

**Pengaruh Berbagai Konsentrasi Bioherbisida Ekstrak Daun Bintaro
(*Cerbera odollam* Gaertn) terhadap Pengendalian Gulma *Eleusine indica***

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ABSTRAK

Rumput belulang (*Eleusine indica*) merupakan gulma semusim dengan karakteristik pertumbuhan yang cepat dan keberadaannya sering dijumpai di lahan pertanian, salah satu alternatif pengendalian gulma yaitu menggunakan ekstrak daun bintaro (*Cerbera odollam* Gaertn). Penelitian bertujuan untuk menentukan pengaruh dan konsentrasi terbaik ekstrak daun bintaro dalam mengendalikan rumput belulang. Penelitian dilaksanakan pada bulan Mei-Juli 2025 di *Greenhouse* yang berlokasi di Jl. Gatotkaca No.1, Banjeng, Maguwoharjo, Depok, Sleman, Daerah Istimewa Yogyakarta. Penelitian menggunakan Rancangan Acak Lengkap (RAL) faktor tunggal dengan 8 perlakuan 3 ulangan, yaitu kontrol (tanpa pengendalian) ekstrak daun bintaro konsentrasi 20%, 30%, 40%, 50%, 60%, 70%, dan 80%. Data dianalisis dengan sidik ragam (ANOVA) pada jenjang nyata (α) 5% dan uji lanjut (BNT) dengan taraf 5%. Aplikasi bioherbisida ekstrak daun bintaro konsentrasi 60%, 70%, dan 80% memberikan pengaruh pengendalian yang sama terhadap tinggi *E. indica*, panjang akar *E. indica*, bobot segar *E. indica*, bobot kering *E. indica*, fitotoksisitas, dan laju pertumbuhan *E. indica*. Konsentrasi 80% mampu mengendalikan pertumbuhan gulma dengan tingkat efisiensi pengendalian 91,10% yang tergolong pengendalian efisien.

Kata Kunci : *Bioherbisida, Ekstrak Daun Bintaro, Eleusine indica, Gulma*

The Effect of Various Concentrations of Bioherbicide from Bintaro Leaf Extract (*Cerbera odollam* Gaertn) on the Control of *Eleusine indica* Weeds

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ABSTRACT

Eleusine indica is an annual weed with rapid growth characteristics and is often found in agricultural land. One alternative method of weed control is to use bintaro leaf extract (*Cerbera odollam* Gaertn). The aim of this study was to determine the effect and optimal concentration of bintaro leaf extract in controlling *Eleusine indica*. The study was conducted from May to July 2025 in a greenhouse located at Jl. Gatotkaca No.1, Banjeng, Maguwoharjo, Depok, Sleman, Special Region of Yogyakarta. The study used a completely randomized design (CRD) with a single factor and 8 treatments with 3 replicates, namely control (without treatment), bintaro leaf extract at concentrations of 20%, 30%, 40%, 50%, 60%, 70%, and 80%. The data were analyzed using analysis of variance (ANOVA) at a significance level (α) of 5% and a post hoc test (LSD) at a level of 5%. The application of bioherbicides extracted from bintaro leaves at concentrations of 60%, 70%, and 80% had the same effect on the height of *E. indica*, the length of *E. indica* roots, the fresh weight of *E. indica*, the dry weight of *E. indica*, phytotoxicity, and the growth rate of *E. indica*. The 80% concentration was able to control weed growth with a control efficiency rate of 91.10%, which is classified as efficient control.

Keywords: *Bintaro Leafes Extract, Eleusine indica, Weeds, Bioherbicide*