

**UJI EFEKTIVITAS HERBISIDA NABATI TERHADAP PENGENDALIAN
GULMA DAN PENGARUHNYA TERHADAP TANAMAN
JAGUNG MANIS (*Zea mays saccharata* Sturt.)**

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ABSTRAK

Penurunan hasil dan kualitas tanaman jagung akibat gulma cukup tinggi, sehingga keberadaan gulma sangat penting untuk dikendalikan. Salah satu cara pengendalian gulma yaitu menggunakan herbisida kimia. Penggunaan herbisida kimia lebih efektif dan efisien, namun memiliki dampak negatif yaitu meninggalkan residu kimia ditanah. Salah satu alternatif pengendalian gulma yang lebih ramah lingkungan yaitu menggunakan herbisida nabati dari tumbuhan.

Penelitian ini dilaksanakan di Kebun Percobaan Wedomartani dan Laboratorium Proteksi Tanaman Fakultas Pertanian UPN “Veteran” Yogyakarta pada bulan Mei hingga Agustus 2023. Tujuan penelitian ini adalah untuk mengetahui pengaruh dan menentukan jenis herbisida terbaik terhadap pengendalian gulma pada tanaman jagung manis (*Z. Mays saccharata* Sturt.).

Penelitian ini menggunakan Rancangan Acak Kelompok Lengkap (RAKL) satu faktor yaitu konsentrasi herbisida diantaranya H0: kontrol (tanpa herbisida), H1: ekstrak daun ketapang 20%, H2: ekstrak daun mahoni 20%, H3: ekstrak daun ketapang+daun mahoni 20%, H4: ekstrak alang-alang 20%, H5: ekstrak daun babadotan 20%, dan H6: ekstrak alang-alang+daun babadotan 20%. Analisis data dilakukan menggunakan uji ANOVA dengan taraf 5%, apabila hasil berbeda nyata maka dilakukan uji *Contrass Orthogonal*.

Hasil penelitian menunjukkan bahwa aplikasi herbisida nabati pada gulma dengan berbagai perlakuan berbeda nyata dengan kontrol pada parameter bobot kering gulma 3, 5, dan 7 mst. Efisiensi pengendalian gulma tertinggi yaitu pada perlakuan H6 (ekstrak alang-alang+daun babadotan 20%) sebesar 78,86% pada 7 mst. Penggunaan herbisida nabati dengan perlakuan dan dosis tersebut dinilai cukup efektif untuk mengendalikan gulma.

Kata Kunci : Jagung Manis, Herbisida Nabati, Ketapang, Mahoni, Alang-alang, Babadotan

**THE EFFECTIVENESS OF BOTANICAL HERBICIDES TO CONTROL
WEEDS AND THE EFFECT ON SWEET CORN CROP (*Zea mays
saccharata* Sturt)**

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ABSTRACT

The reduction in sweet corn yields and quality caused weeds were quite significant. Due to that reason, the presence of weeds in the field is very important to control. Chemical herbicides is very common use to control weeds, it's more effective and efficient than other weed control. Beside that, chemical herbicides has the negative impact of leaving chemical residues on the soil. The alternative way to control weeds and environmental friendly is using botanical herbicides from plants extract.

This research was carried out at Wedomartani Experimental Garden and Plant Protection Laboratory, Faculty of Agriculture UPN Veteran Yogyakarta start from May until August 2023. The aim was to determine the effectiveness and the best type of herbicides on controlling weeds in sweet corn field.

The research used a randomized complete block design (RCBD) one factor was herbicides concentration including H0: control (without herbicides), H1: tropical almond leaf extract 20%, H2: mahogany leaf extract 20%, H3: tropical almond+mahogany leaf extract 20%, H4: cogon grass extract 20%, H5: goat weed leaf extract 20%, and H6: cogon grass+goat weed leaf extract 20%. Data analysis was carried out using ANOVA test with a level of 5%, if the result were significantly different then the data was carried out by Contrass Orthogonal test.

The result showed that the application of botanical herbicides on weeds with various treatment was significantly different than control treatment on weed dry weight parameter at 3, 5, and 7 week after planting. The highest weed control efficiency was treatment H6 with 78,86% 7 week after planting. The use of botanical herbicides with this treatment and dosage is moderately effective in weed control.

Key words : Sweet Corn, Botanical Hebicides, Tropical Almond, Mahogany, Cogon Grass, Goat Weed.