

Muhammad Dzulfikri Ramdhani. (200311100099). Pengaruh Pemberian Pupuk Organik Cair (POC) Air Cucian Beras Terhadap Pertumbuhan dan Hasil Tanaman Kedelai (*Glycine max* L). Dibawah Bimbingan: Dr. Ir. H. Ahmad Arsyadmunir, M.S dan Ir. Achmad Djunaedy, M.P.

ABSTRAK

Tanaman kedelai merupakan tanaman yang penting untuk memenuhi kebutuhan pangan dalam rangka perbaikan gizi pada masyarakat. Kebutuhan rata-rata kedelai di Indonesia sebanyak 2,2 juta ton/tahun, namun produksi kedelai pada tahun 2022 dalam negeri hanya mencapai 594,6 ribu ton. Upaya dalam peningkatan produktivitas tanaman kedelai salah satunya pemberian pupuk yang tepat. Pemupukan bertujuan memperbaiki kesuburan tanah sehingga dapat menyumbangkan unsur hara bagi tanaman, salah satunya menggunakan pupuk organik cair. Pupuk organik cair adalah larutan yang sebagian besar mengandung organik yang berupa sisa tanaman dan sisa hewan. Pupuk organik cair air cucian beras memiliki kandungan unsur hara yang bermanfaat bagi tanaman dan mudah didapatkan. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian pupuk organik cair (POC) air cucian beras terhadap pertumbuhan dan hasil pada tanaman kedelai. Penelitian dimulai pada bulan Desember 2023 – Maret 2024 di *Green House* Agroekoteknologi, Program Studi Agroekoteknologi, Fakultas Pertanian, Universitas Trunojoyo Madura. Penelitian ini menggunakan rancangan penelitian Rancangan Acak Lengkap non faktorial. Perlakuan dalam penelitian ini terdapat 5 taraf perlakuan yaitu P0 = (Tanpa POC air cucian beras), P1 = 150 mL/L air (150 mL POC Air cucian beras + 1 L Air), P2 = 300 mL/L air (300 mL POC Air cucian beras + 1 L Air), P3 = 450 mL/L air (450 mL POC Air cucian beras + 1 L Air), P4 = 600 mL/L air (600 mL POC Air cucian beras + 1 Liter Air). Data yang diperoleh dianalisis menggunakan *Analysis of Variance* (ANOVA) dengan taraf 5%. Apabila terdapat pengaruh yang berbeda nyata, maka dilakukan uji lanjut menggunakan uji lanjut DMRT dengan taraf 5%. Pemberian pupuk organik cair air cucian beras memperoleh hasil nyata pada parameter tinggi tanaman jumlah polong isi, bobot biji pertanaman, bobot 100 biji, dan bobot kering tanaman. Perlakuan pemberian POC air cucian beras terbaik ialah P3 = 450 mL/L air (450 mL POC Air cucian beras + 1 L Air)

Kata Kunci: Air cucian beras, Kedelai, Pupuk Organik Cair,

Muhammad Dzulfikri Ramdhani. (200311100099). The Effect of Providing Liquid Organik Fertilizer (POC) in Rice Washing Water on the Growth and Yield of Soybean Plants (*Glycine max* L). Under the Guidance of: Dr. Ir. H. Ahmad Arsyadmunir, M.S and Ir. Achmad Djunaedy, M.p.

ABSTRACT

Soybeans are an important crop to meet food needs in order to improve nutrition in society. The average demand for soybeans in Indonesia is 2.2 million tons/year, but domestic soybean production in 2022 will only reach 594.6 thousand tons. Efforts to increase the productivity of soybean plants include providing appropriate fertilizer. Fertilization aims to improve soil fertility so that it can contribute nutrients to plants, one of which is using liquid organic fertilizer. Liquid organic fertilizer is a solution that mostly contains organic matter in the form of plant and animal remains. Liquid organic fertilizer from rice washing water contains nutrients that are beneficial for plants and are easy to obtain. This research aims to determine the effect of applying liquid organic fertilizer (POC) from rice washing water on the growth and yield of soybean plants. This research was conducted in December 2023 – March 2024 at the Agroecotechnology Green House, Agroecotechnology Study Program, Faculty of Agriculture, Trunojoyo University, Madura. This research used a non-factorial Completely Randomized Design research design. There were 5 treatment levels in this study, namely P0 = (Without POC rice washing water), P1 = 150 mL/L water (150 mL POC Rice washing water + 1 Liter Water), P2 = 300 mL/L water (300 mL POC Rice washing water + 1 Liter Water), P3 = 450 mL/L water (450 mL POC Rice washing water + 1 Liter Water), P4 = 600 mL/L water (600 mL POC Rice washing water + 1 Liter Water). The data obtained were analyzed using Analysis of Variance (ANOVA) with a level of 5%. If there is a significantly different effect, then a further test is carried out using the DMRT further test with a level of 5%. Real results were obtained on the parameters of plant height, number of filled pods, seed weight per planting, weight of 100 seeds, and plant dry weight. When observing the number of leaves, number of cipo pods, number of root nodules, weight of root nodules, weight of seeds per plant, and wet weight of the plants, the results were not significantly different. The best treatment for giving POC rice washing water is P3 = 450 mL/L water (450 mL POC rice washing water + 1 liter of water)

Keywords: Liquid Organik Fertilizer, Rice Washing Water, Soybeans