ABSTRAK

PERILAKU PERTUKARAN KALIUM DAN KALIUM TERPANEN PADA PERTANAMAN EDAMAME (*Glycine max* L. *Merill*) AKIBAT PERLAKUAN OLAH TANAH DAN PEMUPUKAN DI TANAH ULTISOL GEDUNG MENENG PADA MUSIM TAMAN KE-10

Oleh

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Tanah Ultisol di Indonesia berpotensi untuk budidaya edamame. Namun, memiliki kendala yang dapat menghambat pertumbuhan tanaman, seperti rendahnya unsur hara salah satunya kalium. Upaya untuk mengatasi kendala tersebut dilakukan dengan pengolahan tanah dan pemupukan. Tujuan dari penelitian ini adalah mengetahui pengaruh perlakuan olah tanah dan pemupukan, serta interaksinya, terhadap parameter Q/I kalium (PBC_K, CR_K^0, ΔK^0, dan K_G) dan kalium terpanen pada tanaman edamame. Selain itu, mengatahui korelasi antara parameter Q/I dengan kalium terpanen tanaman edamame akibat perlakuan olah tanah dan pemupukan. Penelitian ini dirancang dalam Rancangan Acak Kelompok (RAK) yang disusun secara faktorial (2×2) dengan 4 kelompok. Faktor pertama adalah perlakuan sistem olah tanah (T) yaitu T0 = olah tanah minimum, dan T1 = olah tanah intensif. Faktor kedua dalam penelitian ini adalah pemupukan (P) yaitu P0 = tanpa pemupukan dan P1= pemberian pupuk NPK 200 kg ha^{-1} dan pupuk kandang ayam 1000 kg ha^{-1}. Hasil penelitian menunjukkan bahwa perlakuan olah tanah tidak meningkatkan parameter Q/I kalium maupun kalium terpanen. Perlakuan pemupukan tidak meningkatkan parameter Q/I kalium, namun berpengaruh nyata meningkatkan kalium terpanen. Tidak terdapat interaksi antara olah tanah dan pemupukan terhadap parameter Q/I kalium, serta tidak terdapat korelasi nyata antara parameter Q/I kalium dengan kalium terpanen tanaman edamame.

Kata kunci : Edamame, Kalium, Olah tanah minimum dan intensif,
Pupuk kandang ayam dan NPK, Q/I Kalium.

ABSTRACT

EXCHANGE BEHAVIOR OF POTASSIUM AND HARVESTED POTASSIUM IN EDAMAME (Glycine max L. Merill) PLANTS DUE TO SOIL CULTIVATION AND FERTILIZER TREATMENTS IN ULTISOL SOIL OF GEDUNG MENENG IN THE 10TH GARDENING SEASON

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Ultisol soil in Indonesia has the potential for edamame cultivation. However, it has constraints that can inhibit plant growth, such as low nutrient content, one of which is potassium. Efforts to overcome these constraints are carried out by soil cultivation and fertilization. The purpose of this study was to determine the effect of soil cultivation and fertilization treatments, as well as their interactions, on the Q/I parameters of potassium (PBC_K, CR_K^0, ΔK^0, and K_G) and harvested potassium in edamame plants. In addition, to determine the correlation between the Q/I parameters and harvested potassium in edamame plants due to soil cultivation and fertilization treatments. The research was conducted in a Randomized Block Design (RBD) consisting of factorially arranged (2×2) with 4 groups. The first factor was the soil cultivation system treatment (T), namely T0 = minimum soil cultivation, and T1 = intensive soil cultivation. The second factor in this study was fertilization (P) namely P0 = without fertilization and P1 = application of 200 kg ha-1 NPK fertilizer and 1000 kg ha-1 chicken manure. The results showed that tillage treatment did not increase the parameters of Q/I potassium or harvested potassium. Fertilization treatment did not increase the parameters of Q/I potassium, but had a significant effect on increasing harvested potassium. There was no interaction between tillage and fertilization on potassium Q/I parameters, and no significant correlation was found between potassium Q/I parameters and potassium uptake in edamame plants

Keywords: Edamame, Exchange, Minimum tillage and Intensive, Chicken manure and NPK, Q/I Potassium.