Efikasi Herbisida Nabati Ekstrak Rimpang Alang-Alang *(Imperata cylindrica)* terhadap Pengendalian Gulma dan Hasil Budidaya Tanaman Selada *(Lactuca sativa .L)*

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ABSTRAK

Meningkatnya permintaan pasar akan selada sehat tidak diimbangi oleh produksi yang cukup, terutama akibat persaingan nutrisi yang intens antara tanaman selada budidaya dengan gulma. Salah satu upaya untuk mengendalikan gulma adalah menggunakan herbisida nabati yaitu ekstrak impang alang-alang. Penelitian ini bertujuan untuk mengetahui pengaruh ekstrak alang-alang dalam mengendalikan gulma dan mampu meningkatkan hasil selada. Penelitian dilaksanakan di Kebun Praktik Fakultas Pertanian UPN "Veteran" Yogyakarta yang terletak di Wedomartani, Kecamatan Ngemplak, Kabupaten Sleman, Daerah Istimewa Yogyakarta. Penelitian dilaksanakan pada bulan April sampai Juni 2025. Metode yang digunakan adalah Rancangan Acak Kelompok Lengkap (RAKL) faktor tunggal yaitu konsentrasi ekstrak rimpang alang-alang 10%, 20%, 30%, 40%, 50%, dan 60%, tiap perlakuan diulang 3 ulangan. Data yang diperoleh dianalisis dengan ANOVA taraf 5% dan dilanjutkan dengan uji BNT taraf 5%. Hasil penelitian menunjukkan bahwa ekstrak rimpang alang-alang berpengaruh terhadap penekanan gulma pada tanaman selada bila dibandingkan dengan perlakuan kontrol, efisiensi tertinggi pada pengaplikasian ekstrak rimpang alang-alang yaitu pada konsentrasi 60% sebesar 42%. Semakin tinggi konsentrasi ekstrak rimpang alang-alang memberikan hasil selada yang lebih baik.

Kata kunci: Alang-alang, Ekstrak, Gulma, Selada

Efficacy of Imperata cylindrica Rhizome Extract-Based Botanical Herbicide on Weed Control and Lettuce (Lactuca sativa L.) Cultivation Yield

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ABSTRACT

The growing market demand for healthy lettuce is not met by sufficient production, mainly due to intense nutrient competition between cultivated lettuce plants and weeds. One approach to weed control is the use of botanical herbicides, specifically *Imperata cylindrica* rhizome extract. This study aims to determine the effect of *Imperata cylindrica* extract in controlling weeds and its ability to improve lettuce yield. The research was conducted at Kebun Praktik Fakultas Pertanian UPN "Veteran" Yogyakarta, which is located in Wedomartani, Ngemplak District, Sleman Regency, Special Region of Yogyakarta. The study was carried out from April to June 2025. The research was conducted using a Completely Randomized Block Design (CRBD) with a single factor. The concentration of *Imperata cylindrica* rhizome extract at 10%, 20%, 30%, 40%, 50%, and 60%. The collected data were analyzed by means of variance ANOVA at a 5% level, followed by an LSD test at a 5% level. The research results indicate that the extract of *Imperata cylindrica* rhizome has an effect on weed suppression in lettuce cultivation when compared to the control treatment. The highest efficiency of *Imperata cylindrica* rhizome extract application was observed at a concentration of 60%, achieving a suppression rate of 42%. Higher concentrations of the rhizome extract resulted in better lettuce yield.

Keywords: *Imperata cylindrica, Extract, Weeds, Lettuce*