

RESPON PERTUMBUHAN DAN HASIL TANAMAN TOMAT CERI (*Lycopersicum Esculentum* Var. *Cerasiforme*) VARIETAS ROJITA TERHADAP DOSIS PUPUK KALIUM DAN PUPUK ORGANIK ECENG GONDOK

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ABSTRAK

Tujuan penelitian adalah mengetahui adanya interaksi dari aplikasi pupuk kalium dan pupuk organik eceng gondok untuk pertumbuhan dan hasil tanaman tomat ceri. Penelitian dilaksanakan di Greenhouse Plasan yang bertempat di Tirtomartani, Kalasan, Yogyakarta bulan Desember 2019 sampai dengan bulan Maret 2020. Menggunakan metode rancangan perlakuan faktorial (4 x 3) dengan 3 ulangan yang disusun menggunakan Rancangan Acak Lengkap (RAL). Faktor pertama adalah dosis pupuk Kalium (K) yang terdiri dari 4 taraf yaitu Tanpa pupuk Kalium (K0), 100 kg K₂O/ ha (K1), 150 kg K₂O/ ha (K2), 200 kg K₂O/ ha (K3). Faktor kedua adalah dosis pupuk organik eceng gondok (P) yang terdiri dari 3 taraf yaitu 10 ton/Ha (P1), 20 ton/Ha (P2), 30 ton/Ha (P3). Dianalisis dengan menggunakan *Analysis of Variance* (ANOVA) pada taraf $\alpha=5\%$. Apabila terdapat beda nyata antar perlakuan maka dilanjutkan uji *Duncan's Multiple Range Test* (DMRT) taraf $\alpha=5\%$. Hasil penelitian menunjukkan adanya interaksi antara perlakuan Kalium dan pupuk eceng gondok pada parameter diameter batang 35, 42, 49 HST, jumlah cabang tanaman 35 dan 42 HST, jumlah buah pertanaman dan bobot buah pertanaman. Dosis pupuk Kalium memberikan hasil yang berbeda-beda tiap parameter. Pada jumlah buah per petak, diameter buah, dan panjang buah, perlakuan (K0) nyata lebih baik dibandingkan dengan perlakuan yang lain. Dosis pupuk eceng gondok memberikan hasil yang berbeda-beda tiap parameter. Pada jumlah buah per tanaman dan bobot buah pertanaman, serta jumlah buah per petak, dan bobot buah per petak, perlakuan dosis pupuk eceng gondok (P1) nyata lebih baik dibandingkan dengan perlakuan lain.

Kata kunci : Tomat ceri, pupuk Kalium, pupuk organik eceng gondok.

**THE GROWTH RESPONSE AND YIELD OF CHERRY TOMATO PLANT
(*Lycopersicum Esculentum* Var. *Cerasiforme*) ROJITA VARIETIES TO THE DOSAGE
OF POTASSIUM FERTILIZER AND ORGANIC FERTILIZER OF WATER
HYACINTH**

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ABSTRACT

The aim of this study was to obtain is there any interaction from Potassium fertilizer application and organic fertilizer of water hyacinth for the growth and the yield of cherry tomato plants. The research was conducted from December 2019 until March 2020 at Greenhouse Plasan, in Tirtomartani, Kalasan, Yogyakarta. The research method was a factorial treatment design (4 x 3) with 3 replications arranged using a completely randomized design (CRD). The first factor is the dose of Potassium (K) fertilizer which consists of 4 levels, which is without Potassium fertilizer(K0), 100 kg K₂O/ ha (K1), 150 kg K₂O/ ha (K2), 200 kg K₂O/ ha (K3). The second factor is the dose of organic water hyacinth (P) fertilizer which consists of 3 levels which is 10 ton/Ha (P1), 20 ton/Ha (P2), 30 ton/Ha (P3). Data were analyzed using *Analysis of Variance* (ANOVA) at the standard of $\alpha=5\%$. If there are significant differences between treatments then the test will be continued using *Duncan's Multiple Range Test* (DMRT) at the standard of $\alpha=5\%$. The research result showed an interaction between potassium treatment and water hyacinth fertilizer on parameter of 35 HST, 42 HST, 49 HST stem's diameter, amount of 35 HST, 42 HST plant branches, amount of fruit plantations, and fruit weight cropping. The dosage of potassium fertilizer gave different results for each parameter. On the parameter of amount of fruit per plot, fruit diameter and length, the treatment (K0) was significantly better than other treatments. The dose of organic hyacinth fertilizer gives different results for each parameter. On parameter amount of planted fruit, weight of planted fruit, fruit amount and weight per plot, the treatment (P1) was significantly better than other treatments.

Keywords: Cherry tomatoes, Potassium fertilizer, organic fertilizer of water hyacinth