

ABSTRAK

PENGARUH TAKARAN KOMPOS GANGGANG AIR (*Hydrilla verticillata* (L.F.) Royle) TERHADAP PERTUMBUHAN DAN HASIL TANAMAN SELADA (*Lactuca sativa* L.)

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Selada merupakan komoditas hortikultura bernilai ekonomi tinggi dengan konsumsi yang terus meningkat, namun produksi selada tergolong masih rendah di Indonesia disebabkan rendahnya produktivitas tanah. Ganggang air (*Hydrilla verticillata*) yang memiliki kandungan hara makro seperti nitrogen, fosfor, dan kalium berpotensi dijadikan kompos untuk memenuhi kebutuhan tanaman serta meningkatkan produktivitas tanah. Penelitian dengan tujuan mendapatkan takaran kompos ganggang air yang memberikan pengaruh terbaik terhadap pertumbuhan dan hasil tanaman selada (*Lactuca sativa* L.) telah dilakukan di Kampung Cibanjuran, Desa Sinagar, Kecamatan Sukaratu, Kabupaten Tasikmalaya pada bulan Juni hingga Agustus 2024. Penelitian menggunakan Rancangan Acak Kelompok (RAK) dengan lima perlakuan: A) Pupuk nitrogen 200 kg/ha, B) Kompos ganggang air 10 ton/ha, C) Kompos ganggang air 12,5 ton/ha, D) Kompos ganggang air 15 ton/ha, dan E) Kompos ganggang air 17,5 ton/ha, yang diulang sebanyak lima kali. Hasil penelitian menunjukkan bahwa takaran kompos ganggang air sebesar 10 ton/ha memberikan pengaruh terbaik terhadap luas daun serta terhadap hasil panen berdasarkan indeks panen. Sementara itu, takaran kompos ganggang air yang lebih tinggi, yaitu 12,5 ton/ha dan 15 ton/ha, memberikan pengaruh yang lebih baik terhadap pertumbuhan vegetatif seperti tinggi tanaman, jumlah daun serta terhadap bobot segar per tanaman.

Kata Kunci : Ganggang air, selada, takaran kompos

ABSTRACT

EFFECT OF AQUATIC ALGAE (*Hydrilla verticillata* (L.F.) Royle) COMPOST APPLICATION RATES ON THE GROWTH AND YIELD OF LETTUCE (*Lactuca sativa* L.)

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Lettuce is a high-value horticultural commodity with increasing consumption demand; however, lettuce production in Indonesia remains low due to poor soil productivity. Aquatic algae (*Hydrilla verticillata*), which contains essential macronutrients such as nitrogen, phosphorus, and potassium, has the potential to be processed into compost to meet plant nutrient needs and improve soil productivity. This study aimed to determine the optimal application rate of aquatic algae compost for the growth and yield of lettuce (*Lactuca sativa* L.). The research was conducted in Kampung Cibantaran, Sinagar Village, Sukaratu Subdistrict, Tasikmalaya Regency, from June to August 2024. The study employed a Randomized Complete Block Design (RCBD) with five treatments: A) 200 kg/ha nitrogen fertilizer, B) 10 tons/ha aquatic algae compost, C) 12.5 tons/ha aquatic algae compost, D) 15 tons/ha aquatic algae compost, and E) 17.5 tons/ha aquatic algae compost, each replicated five times. The results showed that the application of algae compost at a rate of 10 tons/ha provided the best effect on leaf area and yield based on the harvest index. Meanwhile, higher application rates of algae compost, namely 12.5 tons/ha and 15 tons/ha, resulted in better effects on vegetative growth, such as plant height, number of leaves, and fresh weight per plant.

Keywords : Aquatic algae, lettuce, compost application rates