

## RINGKASAN

Tanah top soil inceptisol semakin berkurang dikarenakan terjadinya erosi tanah. Salah satu alternatif yang digunakan untuk media tanam yaitu tanah sub soil inceptisol. Namun kesuburannya sangat rendah, peningkatan kesuburan tanahnya dapat dilakukan dengan pemberian bahan organik. Tujuan penelitian ini untuk mengetahui uji pemberian bahan organik terhadap beberapa varietas pertumbuhan dan produksi tanaman kedelai (*Glycine max* L. Merrill) pada tanah sub soil inceptisol. Penelitian dilaksanakan di Kebun Percobaan Fakultas Pertanian Universitas Islam Sumatera Utara, Jalan Karya Wisata, Kelurahan Gedung Johor, Kecamatan Medan Johor, Kotamadya Medan, Provinsi Sumatera Utara pada ketinggian tempat  $\pm 25$  mdpl dengan jenis tanah Sub Soil Inceptisol Penelitian ini dilakukan mulai tanggal 27 Februari 2019. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) Faktorial dengan dua faktor yaitu Faktor Pertama adalah pemberian bahan organik berupa kompos jerami padi + Kompos Blotong yang terdiri dari 4 taraf, yaitu :  $B_1 = 2,5$  Kg/jerami + 2,5 Kg/blotong + 5 Kg tanah,  $B_2 = 3$  Kg/ jerami + 2 Kg/blotong + 5 Kg tanah,  $B_3 = 3,5$  Kg/jerami + 1,5 Kg/blotong + 5 Kg tanah,  $B_4 = 4$  Kg/jerami + 1 Kg/blotong + 5 Kg tanah. Dan Faktor kedua adalah varietas kedelai (V) yang terdiri dari 3 taraf, yaitu :  $V_1 =$  Dena 1,  $V_2 =$  Devon 1,  $V_3 =$  Deja 1. Selanjutnya kedua Perlakuan dikombinasikan sehingga terbentuk 12 kombinasi perlakuan dan penelitian ini diulang sebanyak 3 kali. Parameter yang di amati Tinggi Tanaman (cm), Jumlah Cabang Produktif, Jumlah Berisi (Polong), Bobot Polong (g), Bobot 100 Biji Kering (g), Analisa kalium (K) Tanah (%). Hasil penelitian Pemberian bahan organik (kompos jerami padi + blotong) berpengaruh nyata terhadap tinggi tanaman, jumlah polong, bobot polong, bobot 100 butir biji kering, dan kandungan K-dd tanah, tetapi tidak berpengaruh nyata terhadap jumlah cabang. Perlakuan terbaik pada penambahan bahan organik perbandingan 4 kg jerami + 1 kg blotong + 5 kg tanah. Varitas kedelai berpengaruh nyata terhadap jumlah polong, bobot polong, dan bobot 100 butir bijit tetapi tidak berpengaruh nyata terhadap dan jumlah cabang. Varitas kedelai terbaik untuk jumlah polong dan bobot 100 biji kering kedelai yaitu Deja 1, sedangkan untuk bobot polong adalah pada Devon 1. Interaksi pemberian bahan organik dan varitas berpengaruh nyata terhadap tinggi tanaman, bobot polong dan bobot 100 biji kering kedelai, sedangkan terhadap jumlah cabang dan kandungan K tersedia tanah tidak berpengaruh nyata. Hasil terbaik untuk tinggi tanaman terdapat pada perlakuan B4V3 (4 kg jerami + 1 kg blotong + 5 kg tanah dan Deja 1), bobot polong pada perlakuan B3V2 (3,5 kg jerami + 1,5 kg blotong + 5 kg tanah dan Devon 1) dan bobot 100 biji kering t pada perlakuan B2V1 (3 kg jerami + 2 kg blotong + 5 kg tanah dan Dena 1).

**Kata Kunci :** *Varietas Kedelai, Kompos Jerami Padi, Kompos Blotong, Sub Soil Inceptisol*

## SUMMARY

Inceptisol top soil is decreasing due to soil erosion. One alternative used for planting media is inceptisol sub soil. But the fertility is very low, increasing soil fertility can be done by providing organic material. The purpose of this study was to determine the test of providing organic material to several varieties of growth and production of soybean plants (*Glycine max* L. Merrill) in sub-soil inceptisol. This research will be carried out in the Experimental Garden of the Faculty of Agriculture, Islamic University of North Sumatra, Jalan Karya Wisata, Kelurahan Gedung Johor, Medan Johor District, Medan Municipality, North Sumatra Province at a height of  $\pm 25$  meters above sea level with Soep Inceptisol Sub Soil type. This research was conducted starting on the 27th February 2019. This study used a factorial Randomized Block Design (RBD) with two factors: the first factor was the provision of organic material in the form of rice straw compost + Blotong compost consisting of 4 levels, namely: B1 = 2.5 kg / straw + 2, 5 kg / kg + 5 kg of soil, B2 = 3 kg / straw + 2 kg / blade + 5 kg of soil, B3 = 3.5 kg / straw + 1.5 kg / blade + 5 kg of soil, B4 = 4 kg / straw + 1 kg / blotong + 5 kg of soil. And the second factor is soybean variety (V) which consists of 3 levels, namely: V1 = Dena 1, V2 = Devon 1, V3 = Deja 1. Then the two treatments were combined to form 12 treatment combinations and this study was repeated 3 times. The parameters observed were Plant Height (cm), Number of Productive Branches, Number of Contains (Pods), Weight of Pods (g), Weight of 100 Dry Seeds (g), Potassium (K) Soil Analysis (%). The results of the study of the provision of organic material (rice straw compost + blotong) significantly affected plant height, number of pods, pod weight, weight of 100 dry seeds, and soil K-dd content, but did not significantly affect the number of branches. The best treatment is the addition of organic matter in the ratio of 4 kg of straw + 1 kg of blotong + 5 kg of soil. Soybean variability significantly affected the number of pods, pod weights, and weights of 100 grains but did not significantly affect and number of branches. The best soybean variety for the number of pods and the weight of 100 dried soybean seeds is Deja 1, while for pod weight is in Devon 1. The interaction of organic matter and variety has a significant effect on plant height, pod weight and weight of 100 soybean dry seeds, while on the number of branches and the available K content of the soil has no significant effect. The best results for plant height were found in the B4V3 treatment (4 kg straw + 1 kg blotong + 5 kg soil and Deja 1), pod weight in the B3V2 treatment (3.5 kg straw + 1.5 kg straw + 5 kg soil and Devon 1 ) and the weight of 100 dry seeds t in the B2V1 treatment (3 kg straw + 2 kg blotong + 5 kg soil and Dena 1).

**Key word** : *Soybean Varieties, Rice Straw Compost, Blotong Compost, Inceptisol Sub Soil*