RINGKASAN

Tanaman pakcoy (*Brassica rapa* L.) merupakan salah satu jenis tanaman sawi yang populer di Indonesia. Pakcoy ditinjau dari segi ekonomi layak diusahakan untuk memenuhi permintaan konsumen yang cukup tinggi. Budidaya tanaman sayuran dilahan memiliki kendala seperti terbatasnya lahan budidaya. Salah satu cara yaitu budidaya dilahan marginal seperti pada tanah ultisol. Tanah ultisol memiliki berbagai kekurangan seperti kandungan bahan organik rendah, kejenuhan Al tinggi, pH masam, dan unsur hara rendah. Penggunaan pupuk organik cair (POC) pada budidaya lahan marginal dapat meningkatkan kandungan bahan organik pada tanah dan pertumbuhan serta hasil tanaman pakcoy meningkat. POC dapat dibuat dari bahan-bahan organik, seperti halnya dari urine kelinci, tanaman azolla, daun trembesi, dan daun paitan atau kipahit. Penelitian ini bertujuan untuk mengetahui formula dan cara aplikasi serta menentukan dosis kombinasi POC urine kelinci yang memberikan pengaruh terbaik pada pertumbuhan dan hasil tanaman pakcoy.

Penelitian ini dilaksanakan di Laboratorium Kebun Percobaan atau *Experimental Farm* serta Laboratorium Agronomi dan Hortikultura, Fakultas Pertanian, Universitas Jenderal Soedirman. Penelitian dilaksanakan dari April 2025 - Juni 2025. Rancangan percobaan yang digunakan yaitu Rancangan Acak Kelompok (RAK) non faktorial dilakukan sebanyak 5 ulangan. Faktor yang diuji pada penelitian ini yaitu pupuk organik cair urine kelinci yang terdiri dari 10 taraf perlakuan meliputi kontrol (P0S0), kontrol petani (P0S0p), POC murni + semprot (P1S1), POC azolla + semprot (P2S1), POC trembesi + semprot (P3S1), POC kipahit + semprot (P4S1), POC murni + kocor (P1S2), POC azolla + kocor (P2S2), POC trembesi + kocor (P3S2), POC kipahit + kocor (P4S2). Faktor tersebut menghasilkan 50 unit percobaan. Satu unit percobaan terdapat 4 tanaman, sehingga dibutuhkan tanaman pakcoy sebanyak 200 tanaman. Variabel yang diamati pada penelitian ini, meliputi tinggi tanaman, jumlah daun, luas daun, tingkat kehijauan daun, kandungan klorofil, panjang akar terpanjang, volume akar, bobot tajuk segar, bobot akar segar, bobot tanaman segar, bobot tajuk kering, bobot akar kering, dan bobot tanaman kering. Data hasil pengamatan dianalisis menggunakan analisis sidik ragam (ANOVA) pada taraf kesalahan 5% untuk mengetahui pengaruh perlakuan, jika hasil analisis menunjukan keragaman atau nyata (F hitung > F Tabel 5 %) maka dilanjutkan dengan uji lanjutan *Duncan's Multiple Range Test* (DMRT) pada taraf kesalahan 5%.

Hasil penelitian menunjukan bahwa POC urine kelinci yang diperkaya bahan organik mampu meningkatkan pertumbuhan dan hasil tanaman pakcoy. POC urine kelinci yang diperkaya daun trembesi berpengaruh nyata pada tinggi tanaman, jumlah daun, luas daun, tingkat kehijaun daun, kandungan klorofil, volume akar, panjang akar terpanjang, bobot akar segar, bobot tajuk segar, bobot tanaman segar, bobot tajuk kering, dan bobot tanaman kering. Penelitian ini menunjukan bahwa POC urine kelinci trembesi + kocor mampu meningkatkan pertumbuhan tanaman pakcoy.

Kata kunci: POC, ultisol, pakcoy, pertumbuhan, bahan organik, urine kelinci

SUMMARY

Pakcoy (Brassica rapa L.) is a popular mustard green in Indonesia. Pakcoy is economically viable to meet high consumer demand. Cultivating vegetables on land faces challenges such as limited land. One approach is to cultivate them on marginal land, such as ultisol soil. Ultisol soils have various deficiencies, including low organic matter content, high Al saturation, acidic pH, and low nutrient content. The use of liquid organic fertilizer (POC) on marginal land can increase soil organic matter content, thereby improving pakcoy plant growth and yield. POC can be made from organic materials, such as rabbit urine, azolla plants, rain tree leaves, and paitan or kipahit leaves. This study aims to determine the formula and application method, as well as the dosage combination of rabbit urine POC that provides the best effect on pakcoy plant growth and yield.

This research was conducted at the Experimental Farm Laboratory and the Agronomy and Horticulture Laboratory, Faculty of Agriculture, Jenderal Soedirman University. The research was conducted from April 2025 to June 2025. The experimental design used was a non-factorial Randomized Block Design (RAK) with 5 replications. The factors tested in this study were liquid organic fertilizer of rabbit urine consisting of 10 treatment levels including control (P0S0), control vegetable farmer (P0S0p), POC POC urine rabbit + spray (P1S1), POC azolla + spray (P2S1), POC trembesi + spray (P3S1), POC kipahit + spray (P4S1), POC urine rabbit + pouring (P1S2), POC azolla + pouring (P2S2), POC trembesi + pouring (P3S2), POC kipahit + pouring (P4S2). These factors resulted in 50 experimental units. One experimental unit contained 4 plants, so 200 pakcoy plants were needed. The variables observed in this study included plant height, number of leaves, leaf area, leaf greenness, chlorophyll content, longest root length, root volume, fresh shoot weight, fresh root weight, fresh plant weight, dry shoot weight, dry root weight, and dry plant weight. The observation data were analyzed using analysis of variance (ANOVA) at an error level of 5% to determine the effect of the treatment. If the analysis results showed significant or significant variation (F count > F Table 5%), then it was continued with the Duncan Multiple Range Test (DMRT) at an error level of 5%.

The results showed that rabbit urine POC enriched with organic materials was able to increase the growth and yield of pakcoy plants. Rabbit urine POC enriched with tamarind leaves significantly affected plant height, number of leaves, leaf area, leaf greenness, chlorophyll content, root volume, longest root length, fresh root weight, fresh shoot weight, fresh plant weight, dry shoot weight, and dry plant weight. This study showed that tamarind rabbit urine POC + pouring was able to increase the growth of pakcoy plants.

Keywords: *POC, ultisol, pakcoy, growth, organic matter, rabbit urine*