AKTIVASI BUBUK SUB-BITUMINUS DENGAN DOLOMIT UNTUK MEMPERBAIKI SIFAT KIMIA ULTISOL DAN PERTUMBUHAN KELAPA SAWIT (*Elaeis guineensis Jacq*.)

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Abstrak

Ultisol merupakan salah satu jenis tanah suboptimal sehingga perlu dilakukan penambahan bahan organik untuk meningkatkan kesuburan tanah. Penelitian ini bertujuan untuk mempelajari pengaruh dari Bubuk Sub-bituminus yang diaktivasi dengan Dolomit dalam memperbaiki sifat kimia Ultisol dan pertumbuhan kelapa sawit (*Elaeis guineensis Jacq*) yang dilaksanakan di Nagari Sungai Dareh, Kecamatan Pulau Punjung, Kabupaten Dharmasraya. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) dengan 6 perlakuan dan 3 kelompok. Dosis perlakuan bubuk Sub-bituminus terdiri dari 150 g/lubang tanam, 300 g/lubang tanam, 450 g/lubang tanam, 150 g/lubang tanam + 10% Dolomit, 300 g/lubang tanam + 10% Dolomit, 450 g/lubang tanam + 10% Dolomit. Hasil penelitian ini menunjukan bahwa: (1) Perlakuan bubuk Sub-bituminus 450 g/lubang tanam mampu meningkatkan pH tanah 0,35 unit; C-organik 0,44 %; P-tersedia 2,09 ppm; N-total 0,05 %; KTK tanah 15,25 me/100g; Tinggi Tanaman 34 cm jika dibandingkan dengan perlakuan bubuk Sub-bituminus takaran 150 g/lubang tanaman. (2) Perlakuan bubuk Sub-bituminus 450 g/lubang tanam + 10% Dolomit mampu meningkatkan pH tanah 0,44 unit; C-organik 0,59 %; P-tersedia 3,23 ppm; N-total 0,08 %; KTK tanah 16,83 me/100g; Tinggi Tanaman 22,67 cm jika dibandingkan dengan perlakuan bubuk Sub-bituminus takaran 150 g/lubang tanaman + 10% Dolomit. (3) Perlakuan bubuk Sub-bituminus 450 g/lubang tanam + 10% Dolomit mampu meningkatkan pH tanah 0,44 unit; C-organik 0,44 %; P-tersedia 1,31 ppm; N-total 0,04 %; KTK tanah 2,62 me/100g; Tinggi Tanaman 12,33 cm jika dibandingkan dengan perlakuan bubuk Sub-bituminus takaran 450 g/lubang tanaman. Dari hasil dapat dinyatakan bahwa perlakuan bubuk Sub-bituminus yang diaktivasi Dolomit lebih bagus jika dibandingkan tanpa pengaktif.

Kata kunci : *Kelapa Sawit, Sub-bituminus, Ultisol, Dolomit.*

ACTIVATION OF SUB-BITUMINUS POWDER WITH DOLOMITE TO IMPROVE ULTISOL CHEMICAL PROPERTIES AND GROWTH OF PALM OIL (*ElaeisguineensisJacq.*)

Abstract

Ultisolsis a suboptimal soil type, so it is necessary to add organic matter to increase soil fertility. This study was aimed to study the effect of activated sub-bituminous powder with Dolomite in improving the chemical properties of Ultisols and the growth of oil palm (*ElaeisguineensisJacq.*) this research was carried out in Nagari Sungai Dareh, PulauPunjung District, Dharmasraya Regency. This study had 6 Sub-bituminous powder treatments (150 g/planting hole, 300 g/planting hole, 450 g/planting hole, 150 g/planting hole + 10% Dolomite, 300 g/planting hole + 10% Dolomite, 450 g/planting hole + 10% Dolomite) with 3 replications. The esperimentalunit were allocated based on Randomized Block Design (RBD). The results of this study indicated that: (1) Application of 450 g Sub-bituminous powder/planting hole treatment was able to increase soil pH by 0.35 units each; Organic-C by 0.44%; Available-P by 2.09 ppm; Total-N by 0.05%; CEC by 15.25 me/100g; Plant height by 34 cm compared to application of 150 g Sub-bituminous powder/planting hole. (2) Application of 450 g Sub-bituminous powder/planting hole + 10% Dolomite was able to increase soil pH by 0.44 units each; Organic-C by 0.59%; Available-P by 3.23 ppm; Total-N by 0.08%; CEC by 16.83 me/100g; Plant height by 22.67 cm compared to application of 150 g Sub-bituminous powder/planting hole + 10% Dolomite. (3) Application of 450 g Sub-bituminous powder/planting hole + 10% Dolomite was able to increase soil pH by 0.44 units each; Organic-C by 0.44%; Available-P by 1.31 ppm; Total-N by 0.04%; CEC by 2.62 me/100g; Plant height by 12.33 cm compared to application of 450 g Sub-bituminous powder/planting hole. From the results it could be said that Dolomite-activated treatment was better than without activation.

Keywords: *Palm Oil, Sub-bituminous, Ultisol, Dolomite.*