraction (NDF, ADF, Cellulose and hemicellulose) in Etawa Peranakan goats. This research was conducted experimentally using a randomized block design (RBD) with 3 treatments and 4 groups as replications. The treatments tested were (P1): 60% field grass + 10% *Indigofera zollingeriana* + 30% concentrate, (P2): 60% field grass + 20% *Indigofera zollingeriana* + 20% concentrate and (P3): 60% field grass + 30% *Indigofera zollingeriana* + 10% concentrate. The observed variables were the availability of minerals Ca, P, Mg and S. The results showed that replacing concentrate with *Indigofera zollingeriana* had an effect that was not significantly different ($P > 0.05$) on the availability of minerals Ca, P and S, but had a very significant effect ($P < 0.01$) on the availability of Mg minerals and had no significant effect ($P > 0.05$) on the digestibility of NDF, ADF, cellulose and hemicellulose. between 75.39%-79.29%, Mg minerals ranged from 68.84%-82.55%, and S minerals between 95.51%-96.30% and with the digestibility of NDF, ADF, cellulose and hemicellulose respectively respectively are 71.55 – 68.15%, 56.06% – 50.59, 75.41% – 72.38%, 91.15 – 92.57%. From the results of this study it can be concluded that the replacement of concentrate in the ration with *Indigofera zollingeriana* up to 30% can maintain the availability of the minerals Calcium (Ca), Phosphorus (P) and Sulfur (S), but reduces the availability of the mineral Magnesium (Mg). As well as the digestibility of NDF, ADF, cellulose and hemicellulose. In general, *Indigofera zollingeriana* can be used up to 30% to replace concentrate in rations.

Keywords – *Indigofera zollingeriana*, PE goat, availability of minerals (Ca, P, Mg and S), Digestibility of Fiber Fractions (NDF, ADF, Cellulose and Hemicellulose)