

## **PENGARUH PENAMBAHAN MINYAK ATSIRI PALA DALAM PAKAN TERHADAP KECERNAAN NUTRIEN, RETENSI NITROGEN DAN PRODUKSI AMONIA EKSKRETA AYAM BROILER**

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### **INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan minyak atsiri pala pada pakan ayam broiler terhadap kecernaan nutrien, retensi nitrogen dan produksi amonia pada ekskreta. Bahan formulasi pakan yang digunakan yaitu jagung, *meat bone meal* (MBM), *soy bean meal* (SBM), *palm oil*, tepung batu, DCP, garam, L - *lysine* HCl (78%), DL - *Meth* (99%), L - *Threonine* (98,5%), sodium bicarbonate, trace mineral mix, choline-Cl 60% dan vitamin mix. Penelitian ini terdiri dari 4 perlakuan dengan penambahan minyak atsiri buah pala. Dengan level 300 ppm dan 600 ppm, setiap perlakuan terdiri dari 5 ulangan dan setiap ulangan terdiri dari 8 ayam dengan perlakuan formulasi pakan + 0% minyak atsiri pala; + 0,25% antibiotik; + 0,03% minyak atsiri pala; + 0,06% minyak atsiri pala dengan 5 ulangan. Masing-masing ulangan diambil 5 sampel ekskreta setelah ayam berumur empat minggu. Variable yang diamati yaitu retensi nitrogen, kecernaan nutrien dan produksi amonia pada ekskreta ayam. Data yang diperoleh dianalisis variansi pola searah, jika terdapat perbedaan nyata antar perlakuan dilanjutkan dengan uji *Duncan's Multiple Range Test* (DMRT). Hasil analisis statistik pada pakan ayam broiler dengan penambahan minyak atsiri pala tidak berpengaruh nyata terhadap kecernaan nutrien ( $P > 0,05$ ). Penambahan minyak atsiri pala tidak berpengaruh nyata terhadap retensi nitrogen ( $P > 0,05$ ). Penambahan minyak atsiri pala berpengaruh nyata terhadap produksi amonia ekskreta ( $P < 0,05$ ) produksi amonia ekskreta menurun seiring dengan peningkatan level minyak atsiri pala. Kesimpulan dari penelitian ini adalah penambahan minyak atsiri pala tidak berpengaruh terhadap kecernaan nutrien dan retensi nitrogen, tetapi mampu menurunkan produksi amonia ekskreta ayam. Level penambahan minyak atsiri pala 0,03% mampu menurunkan kadar amonia ekskreta.

(Kata kunci: Minyak atsiri pala, kecernaan nutrien, retensi nitrogen, amonia)

**EFFECT OF NUTMEG ESSENTIAL OIL IN FEED ON NUTRIENT  
DIGESTIBILITY, NITROGEN RETENTION AND AMMONIA  
PRODUCTION IN EXCRETA OF BROILER**

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**ABSTRACT**

This study aims to determine the effect of nutmeg essential oil in broiler chicken feed on nutrient digestibility, nitrogen retention and ammonia production in excreta of broiler. The feed formulations used were corn, meat bone meal (MBM), soy bean meal (SBM), palm oil, stone flour, DCP, salt, L - lysine HCl (78%), DL - Meth (99%), L - Thereonine (98.5%), sodium bicarbonate, trace mineral mix, choline-Cl 60% and vitamin mix. This study consisted of 4 treatments with the addition of nutmeg essential oil, with a level of 300 ppm and 600 ppm, each treatment consisted of 5 replications and each replication consisted of 8 chicken with feed formulation treatment + 0% nutmeg essential oil; + 0,25% antibiotics; + 0,03% nutmeg essential oil; + 0,06% nutmeg essential oil with 5 replications. Data collected was analysis each replication, 5 excreta samples were taken after the chicken was four weeks old. The observed variables were nitrogen retention, nutrient digestibility and ammonia production in chicken excreta. The data obtained were analyzed for unidirectional pattern variance, if there were significant differences between treatments, it was continued with Duncan's Multiple Range Test (DMRT). The results of statistical analysis on broiler chicken feed with the addition of nutmeg essential oil had no significant affected nutrient digestibility ( $P>0.05$ ). The addition of nutmeg essential oil had no significant effect on nitrogen retention ( $P>0.05$ ). The addition of nutmeg essential oil had a significant effect on the production of ammonia excreta ( $P<0.05$ ). The production of ammonia excreta decreased along with the increase in the level of nutmeg essential oil. The conclusion of this study is that the addition of nutmeg essential oil has no effect on nutrient digestibility and nitrogen retention, but can reduce the production of ammonia excreta. The level of addition of 0.03% nutmeg essential oil was able to reduce the level of ammonia excreta.

(Key words: Nutmeg essential oil, nutrient digestibility, nitrogen retention, ammonia)