

**UJI ALELOPATI EKSTRAK RIMPANG ALANG – ALANG (*Imperata  
cylindrica* L.) SEBAGAI BIOHERBISIDA TERHADAP PENEKANAN  
GULMA DAN PENGARUHNYA TERHADAP HASIL TANAMAN  
JAGUNG MANIS (*Zea mays* L. *saccharata*)**

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**ABSTRAK**

Gulma merupakan salah satu unsur yang dapat menurunkan hasil dalam budidaya tanaman. Senyawa alelopati yang didapatkan dari beberapa jenis gulma dapat dijadikan sebagai bioherbisida. Penelitian bertujuan menentukan konsentrasi yang terbaik untuk aplikasi ekstrak rimpang alang-alang dalam menekan pertumbuhan gulma pada pertanaman jagung manis (*Zea mays* L, *saccharata*). Penelitian di laksanakan di kebun percobaan Fakultas Pertanian UPN Veteran Yogyakarta yang terletak Desa Wedomartani, Kab. Sleman, Yogyakarta, dan di Laboratorium Proteksi Tanaman UPN Veteran Yogyakarta pada bulan November 2022 – Januari 2023. Penelitian menggunakan rancangan perlakuan faktor tunggal, yang disusun dalam Rancangan Acak Kelompok Lengkap (RAKL). Faktor yang dicoba adalah konsentrasi ekstrak alang-alang terdiri atas: H0 = Tanpa ekstrak rimpang alang-alang, H1 = Ekstrak rimpang alang-alang konsentrasi 20 %, H2 = Ekstrak rimpang alang-alang konsentrasi 40 %, H3 = Ekstrak rimpang alang-alang konsentrasi 60 %, H4 = Ekstrak rimpang alang-alang konsentrasi 80 %, H5 = Ekstrak rimpang alang-alang konsentrasi 100 %. Hasil penelitian menunjukkan bahwa perlakuan berbagai dosis ekstrak rimpang alang-alang belum efektif dalam mengendalikan gulma berdasarkan standard EWRC *Scoring for Efficacy and Crop Tolerance*. Dosis ekstrak rimpang alang-alang 100%, 80% dan 60% memberikan hasil yang lebih tinggi pada parameter jumlah daun 2 MST, 4 MST, 7 MST dan pada tinggi tanaman pengamatan 4 MST, tetapi pada pengamatan tinggi tanaman 7 MST perlakuan ekstrak rimpang alang-alang 100%, 80% dan 60% tidak berbeda nyata dengan ekstrak rimpang alang-alang 40%.

**Kata kunci :** *Jagung manis, gulma, alelopati, ekstrak rimpang alang-alang.*

**ALLELOPATHY TEST OF ALANG – ALANG RHIZOME EXTRACT  
(*Imperata cylindrica* L.) AS A BIOHERBICIDE AGAINST WEED  
SUPPRESSION AND ITS EFFECT ON THE YIELD OF SWEET CORN  
PLANTS (*Zea mays* L. *saccharata*)**

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**ABSTRACT**

Weeds were one of the elements that could reduce yields in crop cultivation. Allelopathic compounds obtained from several types of weeds could be used as bioherbicides. The research aimed to determine the best concentration for the application of alang-alang rhizome extract in suppressing weed growth in sweet corn (*Zea mays* L, *saccharata*) plantations. The research was carried out at the experimental garden of the Faculty of Agriculture, UPN Veteran Yogyakarta, located in Wedomartani Village, Kab. Sleman, Yogyakarta, and at the UPN Veteran Yogyakarta Plant Protection Laboratory in November 2022 – January 2023. The research used a single-factor treatment design, which was arranged in a Complete Randomized Block Design (RAKL). The factors tested were the concentration of alang-alang extract consisting of: H0 = Without alang-alang rhizome extract, H1 = Alang-alang rhizome extract with a concentration of 20%, H2 = Alang-alang rhizome extract with a concentration of 40%, H3 = Alang-alang rhizome extract 60% concentration, H4 = Alang-alang rhizome extract 80% concentration, H5 = Alang-alang rhizome extract 100% concentration. The results of the study showed that treatment with various extra doses of alang-alang rhizomes was not effective in controlling weeds based on the EWRC Scoring for Efficacy and Crop Tolerance standards. Extra doses of Alang-alang rhizomes of 100%, 80%, and 60% gave higher results on leaf number parameters at 2 WAP, 4 WAP, 7 WAP, and at observed plant height at 4 WAP, but at plant height observation at 7 WAP, the extra Alang rhizome treatment -100%, 80%, and 60% reeds were not significantly different from extra 40% reed rhizomes.

**Keywords:** *Sweet corn, weeds, allelopathy, alang-alang rhizome extract.*