

## RINGKASAN

Kedelai edamame (*Glycine max* (L.) Merrill) merupakan kedelai yang dipanen dalam bentuk polong muda yang segar, dengan nilai protein tinggi, tekstur lembut, berbiji besar dan rasanya manis. Seiring perkembangan industri pangan, permintaan pasar global terhadap edamame menjadi tinggi, namun produksi edamame di Indonesia masih rendah. Disamping itu, di Indonesia banyak lahan ultisol, dimana tergolong lahan kurang subur dengan pH rendah yang berpeluang dikembangkan komoditas edamame. Kombinasi bahan organik dan dolomit merupakan potensi dalam memperbaiki struktur tanah sehingga meningkatkan pertumbuhan dan hasil edamame. Penelitian ini bertujuan mengetahui pengaruh pemberian macam bahan organik dan dolomit terhadap pertumbuhan dan hasil edamame di tanah ultisol.

Penelitian ini dilaksanakan di Lahan Percobaan dan Laboratorium Agronomi & Hortikultura Universitas Jenderal Soedirman. Rancangan pada penelitian ini yaitu Rancangan Acak Kelompok (RAK) faktorial yang terdiri dari 2 faktor perlakuan, yaitu bahan organik (B) sebanyak 4 taraf dan dolomit (D) sebanyak 4 taraf. Variabel pengamatan terdiri atas tinggi tanaman, jumlah daun trifoliat, jumlah cabang per tanaman, bobot segar tajuk, bobot kering tajuk, bobot segar akar, bobot kering akar, jumlah polong per tanaman, jumlah polong hampa per tanaman, dan bobot polong per tanaman. Data hasil penelitian dianalisis menggunakan analisis ragam (ANOVA) pada taraf 5%. Apabila berpengaruh nyata ( $F_{hitung} > F_{tabel}$ ) maka diuji lanjut menggunakan uji *Duncan's Multiple Range Test* (DMRT) pada taraf kesalahan 5%.

Berdasarkan penelitian yang telah dilakukan, dapat disimpulkan pemberian bahan organik dan dolomit efektif meningkatkan variabel pertumbuhan dan hasil dibandingkan kontrol. Pemberian dolomit paling efektif pada dosis 2,1 ton/ha, karena pemberian dosis yang lebih tinggi tidak meningkatkan hasil secara signifikan. Terdapat interaksi pada variabel jumlah polong per tanaman dan bobot polong per tanaman. Kombinasi terbaik dalam meningkatkan hasil yaitu dolomit dosis 2,1 ton/ha dengan pupuk kandang sapi 15 ton/ha, karena berinteraksi dalam meningkatkan jumlah polong per tanaman dan bobot polong per tanaman tertinggi.

## ***SUMMARY***

Edamame soybeans (*Glycine max* (L.) Merrill) are soybeans that are harvested in the form of fresh young pods, with high protein value, soft texture, large seeds and sweet taste. Along with the development of the food industry, global market demand for edamame has increased, but edamame production in Indonesia is still low. In addition, in Indonesia there are many ultisol lands, which are classified as less fertile land with low pH which have the potential to develop edamame commodities. The combination of organic matter and dolomite has the potential to improve soil structure so as to increase the growth and yield of edamame. This study aims to determine the effect of providing various types of organic matter and dolomite on the growth and yield of edamame on ultisol soil.

This research was conducted at the Experimental Field and Agronomy & Horticulture Laboratory of Jenderal Soedirman University. The design in this study was a factorial Randomized Complete Block Design (RCBD) consisting of 2 treatment factors, namely organic matter (B) as many as 4 levels and dolomite (D) as many as 4 levels. Observation variables consist of plant height, number of trifoliolate leaves, number of branches per plant, fresh weight of crown, dry weight of crown, fresh weight of roots, dry weight of roots, number of pods per plant, number of empty pods per plant, and pod weight per plant. The research data were analyzed using analysis of variance (ANOVA) at the 5% level. If there is a significant effect ( $F_{count} > F_{table}$ ), then it is further tested using Duncan's Multiple Range Test (DMRT) at an error level of 5%.

Based on the research that has been conducted, it can be concluded that the provision of organic matter and dolomite is effective in increasing growth and yield variables compared to the control. The provision of dolomite is most effective at a dose of 2.1 tons/ha, because the provision of higher doses does not significantly increase yields. There is an interaction between the variables of the number of pods per plant and the weight of pods per plant. The best combination in increasing yields is dolomite at a dose of 2.1 tons/ha with 15 tons/ha of cow manure, because it interacts in increasing the number of pods per plant and the highest weight of pods per plant.