DINAMIKA KONSISTENSI DAN RETAKAN TANAH AKIBAT PUPUK *SLURRY* BIOGAS

INTISARI

Oleh:

SARAFINA APAR PASIM

19/440890/TP/12444

Konsistensi tanah mempunyai kaitan dengan pengolahan lahan pertanian. Tujuan penelitian ini adalah untuk mengamati kondisi konsistensi tanah pasiran dan tanah lempung dengan penambahan pupuk *slurry* biogas. Sampel tanah yang telah homogen dimasukkan dalam pot kecil dan diberi perlakuan: tanpa slurry (kontrol) dan dengan slurry dosis 60 ton/ha (P) dan setiap perlakuan memiliki 5 ulangan dan 7x pengamatan. Jumlah total pot 140 buah. Parameter yang diamati dalam penelitian ini meliputi batas cair, batas plastis, batas lekat, indeks cair, indeks plastis, panjang retakan, dan lebar retakan. Pengamatan dilakukan selama 12 minggu di Laboratorium Teknik Sumber Daya Lahan dan Air FTP UGM. Analisis statistik dan regresi polinomial diadapsi untuk mendeskripsikan dan mengevaluasi peran slurry terhadap konsistensi. Hasil penelitian membuktikan bahwa pemberian pupuk *slurry* biogas dapat menurunkan konsistensi dan retakan tanah.

Kata kunci: Konsistensi tanah, *slurry biogas* cair, retakan tanah

DYNAMICS OF CONSISTENCY AND SOIL CRACKS DUE TO BIOGAS SLURRY FERTILIZER

ABSTRACT

By:

SARAFINA APAR PASIM

19/440890/TP/12444

Soil consistency is related to agricultural land management. The purpose of this study was to observe the consistency conditions of sandy and clay soils with the addition of biogas slurry fertilizer. Homogenized soil samples were put in small pots and given the following treatments: without slurry (control) and with slurry at a dose of 60 tons/ha (P) and each treatment had 5 replications and 7 observations. The total number of pots was 140. The parameters observed in this study included liquid limit, plastic limit, adhesive limit, liquid index, plastic index, crack length, and crack width. Observations were conducted for 12 weeks in laboratory. Statistical analysis and polynomial regression were adapted to describe and evaluate the role of slurry on consistency. The results of the study proved that the provision of biogas slurry fertilizer can reduce soil consistency and cracks.

Keywords: Soil consistency, liquid biogas *slurry*, soil cracks