

ABSTRAK

PENGARUH LAMA FERMENTASI DAUN NANAS DAN *Aspergillus niger* TERHADAP KECERNAAN BAHAN KERING DAN BAHAN EKSTRAK TANPA NITROGEN SECARA *IN VITRO*

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Penelitian ini bertujuan untuk mengetahui lama fermentasi dan level pemberian *Aspergillus niger* yang terbaik pada daun nanas terhadap pencernaan bahan kering dan pencernaan bahan ekstrak tanpa nitrogen. Penelitian ini dilaksanakan pada Januari--Maret 2022 di Laboratorium Nutrisi dan Makanan Ternak, Jurusan Peternakan, Fakultas Pertanian, Universitas Lampung dan Laboratorium Nutrisi Ternak Perah, Fakultas Peternakan, Institut Pertanian Bogor. Rancangan percobaan yang digunakan adalah Rancangan Acak Lengkap (RAL) pola faktorial 3x3 dimana pada masing-masing perlakuan terdapat 3 ulangan, sehingga terdapat 27 unit satuan percobaan. Perlakuan yang diberikan yaitu lama fermentasi (0, 6, dan 12 hari) dan level *Aspergillus niger* (0, 2, dan 4%). Peubah yang diamati adalah pencernaan bahan kering dan pencernaan bahan ekstrak tanpa nitrogen. Data yang diperoleh dianalisis menggunakan analisis ragam dengan taraf nyata 5% dan atau 1% dan dilanjutkan dengan uji LSD (*Least Significant Difference*). Hasil penelitian menunjukkan bahwa terdapat interaksi antara lama fermentasi dan level pemberian *Aspergillus niger* terhadap pencernaan bahan kering dan pencernaan bahan ekstrak tanpa nitrogen. Nilai pencernaan bahan kering terbaik pada kombinasi lama fermentasi 0 hari dan level *Aspergillus niger* 4% sebesar 56,09% dan nilai pencernaan bahan ekstrak tanpa nitrogen terbaik pada kombinasi lama fermentasi 0 hari dan level *Aspergillus niger* 4% sebesar 50,00%.

Kata kunci : *Aspergillus niger*, daun nanas, fermentasi, pencernaan bahan ekstrak tanpa nitrogen, pencernaan bahan kering.

ABSTRACT

THE EFFECT OF FERMENTATION DURATION OF PINEAPPLE LEAVES AND *Aspergillus niger* ON THE DIGESTIBILITY OF DRY MATTER AND NON NITROGEN FREE EXTRACT *IN VITRO*

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This study aims to determine the best fermentation duration and level of *Aspergillus niger* on pineapple leaves on dry matter digestibility and digestibility of non nitrogen free extract. This research was conducted in January--March 2022 at the Animal Nutrition and Feeding Laboratory, Department of Animal Husbandry, Faculty of Agriculture, University of Lampung and Dairy Nutrition Laboratory, Faculty of Animal Husbandry, Bogor Agricultural University. The experimental design used was a completely randomized design with a 3x3 factorial pattern where in each treatment there were 3 repetition, so there were 27 experimental units. The treatments given were the length of fermentation (0, 6, and 12 days) and the level of *Aspergillus niger* (0, 2, and 4%). The observed variables were dry matter digestibility and digestibility of non nitrogen free extract. The data obtained were analyzed using analysis of variance with a significance level of 5% and or 1% and continued with the LSD (*Least Significant Difference*) test. The results showed that there was an interaction between the duration of fermentation and the level of *Aspergillus niger* on dry matter digestibility and digestibility of non nitrogen free extract. The best dry matter digestibility value in the combination of 0 day fermentation duration and *Aspergillus niger* of 56,09% and the best digestibility value of non nitrogen free extract at 0 days combination of fermentation duration and *Aspergillus niger* of 50,00%.

Keywords: *Aspergillus niger*, pineapple leaves, fermentation, digestibility of dry matter, digestibility of non nitrogen free extract.