

**PENGARUH KOMBINASI JAMUR *Trichoderma viride* DAN EM-4 TERHADAP  
KUALITAS FISIK DAN KIMIA SUPLEMEN PAKAN FERMENTASI  
BERBASIS KULIT KACANG TANAH (*Arachis hypogaeae* L.)**

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**INTISARI\***

Penelitian ini bertujuan untuk mengetahui pengaruh kombinasi jamur *Trichoderma viride* dan EM-4 terhadap kualitas fisik dan kimia suplemen pakan fermentasi berbasis kulit kacang tanah. Penelitian dilaksanakan tanggal 15 April – 21 Juni 2019 di Laboratorium Dasar Veteriner, Fakultas Sekolah Vokasi dan Laboratorium Biokimia Nutrisi, Fakultas Peternakan, Universitas Gadjah Mada, Yogyakarta. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) pola searah dengan enam perlakuan masing-masing terdiri dari tiga ulangan. Faktor yang digunakan yaitu P0 (kontrol), P1 (EM-4 (100%)), P2 (*Trichoderma viride* (100%)), P3 (*Trichoderma viride* (75%) dan EM-4 (25%)), P4 (*Trichoderma viride* (50%) dan EM-4 (50%)), dan P5 (*Trichoderma viride* (25%) dan EM-4 (75%)). Data dianalisis menggunakan *Analysis of Variance* (ANOVA), jika ada perbedaan nyata dilanjutkan dengan uji *Kruskall Wallis* untuk data non-parametrik dan uji *Duncan's New Multiple Range Test* (DMRT) untuk data parametrik. Hasil penelitian rata-rata uji kualitas fisik terhadap warna pada perlakuan P0 menunjukkan adanya pengaruh nyata ( $P \geq 0,05$ ) terhadap perlakuan lain. Parameter uji fisik lain berupa aroma, tekstur dan jamur tidak menunjukkan adanya pengaruh yang nyata ( $P \leq 0,05$ ). Hasil rerata nilai pH (7,5; 6,9; 6,6; 6,7; 6,7; 6,7) menunjukkan adanya pengaruh yang nyata ( $P \leq 0,05$ ) pada masing-masing perlakuan. Hasil analisis kimia berupa BK (96,52; 95,32; 95,49; 95,50; 95,50; 95,53%), PK (16,12; 15,61; 16,66; 16,12; 15,98; 15,73%), LK (3,67; 2,93; 2,81; 3,01; 3,31; 3,34%), SK (33,48; 34,32; 38,96; 39,17; 38,41; 38,31%), dan BETN (39,45; 39,67; 34,15; 33,90; 34,27; 34,68%) menunjukkan adanya pengaruh yang nyata ( $P \leq 0,05$ ), sedangkan pada kadar abu tidak menunjukkan adanya pengaruh yang nyata ( $P \geq 0,05$ ). Berdasarkan hasil penelitian dapat disimpulkan bahwa kualitas fisik dan kandungan nutrisi suplemen pakan fermentasi berbasis kulit kacang tanah yang paling baik pada perlakuan penambahan kombinasi jamur *Trichoderma viride* (75%) dan EM-4 (25%).

Kata kunci : Suplemen pakan berbasis kulit kacang tanah, kualitas fisik, kualitas kimia, fermentasi kombinasi jamur *Trichoderma viride* dan EM-4.

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**THE EFFECT COMBINATION OF FUNGI (*Trichoderma viride*) AND EM-4 ON PHYSICAL AND CHEMICAL QUALITY OF FERMENTATION FEED SUPPLEMENT BASED ON PEANUT (*Arachis hypogaea* L.) HULL**

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**ABSTRACT\***

The purpose of the research was to determine the effect of the combination of *Trichoderma viride* and EM-4 on physical and chemical quality of fermented feed supplements based on peanut hull. The research was conducted on April 15 - June 21, 2019 at the Veterinary Basic Laboratory, Vocational School Faculty and Laboratory of Nutrition Biochemistry, Faculty of Animal Husbandry, Gadjah Mada University. This study has used with one-way pattern Completely Randomized Design with six treatments and each treatment consisting of three replications. The factors used were P0 (control), P1 (EM-4 (100%)), P2 (*Trichoderma viride* (100%)), P3 (*Trichoderma viride* (75%) and EM-4 (25%)), P4 (*Trichoderma viride* (50%) and EM-4 (50%)), and P5 (*Trichoderma viride* (25%) and EM-4 (75%)). The data were analyzed using Analysis of Variance (ANOVA), if there were significant differences followed by the *Kruskall Wallis* test for non-parametric data and *Duncan's New Multiple Range Test* (DMRT) for parametric data. The results of the average test of the physical quality of the color in treatment P0 showed a significant effect ( $P \leq 0.05$ ) on other treatments. Other physical test parameters in the form of smell, texture, and fungus did not show any significant effect ( $P \leq 0.05$ ). The mean results of pH values (7.5; 6.9; 6.6; 6.7; 6.7; 6.7) showed a significant effect ( $P \leq 0.05$ ) in each treatment. The results of chemical analysis were in the form of BK (96.52; 95.32; 95.49; 95.50; 95.50; 95.53%), PK (16.12; 15.61; 16.66; 16.12; 15.98; 15.73%), LK (3.67; 2.93; 2.81; 3.01; 3.31; 3.34%), SK (33.48; 34.32; 38, 96; 39,17; 38,41; 38,31%), and BETN (39,45; 39,67; 34,15; 33,90; 34,27; 34,68%) indicating a significant influence ( $P \leq 0.05$ ), while the ash content did not show any significant effect ( $P \geq 0.05$ ). Based on the results of the research, it was concluded that the physical and chemical quality of fermentation feed supplement based on peanut hull were the best in the combination of *Trichoderma viride* (75%) and EM-4 (25%) treatment.

Keywords: Feed supplement based peanut hull, physical quality, chemical quality, fermentation of *Trichoderma viride* and EM-4 combination.

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