

ABSTRACT

This research was conducted with the aim of examining the effect of Biophosphate doses fed with chicken manure on several soil chemical properties (pH and available P), plant height, and soybean yields. This research was carried out for 5 months, starting from July to December 2022 at the Teaching and Research Farm, Faculty of Agriculture, Jambi University, Mendalo Darat Village, Jambi Outer City District, Muaro Jambi Regency. The study was carried out using a randomized block design (RBD) with 6 treatments and 4 replications so that there were 24 experimental plots. The size of the experimental plot was 3m x 2m with a spacing of 30cm x 25cm so that the number of plants in one plot was 80 plants. The treatment of biophosphate in this study was (P0) without treatment, (P1) 50 kg/ha of biophosphate, (P2) 100 kg/ha of biophosphate, (P3) 150 kg/ha of biophosphate, (P4) 200 kg/ha of biophosphate, (P5) 250 kg/ha Biophosphate. Before planting, chicken manure is given as basic fertilizer. Parameters observed were soil pH and available P as well as soybean yield and plant height. The data taken was then analyzed by means of variance and the Duncan Multiple Range Test (DMRT). The application of Biophosphate has not been able to have a significant effect on pH, available-P, plant height and soybean yield between treatments. P5 treatment with a dose of 250 kg/ha can increase pH levels, available P, plant height and yield higher than the control or other treatments.

Keywords : Biophosphate, Chicken manure, fertilizer, pH, available-P, high, soybean yeald.

INTISARI

Penelitian ini dilaksanakan dengan tujuan untuk mengkaji pengaruh dosis Biofosfat yang diberi pupuk kandang ayam terhadap beberapa sifat kimia tanah (pH dan P-tersedia), Tinggi tanaman, dan Hasil kedelai. Penelitian ini dilaksanakan selama 5 bulan yaitu dimulai dari Juli sampai Desember 2022 di *Teaching and Reseacrh Farm* Fakultas Pertanian Universitas Jambi Desa Mendalo Darat, Kecamatan Jambi Luar Kota, Kabupaten Muaro Jambi. Penelitian dilaksanakan dengan menggunakan Rancangan Acak Kelompok (RAK) dengan 6 perlakuan dan 4 ulangan sehingga terdapat 24 petak percobaan. Ukuran petak

percobaan 3m x 2m dengan jarak tanam 30cm x 25cm sehingga jumlah tanaman dalam satu petak yaitu 80 tanaman. Adapun Perlakuan Biofosfat pada penelitian ini yaitu (P0) Tanpa perlakuan, (P1) 50 kg/ha Biofosfat, (P2) 100 kg/ha Biofosfat, (P3) 150 kg/ha Biofosfat, (P4) 200 kg/ha Biofosfat, (P5) 250 kg/ha Biofosfat. Sebelum penanaman diberikan pupuk kandang ayam sebagai pupuk dasar. Parameter yang diamati adalah pH dan P-tersedia tanah serta hasil dan tinggi tanaman kedelai. Data yang diambil kemudian dianalisis dengan sidik ragam dan uji Duncan Multiple Range Test (DMRT). Pemberian Biofosfat belum mampu memberikan pengaruh nyata terhadap pH, P-tersedia, tinggi tanamana dan hasil kedelai antar perlakuan. Perlakuan P5 dengan dosis 250 kg/ha dapat meningkatkan kadar pH, P tersedia, tinggi tanaman dan hasil lebih tinggi dibanding dengan kontrol maupun perlakuan lainnya.

Kata kunci : Biofosfat, Pupuk kandang ayam, P-tersedia, pH, Tinggi, Hasil kedelai