## ABSTRAK

## PENGARUH KOMBINASI DOSIS PUPUK HAYATI DAN NPK TERHADAP PERTUMBUHAN DAN HASIL TANAMAN MENTIMUN (*Cucumis sativus* L.)

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Produktivitas tanaman mentimun (*Cucumis sativus* L.) di Indonesia menurun akibat teknik budidaya yang kurang optimal, termasuk penggunaan pupuk anorganik berlebihan yang menurunkan kualitas tanah dan efisiensi hara. Penelitian bertujuan untuk mengetahui kombinasi dosis pupuk hayati dan NPK yang paling efektif dalam meningkatkan pertumbuhan dan hasil tanaman mentimun. Penelitian menggunakan Rancangan Acak Kelompok (RAK) dan dianalisis ANOVA dan uji Duncan yang terdiri dari 7 perlakuan dan 4 ulangan yaitu A= Tanpa pupuk hayati + NPK 100% rekomendasi, B= Pupuk hayati 5 g/tanaman + NPK 25% rekomendasi, C= Pupuk hayati 10 g/tanaman + NPK 25% rekomendasi, D= Pupuk hayati 15 g/tanaman + NPK 25% rekomendasi, E= Pupuk hayati 5 g/tanaman + NPK 50% rekomendasi, F= Pupuk hayati 10 g/tanaman + NPK 50% rekomendasi dan G=Pupuk hayati 15 g/tanaman + NPK 50%. Pengamatan dilaksanakan pada umur 14 HST, 21 HST dan 28 HST. Hasil analisis ragam menunjukkan bahwa perlakuan pupuk hayati dan NPK berpengaruh terhadap tinggi tanaman, jumlah daun, diameter buah, bobot buah per tanaman dan hasil buah per petak. Didapatkan dosis pupuk hayati dan NPK yang tepat yaitu pupuk hayati 10 gram/ tanaman dan pupuk NPK 50% yang paling baik terhadap pertumbuhan dan hasil mentimun (*Cucumis sativus* L.).



Kata kunci: Mentimun, NPK, Pupuk Hayati.

# ABSTRACT

## THE EFFECT OF BIOFERTILIZER AND NPK DOSAGE COMBINATIONS ON THE GROWTH AND YIELD OF CUCUMBER (*Cucumis sativus* L.)

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The productivity of cucumber (*Cucumis sativus* L.) in Indonesia has been declining due to suboptimal cultivation techniques, including excessive use of inorganic fertilizers, which degrade soil quality and nutrient efficiency. This study aims to determine the most effective combination of biofertilizer and NPK doses in improving cucumber growth and yield. The research employed a Randomized Block Design (RBD) and was analyzed using ANOVA and Duncan's Multiple Range Test, comprising seven treatments and four replications: A = No biofertilizer + 100% recommended NPK, B = Biofertilizer 5 g/plant + 25% recommended NPK, C = Biofertilizer 10 g/plant + 25% recommended NPK, D = Biofertilizer 15 g/plant + 25% recommended NPK, E = Biofertilizer 5 g/plant + 50% recommended NPK, F = Biofertilizer 10 g/plant + 50% recommended NPK, and G = Biofertilizer 15 g/plant + 50% recommended NPK. Observations were conducted at 14, 21, and 28 days after planting (DAP). The analysis of variance results indicated that the combination of biofertilizer and NPK significantly influenced plant height, leaf count, fruit weight per plant, and yield per plot. The optimal dosage was found to be 10 g of biofertilizer per plant and 50% of the recommended NPK, which provided the best results for cucumber growth and yield (*Cucumis sativus* L.).



**Keywords:** Cucumber, NPK, Biofertilizer.