ABSTRAK

Zahra Febrianti, 2025. Efektivitas POC Campuran Eceng Gondok (*Eichhornia Crassipes*) dan Sabut Kelapa dalam Efisiensi Pupuk NPK pada Pertumbuhan dan Hasil Tanaman Bawang Merah (*Allium ascalonicum* L.). Dibawah bimbingan Efrin Firmansyah dan Cecep Hidayat.

Bawang Merah (*Allium ascalonicum* L.) merupakan tanaman hortikultura unggulan yang banyak dibudidayakan secara intensif. Untuk meningkatkan produksi dapat melalui pemupukan tepat dengan mengurangi penggunaan pupuk anorganik yang dikombinasikan dengan pupuk organik cair campuran limbah eceng gondok dan sabut kelapa. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh POC campuran eceng gondok dan sabut kelapa dalam efisensi penggunaan pupuk NPK, pertumbuhan dan hasil tanaman bawang merah. Penelitian dilaksanakan di UPT PTPHP Kota Bandung. Metode penelitian yang digunakan yaitu Rancangan Acak Kelompok (RAK) dengan 7 perlakuan dan 4 ulangan yaitu: A = kontrol, B = NPK 100%, C = POC 100%, D = POC 75% + NPK 25%, E = POC 50% + NPK 50%, F = POC 25% + NPK 75%. Pada setiap plot terdapat 3 unit sehingga diperoleh 72 satuan percobaan. Parameter utama pada penelitian ini terdiri dari tinggi tanaman, jumlah daun, jumlah umbi, bobot umbi segar per rumpun, bobot umbi segar per umbi, indeks panen dan RAE. Hasil penelitian menunjukkan bahwa pemberian POC campuran eceng gondok sabut kelapa dapat mengefisienkan penggunaan pupuk NPK dan berpengaruh terhadap pertumbuhan dan hasil tanaman bawang merah. Dosis POC 50% + NPK 50% merupakan dosis yang optimal terhadap pertumbuhan dan hasil bawang merah serta dapat mengefisienkan penggunaan pupuk NPK hingga 50%.

Kata Kunci: Bawang merah, Efisiensi, POC, NPK, Pupuk anorganik

ABSTRACT

Zahra Febrianti, 2025. The Effectiveness of Liquid Organic Fertilizer Mixture of Water Hyacinth (Eichhornia crassipes) and Coconut Husk in Enhancing NPK Fertilizer Efficiency on the Growth and Yield of Shallot (Allium ascalonicum* L.*). Supervised by Efrin Firmansyah and Cecep Hidayat.

Shallot (Allium ascalonicum L.*) is a leading horticultural crop that is widely cultivated intensively. To increase production, proper fertilization can be applied by reducing the use of inorganic fertilizers and combining them with liquid organic fertilizer (LOF) made from a mixture of water hyacinth and coconut husk waste. The aim of this study was to determine the effect of LOF made from water hyacinth and coconut husk on NPK fertilizer efficiency, as well as on the growth and yield of shallot plants. The research was conducted at the Technical Implementation Unit of Horticulture and Plantation Production (UPT PTPHP), Bandung City. The experimental design used was a Randomized Complete Block Design (RCBD) with 7 treatments and 4 replications: A = control, B = 100% NPK, C = 100% LOF, D = 75% LOF + 25% NPK, E = 50% LOF + 50% NPK, F = 25% LOF + 75% NPK. Each plot consisted of 3 units, resulting in 72 experimental units. The main parameters observed in this study were plant height, number of leaves, number of bulbs, fresh bulb weight per clump, fresh bulb weight per bulb, harvest index, and Relative Agronomic Efficiency (RAE). The results showed that the application of LOF made from water hyacinth and coconut husk was able to improve the efficiency of NPK fertilizer use and had a positive effect on the growth and yield of shallot plants. The combination of 50% LOF + 50% NPK was the optimal dosage for enhancing shallot growth and yield while reducing NPK fertilizer use by up to 50%.*

*Keywords**:** Shallot, Efficiency, Liquid Organic Fertilizer, NPK, Inorganic Fertilizer*