

RINGKASAN

Pakcoy (*Brassica rappa* L) merupakan tanaman yang termasuk pada komoditas hortikultura yang mudah dibudidayakan. Selain mudah untuk dibudidayakan pakcoy juga mempunyai rasa yang enak dan mengandung banyak gizi. Produksi pakcoy di Indonesia mengalami fluktuasi pada tahun 2014 adalah sebanyak 602,4 ton/tahun, dan pada tahun 2015 dan 2016 terjadi penurunan yaitu 600,1 ton/tahun dan data terakhir pada tahun 2017 sebanyak 627,5 ton/tahun. Penelitian ini bertujuan untuk : 1) Mengetahui konsentrasi pupuk organik cair optimum berbahan dasar azolla terhadap pertumbuhan tanaman pakcoy. 2) Mengetahui pengaruh dosis pupuk kascing optimum terhadap pertumbuhan tanaman pakcoy. 3) Mengetahui formulasi dosis pupuk organik cair berbasis azolla dan pupuk kascing yang tepat untuk pertumbuhan tanaman pakcoy.

Penelitian dilaksanakan di *screen house* Fakultas Pertanian Universitas Jenderal Soedirman Purwokerto selama satu bulan pada bulan september sampai Desember 2018. Rancangan percobaan yang digunakan adalah Rancangan Acak Kelompok (RAK) dengan 2 faktor perlakuan. Faktor pertama adalah konsentrasi pupuk organik cair azolla yaitu 0 % , 10 % , 20 % , dan 30 % . Faktor kedua adalah dosis pupuk kascing yaitu 10 ton/ha, 20 ton/ha dan 30 ton/ha. Variabel pengamatan meliputi tinggi tanaman, jumlah daun, luas daun, bobot segar tanaman, bobot kering tanaman, bobot akar, panjang akar, serta kandungan klorofil daun. Data pengamatan dianalisis dengan uji F, uji lanjut dengan Duncan's Multiple Range Test (DMRT) serta analisis regresi.

Hasil penelitian menunjukkan bahwa pemberian pupuk organik cair azolla tidak memberikan pengaruh nyata terhadap semua variabel dan pupuk kascing memberikan pengaruh nyata pada variabel tinggi tanaman, jumlah daun, luas daun, bobot segar tanaman, bobot kering tanaman, dan bobot akar. Namun tidak berpengaruh nyata terhadap panjang akar dan kandungan klorofil daun. Pemberian dosis optimal pada pupuk kascing adalah 20 ton/ha. Kombinasi perlakuan pupuk organik cair azolla dan pupuk kascing tidak memberikan pengaruh nyata terhadap pertumbuhan tanaman pakcoy.

Kata kunci : pakcoy, pupuk organik cair azolla, pupuk kascing

SUMMARY

Pakcoy (Brassica rappa L) is a plant that is included in horticultural commodities that are easily cultivated. Besides being easy to cultivate, Pakcoy also has good taste and contains lots of nutrients. Pakcoy products in Indonesia experienced fluctuations in 2014 as many as 602.4 tons / year, and in 2015 and 2016 there was a decrease of 600.1 tons / year and the latest data in 2017 were 627.5 tons / year. This study aims to: 1) Determine the optimum concentration of azolla-based liquid organic fertilizer for pakcoy plant growth. 2) Knowing the effect of the optimum vermicompost dose on the growth of pakcoy plants. 3) Knowing the dosage formulation of azolla-based liquid organic fertilizer and vermicompost fertilizer that are right for the growth of pakcoy plants.

The research was conducted at the screen house of the Faculty of Agriculture, Jenderal Sudirman Purwokerto University for one month from September to December 2018. The experimental design used was Randomized Block Design (RBD) with 2 treatment factors. The first factor is the concentration of azolla liquid organic fertilizer which is 0%, 10%, 20%, and 30%. The second factor is the dose of kascing fertilizer which is 10 tons / ha, 20 tons / ha and 30 tons / ha. Observation variables included plant height, leaf number, leaf area, plant fresh weight, plant dry weight, root weight, root length, and leaf chlorophyll content. Observation data were analyzed by F test, further testing with Duncan's Multiple Range Test (DMRT) and regression analysis.

The results showed that the administration of azolla liquid organic fertilizer had no significant effect on all variables and vermicompost fertilizer had a significant effect on variable plant height, leaf number, leaf area, plant fresh weight, plant dry weight, and root weight. However, it did not significantly affect root length and chlorophyll content of leaves. The optimal dosage for vermicompost is 20 tons / ha. The combination of treatment of azolla liquid organic fertilizer and vermicompost fertilizer did not have a significant effect on pakcoy plant growth

Keywords: pakcoy, azolla liquid organic fertilizer, vermicompost fertilizer