PENGARUH PEMBERIAN PROBIOTIK *ASPERGILLUS NIGER* DAN *EFFECTIVE MICROORGANISM-4* TERHADAP KANDUNGAN NUTRIEN PELEPAH SAWIT

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INTISARI*)

Penelitian ini bertujuan untuk mengetahui pengaruh pemberian probiotik *Aspergillus niger* dan *Effective microorganism-4* terhadap kandungan Nutrien Pelepah Sawit. Penelitian ini dilaksanakan dari tanggal 12 Mei sampai 4 Juni 2020 di tiga tempat, pengambilan sampel pelepah kelapa sawit di Unit Pelaksana Teknis (UPT) kebun percobaan Kaliurang Universitas Mercu Buana Yogyakarta, Bantul, Yogyakarta, pembuatan fermentasi di Jalan Wahid Hasyim, Sleman, Yogyakarta dan uji kandungan nutrien di Laboratorium CV.Chem-Mix Pratama, Bantul. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) pola searah, yang terdiri dari 3 perlakuan 3 ulangan, adapun perlakuannya P0 (kontrol), P1 (penambahan probiotik *Aspergillus* niger) dan P2 (penambahan probiotik *Effective microorganism-4*. Variabel yang diamati yaitu kadar air, kadar abu, protein kasar, lemak kasar, serat kasar dan bahan ekstrak tanpa nitrogen. Data yang diperoleh dianalisis menggunakan *Analysis of Variance* (ANOVA), bila terdapat perbedaan nyata dilanjutkan dengan uji jarak berganda *Duncan's New Multiple Range Test (Duncan's)*. Hasil penelitian menunjukkan bahwa perlakuan dengan menggunakan probiotik *Aspergillus niger* dan *Effective microorganism-4* berpengaruh sangat nyata ($P<0,01$), kadar air (P0 : 47,87) (P1 : 48,47) (P2 : 48,61), kadar abu (P0 : 7,21) (P1 : 7,12) (P2 : 6,68), protein kasar (P0 : 4,83) (P1 : 5,01) (P2 : 4,96), lemak kasar (P0 : 2,22) (P1 : 1,39) (P2 : 1,49), serat kasar (P0 : 17,48) (P1 : 14,53) (P2 : 16,11) dan bahan ekstrak tanpa nitrogen (P0 : 20,34) (P1 : 23,44) (P2 : 22,10). Berdasarkan hasil penelitian ini dapat disimpulkan bahwa pemberian probiotik *Aspergillus niger* dapat meningkatkan kandungan nutrien pelepah kelapa sawit.

Kata Kunci : *Aspergillus niger, Em-4*, Kandungan Nutrien, Pelepah Sawit.

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*) Intisari Skripsi Sarjana Peternakan, Program Studi Peternakan Fakultas Agroindustri, Universitas Mercu Buana Yogyakarta, 2020.

THE EFFECT OF PROBIOTIC ASPERGILLUS NIGER AND EFFECTIVE MICROORGANISM-4 ADDITION ON NUTRIENT CONTENT OF PALM OIL MIDRIB

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ABSTRACT*)

The purpose of this research was to determine the effect of probiotic Aspergillus niger and Effective microorganism-4 addition on nutrient content of the palm oil midrib. This research was conducted on May 12th to 4th June 2020 at the third places, the sampling palm oil midrib at UPT Trial Garden Kaliurang Mercu Buana University Yogyakarta, Bantul, Yogyakarta, the manufactures of fermented at Wahid Hasyim Street, Sleman, Yogyakarta, and the best of the nutrient content at CV. Chem-Mix Pratama chemicals laboratory, Yogyakarta. This Research was design using a completely randomized design (CRD) in a one way pattern consisting of 3 treatment 3 replication, the treatment is P0 (control), P1 (using Aspergillus niger) and P2 (using Effective microorganism-4). The variable observed were nutrient content are water content, ash content, crude protein content, crude fat content, crude fiber and BETN. Data were analyzed using Analysis of Variance (ANOVA), if were significant differences followed by Duncan's New Multiple Range Test (DMRT). The result showed the treatment using Aspergillus niger and Effective microorganism-4 had a significant effect ($P < 0,01$) on water content (P0 : 47,87) (P1 : 48,47) (P2 : 48,61), ash content (P0 : 7,21) (P1 : 7,12) (P2 : 6,68), crude protein content (P0 : 4,83) (P1 : 5,01) (P2 : 4,96), crude fat content (P0 : 2,22) (P1 : 1,39) (P2 : 1,49), crude fiber (P0 : 17,48) (P1 : 14,53) (P2 : 16,11) and BETN (P0 : 20,34) (P1 : 23,44) (P2 : 22,10). Based on the result of the research the probiotic *Aspergillus niger* can increase the nutrient content of the palm oil midrib.

Key word : *Aspergillus niger, Effective microorganism-4*, Nutrient Content, Palm Oil Midrib.

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*) Abstract From Thesis of Animal Husbandry Degree, Agroindustry Faculty, University of Mercu Buana Yogyakarta, 2020.