

PENGARUH KOMBINASI FOSFAT-MIKORIZA TERHADAP KADAR LEMAK KASAR, BETN DAN TDN TANAMAN SORGUM YANG DITANAM PADA TANAH KAPUR

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Abstrak. Penelitian bertujuan untuk mengetahui kadar lemak kasar (LK), bahan ekstrak tanpa nitrogen (BETN) dan *total digestible nutrient* (TDN) tanaman sorgum fase vegetatif dengan umur panen 63 hari yang ditanam di tanah kapur. Materi penelitian yang digunakan adalah tanaman sorgum, pupuk TSP dan fungi mikoriza yang ditanam sesuai perlakuan di *polybag* serta seperangkat alat uji lemak kasar. Penelitian menggunakan metode experimental rancangan acak lengkap (RAL) pola faktorial 4 x 4 dengan 5 kali ulangan. Faktor pertama adalah pupuk TSP dengan level 0; 1,33; 2,66; 3,99 g/*polybag* (G). Faktor kedua adalah penambahan mikoriza dengan level 0, 10, 20, 30 g/*polybag* (H). Variabel yang diukur dalam penelitian adalah kadar lemak kasar, BETN dan TDN. Penelitian dilakukan di *green house* serta Laboratorium Ilmu Nutrisi dan Makanan Ternak, Fakultas Peternakan, Universitas Jenderal Soedirman. Hasil *analysis of variance* (ANOVA) menunjukkan bahwa pemberian fosfat-mikoriza berpengaruh nyata ($P>0,05$) terhadap kadar lemak kasar, BETN dan TDN. Hasil uji lanjut *duncant new multiple range test* (DMRT) menunjukkan perlakuan pupuk TSP 2,66 g/*polybag* dan mikoriza 20-30 g/*polybag* menghasilkan kadar lemak kasar, BETN dan TDN yang lebih tinggi dibanding kontrol. Kesimpulan penelitian yaitu kombinasi perlakuan pupuk TSP 2,66 g/*polybag* dan mikoriza 30 g/*polybag* dapat meningkatkan kadar lemak kasar, BETN dan TDN.

Kata kunci: fosfat, lemak kasar, mikoriza, tanah kapur, tanaman sorgum

Abstract. This study aimed to determine the extract ether (EE), nitrogen-free extract (NFE) and total digestible nutrient (TDN) vegetative phase of sorghum plants with a harvest age of 63 days grown in limestone soil. The research materials used were sorghum plants, TSP fertilizers and mycorrhizal fungi, which were grown according to the polybag treatment and a set of crude fat test kits. The research used a completely randomized design (CRD) 4 x 4 factorial experimental method with 5 replications. The first factor is TSP fertilizer with level 0; 1.33; 2.66; 3.99g/polybag (G). The second factor was the addition of mycorrhizae at levels of 0, 10, 20, 30 g/polybag (H). Variables measured in this study were crude fat content, NFE and TDN. The research was conducted in a greenhouse and the Animal Feed and Nutrition Science Laboratory, Faculty of Animal Husbandry, Jenderal Soedirman University. The results of the analysis of variance (ANOVA) showed that the administration of phosphate-mycorrhiza had a significant effect ($P>0.05$) on crude fat content, NFE and TDN. The Duncant new multiple range test (DMRT) results showed that 2.66 g/polybag TSP and 20-30 g/polybag mycorrhiza resulted in higher levels of crude fat, NFE and TDN than the control. The study concluded that the combination of 2.66 g/polybag TSP and 30 g/polybag mycorrhiza treatments increased the levels of crude fat, NFE and TDN.

Keywords: extract ether, limestone soil, mycorrhiza, phosphate, sorghum plant