

ABSTRAK

Najwa Savira Muthmainnah. 2025. Pengaruh Dosis Berbagai Jenis Pupuk Kandang dan Pupuk Hayati Terhadap Pertumbuhan dan Hasil Tanaman Mentimun (*Cucumis sativus* L.). Dibawah Bimbingan Budy Frasetya Taufik Qurrohman dan Jajang Supriatna.

Produktivitas tanaman mentimun menurun akibat rendahnya kandungan hara dan degradasi lahan karena penggunaan pupuk anorganik tanpa pupuk organik. Pupuk kandang merestorasi tanah terdegradasi, sementara pupuk hayati dengan mikroorganisme meningkatkan ketersediaan unsur hara. Penelitian bertujuan mengetahui interaksi pupuk kandang dan pupuk hayati terhadap pertumbuhan dan hasil tanaman mentimun (*Cucumis sativus* L.) serta kombinasi dosis untuk meningkatkan pertumbuhan dan hasil tanaman mentimun (*Cucumis sativus* L.). Penelitian dilakukan di Kampus II UIN Sunan Gunung Djati Bandung dari Maret-November 2025 menggunakan metode eksperimental RAK faktorial. Faktor pertama pupuk kandang (P) 4 taraf perlakuan: p0 (tanpa perlakuan pupuk kandang), p1 (20 t ha⁻¹ pupuk kandang ayam), p2 (20 t ha⁻¹ pupuk kandang sapi), dan p3 (20 t ha⁻¹ pupuk kandang kambing). Faktor kedua pupuk hayati (H) 4 taraf perlakuan: h0 (tanpa perlakuan pupuk hayati), h1 (20 kg ha⁻¹ pupuk hayati merek A), h2 (20 kg ha⁻¹ pupuk hayati merek B), dan h3 (20 kg ha⁻¹ pupuk hayati merek C), menghasilkan 16 kombinasi perlakuan dengan 3 ulangan dan 2 unit, total 96 perlakuan. Hasil penelitian menunjukkan bahwa pupuk kandang ayam memengaruhi panjang batang (cm) dan menunjukkan hubungan antara pupuk kandang dan pupuk hayati pada indeks panen. Dosis kombinasi (p1h1 = 20 t ha⁻¹ pupuk kandang ayam dan 20 kg ha⁻¹ pupuk hayati merek A) paling efektif untuk meningkatkan pertumbuhan dan hasil tanaman mentimun.

Kata Kunci : Budidaya Mentimun, Pupuk Hayati, Pupuk Kandang

ABSTRACT

Najwa Savira Muthmainnah. 2025. The Effect of Different Types of Fertilizer Dosage and Organic Fertilizer on the Growth and Yield of Cucumber Plants (*Cucumis sativus* L.). Supervised by Budy Frasetya Taufik Qurrohman and Jajang Supriatna.

Cucumber plant productivity declines due to low nutrient content and land degradation from inorganic fertilizer use without organic supplements. Manure restores degraded soil, while biofertilizers with microorganisms enhance nutrient availability. This research aims to determine the interaction between manure and biofertilizers on cucumber (*Cucumis sativus* L.) growth and yield, as well as dosage combinations to improve both. Research was conducted at Campus II UIN Sunan Gunung Djati Bandung from March-November 2025 using experimental factorial RAK design. First factor manure (P) 4 treatment levels: p0 (no manure), p1 (20 t ha⁻¹ chicken manure), p2 (20 t ha⁻¹ cow manure), p3 (20 t ha⁻¹ goat manure). Second factor biofertilizer (H) 4 treatment levels: h0 (no biofertilizer), h1 (20 kg ha⁻¹ brand A), h2 (20 kg ha⁻¹ brand B), h3 (20 kg ha⁻¹ brand C), yielding 16 combinations with 3 replications and 2 units, totaling 96 treatments. Results show chicken manure affects stem length (cm) and reveals relationship between manure and biofertilizer on harvest index. Combination dosage (p1h1 = 20 t ha⁻¹ chicken manure and 20 kg ha⁻¹ brand A biofertilizer) most effective for enhancing cucumber growth and yield.

Keywords: Biofertilizer, Cucumber Cultivation, Manure

