

## ABSTRAK

### **PENGARUH LAMA FERMENTASI DAUN NANAS DAN *Aspergillus niger* TERHADAP KECERNAAN BAHAN ORGANIK DAN SERAT KASAR SECARA *In Vitro***

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Penelitian ini bertujuan untuk mengetahui pengaruh dan kombinasi terbaik antara lama fermentasi dan level pemberian *Aspergillus niger* pada daun nanas terhadap pencernaan bahan organik dan serat kasar secara *in vitro*. Penelitian ini dilaksanakan pada Januari-Maret 2022 bertempat di Laboratorium Ilmu Nutrisi Ternak Perah, Fakultas Peternakan, Institut Pertanian Bogor. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) faktorial 3x3 perlakuan 3 ulangan sehingga terdapat 27 unit percobaan. Perlakuan yang digunakan yaitu D0L0 (level *Aspergillus niger* 0% tanpa difermentasi), D0L1 (level *Aspergillus niger* 0% dengan lama fermentasi 6 hari), D0L2 (level *Aspergillus niger* 0% dengan lama fermentasi 12 hari), D1L0 (level *Aspergillus niger* 2% tanpa difermentasi), D1L1 (level *Aspergillus niger* 2% dengan lama fermentasi 6 hari), D1L2 (level *Aspergillus niger* 2% dengan lama fermentasi 12 hari), D2L0 (level *Aspergillus niger* 4% tanpa difermentasi), D2L1 (level *Aspergillus niger* 4% dengan lama fermentasi 6 hari, dan D2L2 (level *Aspergillus niger* 4% dengan lama fermentasi 12 hari). Data yang diperoleh dianalisis ragam pada taraf nyata 5% dan atau 1% dan dilanjutkan menggunakan uji BNT (Beda Nyata Terkecil). Hasil penelitian terdapat interaksi yang berpengaruh nyata antara lama fermentasi dan level pemberian *Aspergillus niger* terhadap Kecernaan Bahan Organik dan Kecernaan Serat Kasar. Kombinasi perlakuan terbaik yaitu pada perlakuan D2L0 (level *Aspergillus niger* 4% tanpa fermentasi) terhadap Kecernaan Bahan Organik sebesar 55,02% dan perlakuan D0L2 (level *Aspergillus niger* 0% + fermentasi 12 hari) terhadap Kecernaan Serat Kasar sebesar 66,39%.

Kata kunci: Kecernaan Bahan Organik, Kecernaan Serat Kasar, *Aspergillus niger*, daun nanas.

## ABSTRACT

### EFFECT LONG FERMENTATION OF PINEAPPLE LEAVES AND ASPERGILLUS NIGER OF ORGANIC MATTER DIGESTIBILITY AND CRUDE FIBER DIGESTIBILITY IN VITRO

By

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This study aims to determine the best treatment between the length of fermentation and the level of *Aspergillus niger* application on pineapple leaves to the organic matter digestibility and crude fiber digestibility *In Vitro*. This research was conducted in January-March 2022 at the Dairy Animal Nutrition Science Laboratory, Faculty of Animal Husbandry, Bogor Agricultural University. This study used a factorial Completely Randomized Design consisting of 3 x 3 treatments and 3 replications so that there were 27 experimental units. The treatments used were D0L0 (0% *Aspergillus niger* level with 0 days of fermentation), D0L1 (0% *Aspergillus niger* level with 6 days of fermentation), D0L2 (0% *Aspergillus niger* level with 12 days of fermentation), D1L0 (2% *Aspergillus niger* level with 0 days of fermentation), D1L1 (2% *Aspergillus niger* level with 6 days of fermentation), D1L2 (2% *Aspergillus niger* level with 12 days of fermentation), D2L0 (4% *Aspergillus niger* level with 0 days of fermentation), D2L1 (4% *Aspergillus niger* level with 6 days of fermentation) and D2L2 (4% *Aspergillus niger* level with 12 days of fermentation). The data obtained were analyzed for variance at the 5% and or 1% significance level and continued using the BNT test. The results showed that there was a significantly different interaction between the duration of fermentation and the level of *Aspergillus niger* administration of *Aspergillus niger* on the concentration of organic matter digestibility and crude fiber digestibility. Combination best treatment are on D2L0 treatment (4% *Aspergillus niger* level with 0 days of fermentation) on organic matter digestibility of 55,02% and treatment of D0L2 (0% *Aspergillus niger* level with 12 days of fermentation) to crude fiber digestibility of 66,39%.

**Keywords:** *Aspergillus niger*, organic matter digestibility, crude fiber digestibility, pineapple leaf.