

RESPON PERTUMBUHAN DAN HASIL TANAMAN PAKCOY (*Brassica rapa* L.) TERHADAP DOSIS PUPUK KASCING DAN KONSENTRASI PUPUK ORGANIK CAIR LIMBAH KULIT PEPAYA

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ABSTRAK

Pakcoy adalah tanaman semusim. Pupuk kascing adalah pupuk organik dari proses pencernaan cacing yang dapat meningkatkan kesuburan tanah. Kulit pepaya yang berupa limbah dapat digunakan untuk membuat pupuk organik cair (POC). Penelitian bertujuan untuk menentukan dosis pupuk kascing dan konsentrasi POC limbah kulit pepaya yang terbaik terhadap pertumbuhan tanaman pakcoy. Penelitian dilaksanakan pada Februari – April 2025 di *Green House* Fakultas Pertanian UPN “Veteran” Yogyakarta. Metode yang digunakan adalah faktorial dengan Rancangan Acak Lengkap (RAL) 2 faktor. Faktor pertama dosis pupuk Kascing terdiri dari 3 taraf yaitu; 300, 400, dan 500 g/polibag. Faktor kedua konsentrasi POC limbah kulit pepaya terdiri dari 3 taraf: 150, 250, dan 350 ml/L dan kontrol (pengaplikasian NPK). Data dianalisis dengan Sidik Ragam (ANOVA) pada taraf $\alpha = 5\%$ dan lanjut dengan (DMRT) pada taraf 5% dan perbedaan kontrol dengan perlakuan di uji Kontras Orthogonal pada taraf 5%. Hasil penelitian menunjukkan terdapat interaksi antara dosis pupuk kascing dan konsentrasi POC limbah kulit pepaya terhadap tinggi tanaman, jumlah daun, panjang daun, lebar daun, panjang akar, bobot segar tanaman dan bobot segar ekonomis tanaman. Dosis pupuk kascing 400 g/polibag memberikan hasil terbaik terhadap tinggi tanaman, panjang daun dan indeks panen. Konsentrasi POC limbah kulit 350 ml/L pepaya memberikan hasil terbaik terhadap jumlah daun dan panjang daun.

Kata kunci: Kascing, Pupuk Organik Cair, Pakcoy

RESPONSE OF PAKCOY (*Brassica rapa* L.) PLANT GROWTH AND YIELD TO THE DOSE OF VERMICOMPOST AND CONCENTRATION OF BIOFERTILIZER FROM PAPAYA PEEL WASTE

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ABSTRACT

Pakcoy is an annual plant. Vermicompost is an organic fertilizer produced from the digestive process of worms that can improve soil fertility. Papaya peel, which is considered waste, can be used to make liquid organic fertilizer (POC). The study aims to determine the optimal dosage of casing fertilizer and concentration of papaya peel waste POC for pakcoy plant growth. The research was conducted from February-April 2025 at the Green House of the Faculty of Agriculture, UPN “Veteran” Yogyakarta. The method used was factorial with a completely randomized design (CRD) of 2 factors. The first factor is the dosage of vermicompost, which consists of three levels: 300, 400, and 500 g/polybag. The second factor was the concentration of papaya peel waste POC, which consisted of three levels: 150, 250, and 350 ml/L and control (application of NPK). The data were analyzed using analysis of variance (ANOVA) at a level of $\alpha = 5\%$ and followed by DMRT at a level of 5% and the difference between the control and treatment in the Orthogonal Contrast test at the 5% level. The results showed that there was an interaction between the dose of vermicompost and the concentration of papaya peel waste POC on plant height, number of leaves, leaf length, leaf width, root length, fresh plant weight, and economic fresh plant weight. A dosage vermicompost of 400 g/polybag provides the best results in terms of plant height, leaf length, and harvest index. A concentration of 350 ml/L of papaya peel waste POC produced the best results in terms of the number and length of leaves.

Keywords: Vermicompost, Biofertilizer, Pakcoy