RINGKASAN

Tanaman sawi pagoda jarang diketahui orang Indonesia karena petani belum banyak yang membudidayakan. Tanaman sawi pagoda bernilai ekonomi tinggi serta memiliki prospek pasar yang bagus. Sawi pagoda mengalami peningkatan permintaan terutama dari hotel, supermarket, dan restoran, namun produksi sawi pagoda masih sedikit dan perlu dikembangkan. Permintaan sawi pagoda semakin bertambah sehingga salah satu upaya yang dapat dilakukan yaitu peningkatan kualitas serta kuantitas sawi pagoda. Penelitian ini bertujuan untuk: 1. Mendapatkan dosis pupuk organik cair urin sapi yang terbaik untuk pertumbuhan dan hasil tanaman sawi pagoda. 2. Mendapatkan komposisi media tanam terbaik untuk pertumbuhan dan hasil tanaman sawi pagoda. 3. Mendapatkan interaksi perlakuan antara dosis pupuk organik cair urin sapi dan komposisi media tanam untuk pertumbuhan dan hasil tanaman sawi pagoda.

Penelitian dilaksanakan di *screen house* Fakultas Pertanian dan Laboratorium Agronomi Hortikultura, Fakultas Pertanian, Universitas Jenderal Soedirman. Penelitian dilaksanakan pada bulan Desember 2021 sampai Februari 2022. Penelitian ini percobaan faktorial 4x3 dengan 3 ulangan, menggunakan Rancangan Acak Kelompok Lengkap (RAKL). Faktor pertama yaitu dosis pupuk organik cair urin sapi yang terdiri dari 4 taraf : tanpa pupuk organik cair urin sapi, 30 ml/tanaman, 60 ml/tanaman, dan 90 ml/tanaman. Faktor kedua yaitu komposisi media tanam yang terdiri dari 3 taraf : (50% tanah inseptisol: 25% pupuk kandang sapi: 25% arang sekam), (25% tanah inseptisol: 50% pupuk kandang sapi: 25% arang sekam), dan (25% tanah inseptisol: 25% pupuk kandang sapi: 50% arang sekam). Variabel pertumbuhan dan hasil tanaman yang diamati adalah tinggi tanaman, jumlah daun, luas daun, bobot tajuk segar, bobot tajuk kering, bobot akar segar, bobot akar kering, bobot tanaman segar, dan bobot tanaman kering. Data hasil pengamatan dianalisis dengan uji F dan jika berbeda nyata dilanjutkan dengan *Duncan's Multiple Range Test* (DMRT) pada taraf 5%.

Hasil penelitian menunjukkan bahwa terdapat pengaruh dosis pupuk organik cair berbahan urin sapi dan komposisi media tanam terhadap pertumbuhan dan hasil tanaman sawi pagoda. Dosis 60 ml/tanaman merupakan perlakuan yang terbaik dengan tinggi tanaman 15,84 cm, jumlah daun 56,83 helai, luas daun 1232,72 cm^2, bobot tanaman segar 84,32 g, bobot tajuk segar 81,41 g, bobot akar segar 2,86 g, bobot tanaman kering 4,39 g, bobot tajuk kering 4,04 g, dan bobot akar kering 0,35 g. Komposisi media tanam 25% tanah inseptisol: 50% pupuk kandang sapi: 25% arang sekam merupakan perlakuan yang paling baik dengan tinggi tanaman 16,52 cm, jumlah daun 57,31 helai, luas daun 1204,12 cm^2, bobot tanaman segar 86,53 g, bobot tajuk segar 83,8 g, bobot akar segar 2,54 g, bobot tanaman kering 4,36 g, bobot tajuk kering 4,04 g, dan bobot akar kering 0,31 g. Interaksi antara dosis POC urin sapi dengan komposisi media tanam tidak berpengaruh terhadap seluruh variabel pengamatan sehingga belum diperoleh bentuk kombinasi perlakuan terbaik.

SUMMARY

Indonesians rarely know pagoda mustard plant because many farmers have not cultivated this plant. Pagoda mustard plant have high economic value and have good market prospects. The demand of pagoda mustard has increased, especially from hotels, supermarkets, and restaurants, but Pagoda mustard production is still small and needs to be developed. The demand for pagoda mustard is increasing, so one of the efforts is to improve the quality and quantity. This study aims to: 1. Determine the best dose of liquid organic fertilizer cow urine for the growth and yield of Pagoda mustard plant. 2. Determine the best composition of the growing media for the growth and yield of mustard plant. 3. Determine the best interactions of treatment between the dose of liquid organic fertilizer of cow urine and the composition of the growing media for the growth and yield of pagoda mustard.

The research was conducted at the screen house of the Faculty of Agriculture and Horticultural Agronomy Laboratory, Faculty of Agriculture, Jenderal Soedirman University. The study was conducted from December 2021 to February 2022. This study was a 4x3 factorial experiment with three replications, using a Randomized Completely Block Design (RCBD). The first factor was the dose of cow urine liquid organic fertilizer that consisted of 4 levels: without liquid organic cow urine fertilizer, 30 ml/plant, 60 ml/plant, and 90 ml/plant. The second factor was the composition of the growing media which consists of 3 levels: (50% inceptisol soil: 25% cow manure: 25% husk charcoal), (25% inceptisol soil: 50% cow manure: 25% charcoal husk), and (25% inceptisol soil: 25% cow manure: 50% husk charcoal). Pagoda mustard plant growth and plant variables observed were plant height, number of leaves, leaf area, dry crown weight, fresh crown weight, fresh root weight, dry root weight, fresh plant weight, and dry plant weight. Observational data were analyzed using the F test, and if they were significantly different, it had continued with Duncan's Multiple Range Test (DMRT) at the 5% level.

The results showed that there was an effect of the dose of liquid organic fertilizer made from cow urine and the composition of the growing media on the growth and yield of pagoda mustard. The dose of 60 ml/plant was the best treatment with plant height of 15.84 cm, number of leaves 56.83 strands, leaf area of 1232.72 cm^2, fresh plant weight 84.32 g, fresh crown weight 81.41 g, weight fresh root 2.86 g, dry plant weight 4.39 g, dry crown weight 4.08 g, and dry root weight 0.35 g. The composition of growing media 25% inceptisol soil: 50% cow manure: 25% husk charcoal was the best treatment with plant height 16.52cm, number of leaves 57.31 pieces, leaf area 1204.12 cm^2, fresh plant weight 86.53g, fresh crown weight 83.8g, fresh root weight 2.54g, dry plant weight 4.36g, dry crown weight 4.04g, and dry root weight 0.32g. The interaction between the dose of liquid organic fertilizer made from cow urine and the composition of the growing media did not affect all of the observed variables so that the best form of treatment combination has not been obtained.