

ABSTRAK

Ikhsan Miftah Arrizki. 2025. Pengaruh Ragam Formulasi Pupuk Organik Cair Air Cucian Beras Terhadap Pertumbuhan Tanaman Pakcoy (*Brassica rapa L.*) . Dibawah bimbingan Budy Frasetya Taufik Qurrohman dan Ahmad Taofik.

Pemanfaatan limbah rumah tangga sebagai sumber pupuk organik cair (POC) menjadi alternatif berkelanjutan dalam mendukung pertanian ramah lingkungan. Air cucian beras mengandung nutrisi seperti nitrogen (N), fosfor (P), dan kalium (K) yang dapat meningkatkan pertumbuhan tanaman. Namun, kandungan nitrogen dalam POC berbasis air cucian beras masih terbatas, sehingga diperlukan formulasi tambahan untuk meningkatkan efektivitasnya. Penelitian ini bertujuan untuk mengevaluasi pengaruh berbagai formulasi POC air cucian beras terhadap pertumbuhan tanaman pakcoy (*Brassica rapa L.*), dengan tambahan limbah cair tahu dan getah pepaya sebagai sumber nitrogen dan enzim protease. Penelitian dilakukan menggunakan Rancangan Acak Kelompok (RAK) dengan 7 perlakuan dan 4 ulangan. Perlakuan yang diberikan yaitu : P1 : Kontrol, P2 : Air Cucian Beras 3 L, P3 : Air Cucian Beras 3 L + 1 L Limbah Cair Tahu, P4 : Air Cucian Beras 3 L + 2 L Limbah Cair Tahu, P5 : Air Cucian Beras 3 L + 1 L Limbah Cair Tahu + 15 g Getah Pepaya, P6 : Air Cucian Beras 3 L + 2 L Limbah Cair Tahu + 15 g Getah Pepaya, P7 : Air Cucian Beras 3 L + 15 g Getah Pepaya. Hasil penelitian menunjukkan ragam formulasi POC berpengaruh nyata terhadap pertumbuhan tanaman pakcoy pada parameter tinggi tanaman, jumlah daun, dan bobot segar tanaman. Sedangkan tidak berpengaruh nyata pada parameter luas daun, berat kering tanaman dan nisbah pupus akar. Perlakuan P5 : Air Cucian Beras 3 L + 1 L Limbah Cair Tahu + 15 g Getah Pepaya merupakan perlakuan yang paling optimal terhadap pertumbuhan tanaman pakcoy.

Kata Kunci : Air Cucian Beras, Getah Pepaya, Limbah Cair Tahu, Pakcoy

ABSTRACT

Ikhsan Miftah Arrizki. 2025. The Effect of Various Rice-Washing-Water (LOF) Formulations on the Growth of Pakcoy. Supervised by Budy Frasetya Taufik Qurrohman and Ahmad Taofik.

The utilization of household waste as liquid organic fertilizer (LOF) represents a sustainable approach to support environmentally friendly agriculture. Rice washing water contains essential nutrients such as nitrogen (N), phosphorus (P), and potassium (K), which can promote plant growth. However, its nitrogen content remains limited, thus requiring additional formulations to enhance effectiveness. This study aimed to evaluate the effects of different rice-washing-water-based LOF formulations on the growth of pakcoy (*Brassica rapa* L.), with the addition of tofu wastewater and papaya latex as sources of nitrogen and protease enzymes. The experiment was arranged in a Randomized Complete Block Design (RCBD) with seven treatments and four replications: P1 (control), P2 (3 L rice washing water), P3 (3 L rice washing water + 1 L tofu wastewater), P4 (3 L rice washing water + 2 L tofu wastewater), P5 (3 L rice washing water + 1 L tofu wastewater + 15 g papaya latex), P6 (3 L rice washing water + 2 L tofu wastewater + 15 g papaya latex), and P7 (3 L rice washing water + 15 g papaya latex). The results revealed that LOF formulations significantly affected plant height, number of leaves, and fresh weight of pakcoy, but had no significant effect on leaf area, dry weight, and root-to-shoot ratio. Among the treatments, P5 (3 L rice washing water + 1 L tofu wastewater + 15 g papaya latex) was the most effective in promoting optimal growth of pakcoy.

Keywords: pakcoy, papaya latex, rice washing water, tofu wastewater,