

EVALUASI PENGGUNAAN *DEAD POULTRY MEAL* DALAM *DRY FOOD*
TERHADAP KONSUMSI, EKSKRESI, DAN *NITROGEN BALANCE*
KUCING DOMESTIK JANTAN

INTISARI

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Penelitian ini bertujuan untuk mengevaluasi penggunaan *dead poultry meal* sebagai sumber protein terhadap konsumsi, ekskresi, dan *nitrogen balance* kucing domestik jantan. Tipe *dry food* sebagai perlakuan yaitu DF 0 (0% DPM), DF 1 (10% DPM), DF 2 (20% DPM), dan DF 3 (30% DPM). Penelitian menggunakan 8 kucing domestik jantan dengan desain *latin square* 4x4. Evaluasi pakan dilakukan dengan mengamati berbagai variabel yang berupa kualitas kimia dan fisik *dry food*, konsumsi, ekskresi, pencernaan, energi metabolis, *nitrogen balance*, berat badan akhir, *body condition score*, dan pengukuran morfometrik. Data kualitas kimia dan fisik *dry food* yang diperoleh dianalisis dengan *one way anova* dan data yang lainnya dianalisis dengan *general linear model univariate*. *Dead poultry meal* mengandung 56,56% protein kasar, 19,89% lemak kasar, 6,88% serat kasar, dan 8,86% abu. Penggunaan peningkatan *dead poultry meal* dalam *dry food* pada kucing domestik jantan dewasa tidak memberikan perbedaan nyata bahan kering *dry food* tetapi cenderung meningkatkan kandungan abu, lemak kasar, serat kasar, dan secara signifikan meningkatkan protein *dry food*. Penggunaan DPM dapat mempertahankan kualitas fisik yakni diameter, kekerasan, durabilitas *dry food*. Konsumsi dan pencernaan bahan kering, bahan organik serta energi *dry food* tidak terlihat perbedaan yang nyata begitu halnya dengan energi metabolis sehingga ekskresi feses tidak berbeda nyata walaupun karakteristik feses yang ditunjukkan dalam skor feses terlihat perbedaan. Konsumsi dan pencernaan protein meningkat ($P < 0,05$) dengan nilai pencernaan protein terendah pada DF 0 sebesar $71,31 \pm 3,36\%$, kemudian meningkat pada DF 1, DF 2, dan DF 3 dengan nilai masing-masing $78,89 \pm 5,48$, $78,35 \pm 3,49$, dan $81,40 \pm 1,24\%$. Peningkatan ini berpengaruh nyata ($P < 0,05$) pada peningkatan minum dan ekskresi urin. Peningkatan penggunaan *dead poultry meal* akhirnya mampu mempertahankan pemeliharaan kucing domestik jantan dewasa yang ditunjukkan oleh kestabilan berat badan dan *body condition score*, serta mampu meningkatkan *nitrogen balance* dimana nilai terendah DF 0 ($-0,28 \pm 0,33\%$), kemudian cenderung meningkat pada DF 1 ($0,00 \pm 0,38\%$) dan DF 2 ($0,26 \pm 0,49\%$), serta nilai tertinggi DF 3 ($0,50 \pm 0,55\%$). Hal ini didukung dengan perbedaan pada pengukuran morfometrik khususnya lingkaran dada dan kaki depan. Diantara DF lainnya DF 2 memiliki kualitas terbaik untuk menunjang fungsi pemeliharaan kucing.

Kata kunci: *Dead poultry meal*, *Dry food*, Kucing, Konsumsi, Ekskresi, Pencernaan, dan *Nitrogen balance*

EVALUATION OF UTILIZATION DEAD POULTRY MEAL IN DRY FOOD ON
CONSUMPTION, EXCRETION, AND NITROGEN BALANCE OF
MALE DOMESTIC CAT

ABSTRACT

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The purpose of this study was to evaluate the use of dead poultry meal as protein source in dry food to consumption, excretion, and nitrogen balance of male domestic cat. All dry foods contained graded dead poultry meal as the treatment that is DF 0 (0% DPM), DF 1 (10% DPM), DF 2 (20% DPM), and DF 3 (30% DPM). Eight adult male domestic cat were utilized in 4x4 latin square design. Evaluation of dry food was conducted by observing the various variables such as the chemical and physical quality of dry food, consumption, excretion, digestibility, metabolizable energy, nitrogen balance, final body weight, body condition score, and morphometric measurements. The chemical and physical data of dry food were analysed using one way anova and the rest data were analysed using general linear model univariate. Dead poultry meal containing 56.56% crude protein, 19.89% crude fat, crude fiber 6.88%, and 8.86% ash. Utilization of increasing dead poultry meal in dry food on adult male domestic cat did not give significant difference in dry matter of dry food but tends to increase the content of ash, crude fat, and crude fiber, also the protein of dry food increased significantly. Utilization of dead poultry meal can maintain physical quality of dry food in diameter hardness, and durability. There were no differences in the consumption and digestibility in the dry matter, organic matter and energy of dry food, likewise fecal excretion and metabolizable energy although the characteristics of feces which showed in the fecal score was difference. The consumption and digestibility of protein increased ($P < 0.05$) with the lowest value on DF 0 ($71.31 \pm 3.36\%$), then DF 1, DF 2, DF 3 increased respectively by 78.89 ± 5.48 , 78.35 ± 3.49 , and $81.40 \pm 1.24\%$. This increase was significant ($P < 0.05$) with increasing of water consumption and urinary excretion. Increasing the used of dead poultry meal finally was able to maintain adult male domestic cat that shown by body weight and body condition score stability, and were able to improve the nitrogen balance in which the lowest value DF 0 ($-0.28 \pm 0.33\%$), then tended to increase in DF 1 ($0.00 \pm 0.38\%$) and DF 2 ($0.26 \pm 0.49\%$), and the highest value is DF 3 ($0.50 \pm 0.55\%$). This is supported by the differences of morphometric measurements, especially thoracic and front leg circumference. Among the others, DF 2 has the best quality to support maintenance of cats.

Key words: *Dead poultry meal, Dry food, Cat, Consumption, Excretion, Digestibility, and Nitrogen balance*