

ABSTRAK

Pujiyanti Lestari. 2023. Efektivitas Isolat Bakteri Pelarut Fosfat dan Pupuk NPK 15:09:20 terhadap Pertumbuhan dan Hasil Tanaman Mentimun Jepang (*Cucumis sativus* var. *Japonese*). Dibawah bimbingan Cecep Hidayat dan Yati Setiati Rachmawati.

Produksi mentimun jepang tergolong rendah, peningkatan hasil dapat dilakukan dengan pemberian pupuk anorganik. Pengurangan pupuk anorganik harus dilakukan sebab banyak menimbulkan dampak negatif, solusinya dengan penggabungan bersama isolat bakteri pelarut Fosfat. Tujuan dari penelitian yaitu untuk mengetahui interaksi antara isolat bakteri pelarut fosfat dan pupuk NPK 15:09:20 terhadap pertumbuhan dan hasil tanaman mentimun jepang. Metode yang digunakan yaitu Rancangan Acak Kelompok Faktorial 2 faktor. Faktor pertama Isolat BPF 4 taraf yaitu 0 ml polybag⁻¹, Isolat A 10 ml polybag⁻¹, Isolat B 10 ml polybag⁻¹, Isolat C 10 ml polybag⁻¹. Faktor kedua pupuk NPK 15:09:20 5 taraf yaitu 0 g polybag⁻¹, 0,38 g polybag⁻¹, 0,75 g polybag⁻¹, 1,13 g polybag⁻¹, dan 1,5 g polybag⁻¹. Hasil penelitian menunjukkan tidak terjadi interaksi antara Isolat BPF dan pupuk NPK 15:09:20 dalam meningkatkan pertumbuhan dan hasil tanaman mentimun jepang. Pengaruh Isolat BPF tidak berpengaruh terhadap pertumbuhan dan hasil tanaman mentimun jepang, namun pupuk NPK 15:09:20 dengan dosis 1,5 g polybag⁻¹ memberikan hasil terbaik terhadap pertumbuhan tanaman mentimun jepang.

Kata kunci: Isolat BPF, Mentimun Jepang, Pupuk NPK 15:09:20

ABSTRACT

Pujiyanti Lestari. 2023. Effectiveness of Phosphate Solubilizing Bacterial Isolates and NPK 15:09:20 Fertilizer on the Growth and Yield of Japanese Cucumber Plants (*Cucumis sativus* var. *Japonese*). Under the guidance of Cecep Hidayat and Yati Setiati Rachmawati.

Japanese cucumber production is relatively low, increasing yields can be done by applying inorganic fertilizer. Reducing inorganic fertilizers must be carried out because they have many negative impacts, the solution is by combining them with phosphate-solvent bacterial isolates. The aim of the research was to determine the interaction between phosphate solubilizing bacterial isolates and NPK 15:09:20 fertilizer on the growth and yield of Japanese cucumber plants. The method used was a 2-factor factorial randomized block design. The first factor is 4 levels of BPF Isolate, namely 0 ml polybag⁻¹, Isolate A 10 ml polybag⁻¹, Isolate B 10 ml polybag⁻¹, Isolate C 10 ml polybag⁻¹. The second factor of NPK fertilizer 15:09:20 5 levels is 0 g polybag⁻¹, 0.38 g polybag⁻¹, 0.75 g polybag⁻¹, 1.13 g polybag⁻¹, and 1.5 g polybag⁻¹. The research results showed that there was no interaction between BPF isolate and NPK 15:09:20 fertilizer in increasing the growth and yield of Japanese cucumber plants. The effect of BPF isolate had no effect on the growth and yield of Japanese cucumber plants, however NPK 15:09:20 fertilizer at a dose of 1.5 g polybag⁻¹ gave the best results on the growth of Japanese cucumber plants.

Keywords: BPF Isolate, Japanese Cucumber, NPK Fertilizer 15:09