

INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh campuran arang sekam dengan kompos kandang sapi atau kompos mimba terhadap perubahan sifat kimia tanah, serapan N padi serta pertumbuhan vegetatif dan generatif padi. Pengambilan sampel tanah dilakukan pada awal sebelum perlakuan dan setelah satu minggu perlakuan. Pengambilan sampel tanaman dilakukan pada akhir masa vegetatif dan akhir masa generatif. Penelitian ini dilaksanakan di Trucuk, Klaten, Jawa Tengah pada bulan Maret 2018 sampai bulan September 2018. Perlakuan yang diaplikasikan adalah kombinasi arang sekam dengan dosis 5 ton/ha dan 10 ton/ha dengan kompos kandang sapi dengan dosis 10 ton/ha, 20 ton/ha, 30 ton/ha atau kompos mimba dengan dosis 10 ton/ha, 15 ton/ha, dan 20 ton/ha. Hasil penelitian menunjukkan pemberian campuran arang sekam dan kompos kandang sapi atau kompos mimba berpengaruh terhadap penurunan pH aktual tanah dan pH potensial tanah serta menaikkan DHL, C-organik, KPK, ketersediaan N, P, K. Dari semua perlakuan yang diaplikasikan, perlakuan arang sekam 10 ton/ha dan kompos mimba 20 ton/ha memberikan nilai serapan nitrogen tertinggi yaitu 0,107 g/tanaman. Selain itu, tanaman pada perlakuan arang sekam 10 ton/ha dan kompos mimba 20 ton/ha mampu meningkatkan produktivitas padi sebesar 6,78 ton/ha.

Kata kunci: arang sekam, kompos kandang sapi, kompos mimba, padi, nitrogen

ABSTRACT

This research aimed to investigate the effects of the mixture between rice husk charcoal, and cow manure or mimba leaf compost toward the changing of soil chemical characteristics, N absorption, as well as generative, and vegetative growth in rice plants. A soil sample was taken before the experiment, and after one week. Furthermore, a rice sample was taken at the end of generative, and vegetative period. This study was conducted in Trucuk, Klaten, Central Java on March until September 2018. The applied treatments were by combining the rice husk charcoal with a dosage of 5 tons/ha, and 10 tons/ha along with cow manure compost with a dosage of 10 tons/ha, 20 tons/ha, 30 tons/ha, and mimba leaf compost with 10 tons/ha, 15 tons/ha, and 20 tons/ha. The result shows that the mixture of rice husk charcoal, and cow manure, or mimba leaf compost brought effects to the decreased actual soil pH, and potential soil pH. At the same time, it also increased C-organic, cation exchange capacity, electrical conductivity, and N, P, K availability. From all the treatments mentioned above, the treatment with 10 tons/ha of rice husk charcoal, and 20 ton/ha of mimba leaf compost resulted to the highest nitrogen adsorption, which was 0,107 g/plant. Moreover, the 10 tons/ha of rice husk charcoal, and 20 tons/ha of mimba leaf compost could increase the plants productivity, which was 6,78 tons/ha.

Keywords: rice husk charcoal, cow manure compost, mimba leaf compost, rice plants, nitrogen.