

Intisari

Lumpur tinja yang dihasilkan di Balai PIALAM memiliki potensi sebagai pupuk atau amandemen organik. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian lumpur tinja dan bahan organik terhadap sifat kimia tanah Inceptisol dan pertumbuhan tanaman padi. Penelitian dilakukan di pada bulan Januari sampai November 2023. Penelitian ini menggunakan rancangan acak lengkap non faktorial dengan 14 perlakuan dengan 3 jenis lumpur dan dosis berbeda (lumpur 20 ton/ha dan lumpur 40 ton/ha). Lumpur yang digunakan yaitu lumpur lama (LL), lumpur baru (LB), dan lumpur campuran (LC), serta adanya penambahan bahan organik yaitu arang sekam padi dan pupuk kandang sapi (arang sekam padi 15 ton/ha : pupuk kandang sapi 15 ton/ha) dengan 3 kali pengulangan, sehingga total unit percobaan adalah 42 unit. Pemberian lumpur tinja dan bahan organik berpengaruh terhadap sifat kimia tanah Inceptisol meningkatkan KPK, N total, P total, K total. Pemberian tersebut juga mempengaruhi tinggi tanaman, jumlah anakan, dan berat segar kering tanaman pada tanaman padi. Berat kering dan jumlah anakan terbaik ada pada perlakuan LL40 (lumpur tinja lama 40 ton/ha) sebesar 55 gr dan sebanyak 30 anakan. Kombinasi lumpur tinja dapat dimanfaatkan sebagai pupuk atau amandemen organik sehingga dapat mengurangi limbah perkotaan di Balai PIALAM.

Kata kunci : lumpur tinja, bahan organik, Inceptisol, tanaman padi.

Abstract

The fecal sludge produced at Balai PIALAM has potential as fertilizer or organic amendment. This research aims to determine the effect of applying fecal sludge and organic materials on the chemical properties of Inceptisol soil and the growth of rice plants. The research was conducted from January to November 2023. This research used a completely randomized non-factorial design with 14 treatments with 3 types of mud and different doses (20 tons/ha of mud and 40 tons/ha of mud). The mud used is old mud (LL), new mud (LB), and mixed mud (LC), as well as the addition of organic materials, namely rice husk charcoal and cow manure (rice husk charcoal 15 tons/ha: cow manure 15 tons /ha) with 3 repetitions, so that the total experimental units were 42 units. The application of fecal sludge and organic materials affects the chemical properties of Inceptisol soil, increasing KPK, total N, total P, total K. This provision also affects plant height, number of tillers, and fresh dry plant weight in rice plants. The best dry weight and number of tillers was in the LL40 treatment (40 tons/ha old fecal sludge) of 55 gr and 30 tillers. The combination of fecal sludge can be used as fertilizer or organic amendment so that it can reduce urban waste at Balai PIALAM.

.Keywords: fecal sludge, organic materials, Inceptisol, rice plants