Uji Pemberian Pupuk NPK 13-7-19 + TE Terhadap Sifat Kimia Tanah, Pertumbuhan, dan Hasil Tanaman Kacang Tanah (*Arachis hypogaea* L.) pada Tanah Inceptisol

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ABSTRAK

Penelitian ini bertujuan untuk menguji pengaruh pemberian pupuk anorganik NPK 13-7-19+TE pada tanaman kacang tanah terhadap pertumbuhan dan hasil tanaman kacang tanah, menguji pengaruh pemberian pupuk anorganik NPK 13-7-19+TE pada tanaman kacang tanah terhadap sifat kimia tanah, dan menentukan dosis yang tepat pupuk anorganik NPK 13-7-19+TE untuk tanaman kacang tanah. Penelitian dilaksanakan pada Januari 2017 sampai dengan April 2017 di lahan pertanian Desa Cihideung Udik, Ciampea, Bogor, Jawa barat (koordinat : 6° 35’ 15,8” LS, 106° 43’ 4,9” BT) dan untuk kegiatan analisis kimia dilaksanakan di Laboratorium Kimia dan Kesuburan Tanah, Balai Penelitian Tanah. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) dengan tujuh perlakuan dan tiga ulangan. Perlakuannya yaitu P0 = Kontrol , P1 = NPK standar, P2 = 0,25 NPK 13-7-19+TE, P3 = 0,50 NPK 13-7-19+TE, P4 = 0,75 NPK 13-7-19+TE, P5 = 1,00 NPK 13-7-19+TE, P6 = 1,25 NPK 13-7-19+TE, dan P7 = 1,50 NPK 13-7-19+TE. Parameter yang diamati yaitu tinggi tanaman, jumlah cabang produktif, jumlah daun, analisis contoh tanah setelah ditanami tanaman kacang tanah, berat basah dan kering polong, serta berat kering biji. Data hasil penelitian dianalisis dengan menggunakan Analysis Of Varians (ANOVA) dan dilanjutkan dengan uji lanjut Duncant Multiple Range Test (DMRT) pada taraf 5% jika terdapat pengaruh perlakuan pupuk NPK 13-7-19 + TE terhadap sifat kimia tanah, pertumbuhan dan hasil tanaman kacang tanah. Hasil penelitian menunjukkan bahwa pemberian pupuk NPK 13-7-19+TE menunjukkan peningkatan pada sifat kimia tanah Inceptisol pada KPK tanah, P-tersedia dan K-tersedia, serta meningkatkan pertumbuhan tanaman kacang tanah pada jumlah cabang. Akan tetapi, pemberian pupuk NPK 13-7-19+TE tidak berpengaruh terhadap peningkatan pH tanah, KB, dan N-total serta pada pertumbuhan dan hasil kacang tanah pada tinggi tanaman, jumlah daun, berat basah polong, berat kering polong dan berat kering biji.

Kata Kunci : *NPK 13-7-19 + TE, Kacang Tanah* (*Arachis hypogaea* L.)

Test of Application of NPK 13-7-19+Trace Elements Fertilizer toward Chemical Soil Substances of Inceptisol and Growth and Yield of Peanut Crops (*Arachis hypogaea* L.)

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ABSTRACT

This research aims to test the effect of the use of NPK 13-7-19+TE fertilizer upon the growth of peanut crops (*Arachis hypogaea* L.) as well as its result. This research also tests the effect of the fertilizer on the plant toward the soil chemical substance. Furthermore, the result from the test can tell how much NPK 13-7-19+TE fertilizer be effective for peanut crops (*Arachis hypogaea* L.). The research has been conducted from January 2017 to April 2017 in the locus of Cihideung Udik Village, Ciampea, Bogor, West Jawa (at coordinate 6° 35' 15,8" LS, 106° 43' 4,9" BT) and lab analysis was done in the Chemical and Soil Fertility Laboratory in Soil Research Institute. The research applied Randomized Block Design consists seven treatments and three repetitions. The treatments are PO = Control, P1 + standard NPK , P2 = 0,25 NPK 13-7-19+TE , P3 = 0,50 NPK 13-7-19+TE , P4 = 0,75 NPK 13-7-19+TE, P5 = 1,00 NPK 13-7-19+TE, P6= 1,25 NPK 13-7-19+TE, and P7 = 1,50 NPK 13-7-19+TE. The observed parameters were the height of the plant, amount of productive branches, amount of leaves, the sample of soil analysis after being used, the wet and dry weight of peas and dry weight of seeds. The data was analyzed applying Analysis of Varians (ANOVA) and continued with further test using Duncant Multiple Range Test (DMRT) with the level of 5% if the use of NPK 13-7-19+TE fertilizer took effect to the growth and yield of peanut crops as well as the level of soil chemical substance. The result of the research shows that the use of NPK 13-7-19+TE fertilizer increased the Inceptisol soil chemical substance to the Cation Exchange Capacity (CEC) soil, availibility of phosphorus and pottasium. The fertilizer improved the growth of the peanut crops (*Arachis hypogaea* L.) shown on the amount of branches. However, the use of NPK 13-7-19+TE fertilizer doesn't shows the improvement of the soil-pH, Base Saturation (BS) and total nitrogen, height of the peanut crops (*Arachis hypogaea* L.), amount of the leaves, the wet and dry weight of peas as well as dry weight of seeds.

Keyword: Ground nut (*Arachis hypogaea* L), NPK 13-7-19+TE fertilizer