

## INTISARI

Penelitian ini bertujuan untuk (1) mengetahui pengaruh dosis dari kombinasi vermikompos dan batuan fosfat terhadap ketersediaan P pada tanah Alfisol serta (2) mengetahui pengaruh vermikompos dan batuan fosfat terhadap serapan P pada tanaman jagung. Penelitian dilaksanakan dengan rancangan acak lengkap 2 faktorial yakni faktor kombinasi perlakuan pupuk dan faktor dosis. Aras dari faktor kombinasi perlakuan pupuk adalah vermikompos dan batuan fosfat 1%, vermikompos dan batuan fosfat 3%, vermikompos dan batuan fosfat 5%, serta vermikompos dan batuan fosfat 0%. Sedangkan aras faktor dosis antara lain 25 g/pot, 50 g/pot, dan 75 g/pot. Pengamatan dilakukan terhadap sifat kimia antara lain pH, C-organik, Daya Hantar Listrik (DHL), P-tersedia tanah, dan P-total jaringan. Pengamatan agronomis meliputi berat kering akar dan berat kering daun. Dilakukan analisis uji lanjut terhadap data dengan uji *Duncan's Multiple Range Test* (DMRT) dengan taraf signifikan 5%. Hasil penelitian memberikan informasi bahwa (1) Perbandingan dosis yang diberikan (25 gram, 50 gram, 75 gram) memberikan pengaruh yang nyata terhadap ketersediaan P didalam Tanah Alfisol, Gunung Kidul. Semakin tinggi dosis yang diberikan, maka kandungan P tersedia di dalam tanah semakin tinggi. (2) Pemberian kombinasi batuan fosfat dan vermikompos memberikan pengaruh yang beda nyata terhadap serapan P pada tanaman jagung. Serapan P terbesar yaitu pada perlakuan kombinasi 5% vermikompos dan batuan fosfat.

Kata kunci : Alfisol, batuan fosfat, fosfor, jagung, vermikompos

### ***ABSTRACT***

This research aimed to ( 1) find out the influence of dose from a combination of vermicompost and rock phosphate P availability in soil against the Alfisol and (2) find out the influence of the combination of vermicompost and rock phosphate uptake in plants against maize . The research was carried out with complete random design 2 factorial combination of factors namely fertilizer treatment and dose. The levels of factor combination fertilizer treatment was vermicompost and phosphate 1%, vermicompost and rock phosphates 3%, vermicompost and phosphate rock 5%, as well as vermicompost and rock phosphate 0%. Then the levels among other factors the dosage 25 g/50 g/pot, pot, and 75 g/pot. Observations of chemical properties among other things pH, organic C, Electrical Conductivity (DHL), P-available land, and P-total network. Observations of the agronomis include the root dry weight and dry weight of leaves. Advanced test analysis performed against the data with test Duncan's Multiple Range Test (DMRT) with a significant level of 5%. Research results provide information that (1) a comparison of the doses given (25 g, 50 g, 75 g) gives a real influence against the availability of P in the Alfisol Soil, Gunung Kidul. The higher the dose is given, then the P content is available on the higher ground. (2) the grant of a combination of phosphates and vermicompost give a real difference against the influence of P uptake on corn plants. The largest P absorption i.e. on treatment combination 5% vermicompost and rock phosphate

Key word: Alfisols, rock phosphate, phosphor, maize, vermicompost