

Sari Lailatul Izza. NIM 200311100051. Respon Pertumbuhan dan Hasil Sawi Hijau (*Brassica juncea* L.) terhadap Aplikasi POC Daun Lamtoro dan Kompos Biochar. Dibawah bimbingan Ir. Slamet Supriyadi, M.Si. dan Dr. Ir. Hj. Siti Fatimah, M.Si.

ABSTRAK

Sawi hijau (*Brassica juncea* L.) merupakan tanaman sayuran yang diminati oleh masyarakat karena bermanfaat bagi kesehatan. Peningkatan produksi tanaman perlu dilakukan untuk memenuhi kebutuhan masyarakat. Pemberian POC daun lamtoro dan kompos biochar yang tepat, diduga mampu meningkatkan pertumbuhan dan hasil tanaman sawi serta memperbaiki kualitas hasil panen. Tujuan penelitian ini adalah untuk mengetahui pengaruh interaksi POC daun lamtoro dan kompos biochar, dan konsentrasi dan dosis yang tepat untuk peningkatan pertumbuhan dan hasil tanaman sawi hijau. Penelitian ini dilakukan di Green House Universitas Trunojoyo Madura pada bulan Februari - Maret 2024. Perlakuan disusun dalam Rancangan Acak Kelompok (RAK) faktorial dengan 2 faktor. Faktor pertama, konsentrasi POC daun lamtoro (L) yang terdiri dari 3 taraf perlakuan yaitu: L1 = 5% (50 mL/L), L2 = 10% (100 mL/L), dan L3 = 15% (150 mL/L). Faktor kedua, dosis kompos biochar yang terdiri dari 4 taraf perlakuan yaitu: K0 = 0 ton/ha, K1 = 5 ton/ha, K2 = 10 ton/ha, dan K3 = 15 ton/ha. Dari kedua faktor tersebut diperoleh 12 perlakuan kombinasi, dan setiap perlakuan diulang sebanyak 3 kali sehingga didapatkan 36 unit percobaan dengan 3 sampel tanaman di setiap unit. Data dianalisis dengan ANOVA taraf 5% dan bila ada pengaruh dari perlakuan dilakukan uji lanjut dengan DMRT taraf 5%. Hasil penelitian menunjukkan bahwa interaksi POC daun lamtoro dan kompos biochar berpengaruh nyata pada tinggi tanaman, jumlah daun, luas daun, bobot basah tanaman, bobot kering tanaman, kadar klorofil a, klorofil b, dan klorofil total. Perlakuan K1L1 (5 ton/ha kompos biochar + 50 mL/L POC daun lamtoro) menghasilkan bobot basah tanaman dan kadar klorofil terbaik.

Kata kunci: kompos biochar, pupuk organik cair, sawi hijau

Sari Lailatul Izza. NIM 200311100051. Growth and Yield of Green Mustard (*Brassica juncea* L.) due to Application of Liquid Organic Fertilizer (LOF) from Leucaena Leaf and Biochar Compost. Supervised by Ir. Slamet Supriyadi, M.Si. and Dr. Ir. Hj. Siti Fatimah, M.Si.

ABSTRACT

Green mustard (*Brassica juncea* L.) is a vegetable crop in high demand by the public for its health benefits. There is a need to increase the yield of the crop to meet the needs of the community. Appropriate application of Liquid Organic Fertilizer (LOF) from Leucaena Leaf and biochar compost could be able to increase the growth and yield of mustard plants. The objective of this study was to determine the effects of the interaction of LOF from Leucaena Leaf and biochar compost and the right concentration and dose to increase the growth and yield of green mustard plants. This research was conducted at the Green House of Trunojoyo University Madura from February to March 2024. The treatments were arranged in a factorial randomized group design (RAK) consisting 2 factors. The first factor was the LOF concentrations (L), which consist of 3 treatment levels, namely L1 = 5% (50 mL/L), L2 = 10% (100 mL/L), and L3 = 15% (150 mL/L). The second factor was the doses of biochar compost, which consist of 4 treatment levels, namely K0 = 0 ton/ha, K1 = 5 ton/ha, K2 = 10 ton/ha, and K3 = 15 ton/ha. From these two factors, there were 12 combination treatments, and each treatment was replicated for 3 times, to end up in 36 experimental units (there were 3 plant samples in each unit). Data were analysed by ANOVA 5% and the difference among means was analysed by DMRT 5%. The results showed that the interaction of the LOF and biochar compost significantly affected plant height, number of leaves, leaf area, plant fresh weight, plant dry weight, chlorophyll a, chlorophyll b, and total chlorophyll content. The treatment of K1L1 (5 ton/ha biochar compost + 50 mL/L LOF) resulted the highest yield and chlorophyll content of green mustard.

Keywords: biochar compost, green mustard, liquid organic fertilizer