

RINGKASAN

Sawi pagoda merupakan varian baru tanaman sawi yang sedang diminati masyarakat. Adapun saat ini kendala produksi sawi pagoda yaitu penurunan luas lahan pertanian yang potensial akibat adanya penumpukan sampah hasil aktivitas manusia salah satunya sampah sayur. Peningkatan produksi sawi pagoda dapat dilakukan melalui pengolahan sampah sayur menjadi pupuk organik cair dan penggunaan berbagai jenis media tanam. Penelitian ini bertujuan untuk (1) mendapatkan konsentrasi pupuk organik cair sampah sayur terbaik, (2) mendapatkan media tanam terbaik, dan (3) mendapatkan interaksi antara konsentrasi pupuk organik cair sampah sayur dan media tanam terbaik untuk fisiologi tanaman sawi pagoda.

Penelitian dilaksanakan di Perumahan Griya Satria Bancarkembar, Kabupaten Banyumas; Laboratorium Agronomi dan Hortikultura serta Laboratorium Tanah dan Sumberdaya Lahan Fakultas Pertanian Universitas Jenderal Soedirman. Rancangan yang digunakan yaitu Rancangan petak Terbagi (*Split plot design*) yang terdiri dari 2 faktor dan 3 ulangan. Faktor pertama sebagai petak utama adalah konsentrasi pupuk organik cair sampah sayur (P) yaitu 5 mL/liter air, 20 mL/liter air, dan 35 mL/liter air. Faktor kedua sebagai anak petak adalah media tanam (M) yaitu tanah, arang sekam, dan serbuk gergaji. Data yang diperoleh dianalisis menggunakan analisis sidik ragam pada taraf 5%, selanjutnya apabila berpengaruh nyata dilanjutkan dengan uji *Duncan's Multiple Range Test* (DMRT) pada taraf nyata 5%.

Hasil penelitian menunjukkan konsentrasi pupuk organik cair sampah sayur tidak berpengaruh nyata terhadap semua variabel, namun perlakuan konsentrasi pupuk organik cair sampah sayur 35 mL/liter air memberikan hasil yang cenderung lebih baik. Media tanam berpengaruh sangat nyata pada variabel bobot tanaman kering, indeks luas daun, jumlah stomata, kerapatan stomata dan serapan nitrogen; sedangkan berpengaruh nyata pada variabel kehijauan daun 4 MST. Perlakuan media tanam tanah memberikan hasil yang terbaik terhadap seluruh variabel. Tidak terdapat interaksi antara perlakuan konsentrasi pupuk organik cair sampah sayur dengan media tanam pada semua variabel. Perlakuan konsentrasi pupuk organik cair sampah sayur 5 mL/liter air + tanah memberikan hasil cenderung lebih baik pada variabel kehijauan daun, sedangkan perlakuan konsentrasi pupuk organik cair sampah sayur 35 mL/liter air + tanah memberikan hasil cenderung lebih baik pada variabel bobot tanaman kering, indeks luas daun, jumlah stomata, kerapatan stomata dan serapan nitrogen.

Kata Kunci : Sawi pagoda, konsentrasi, sampah sayur, pupuk organik cair.

SUMMARY

Pagoda mustard is a new variant of the mustard plant that is currently in demand by the public. Meanwhile, the current constraint to the production of mustard greens is the potential reduction in the area of agricultural land due to the accumulation of waste produced by human activities, one of which is a vegetable waste. Increased production of mustard greens can be done through the processing of vegetable waste into liquid organic fertilizer and the use of various types of planting media. This study aims to (1) obtain the best concentration of liquid organic fertilizer for vegetable waste, (2) obtain the best-growing media, and (3) obtain the interaction between the concentration of liquid organic fertilizer for vegetable waste and the best-growing media for the physiology of mustard greens.

The research was conducted at the Griya Satria Bancarkembar Housing Estate, Banyumas Regency; Laboratory of Agronomy and Horticulture and Laboratory of Soil and Land Resources, Faculty of Agriculture, Jenderal Soedirman University. The design used is the Split plot design which consists of 2 factors and 3 replications. The first factor as the main plot is the concentration of liquid organic fertilizer for vegetable waste (P), namely 5 mL/liter of water, 20 mL/liter of water, and 35 mL/liter of water. The second factor as a sub-plot was the planting medium (M), namely soil, husk charcoal, and sawdust. The data obtained were analyzed using analysis of variance at the 5% level, then if it had a significant effect, it was continued with the Duncan's Multiple Range Test (DMRT) at the 5% significance level.

The results showed that the concentration of liquid organic fertilizer in vegetable waste had no significant effect on all variables, but the treatment with a concentration of 35 mL/liter of water gave better results. Planting media had a very significant effect on the variables of dry plant weight, leaf area index, a number of stomata, stomatal density, and nitrogen uptake; while the significant effect on the green leaf variable 4 WAP. Soil planting media treatment gave the best results for all variables. There is no interaction between the treatment of liquid organic fertilizer concentration of vegetable waste with the growing media on all variables. The treatment of liquid organic fertilizer concentration of vegetable waste 5 mL/liter of water + soil gave a tend to be better on the greenness of the leaves, while the treatment of concentration of liquid organic fertilizer of vegetable waste 35 mL/liter of water + soil tended to be better on the variable dry plant weight, leaf area index, a number of stomata, stomatal density, and nitrogen uptake.

Keywords: *Pagoda mustard, concentration, vegetable waste, liquid organic fertilizer.*