

Efektivitas Ekstrak Daun Bambu (*Gigantochloa apus* Kurz) dan Asam Asetat untuk Mengendalikan Pertumbuhan Gulma Ara Sungsang (*Asystasia gangetica*)

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ABSTRAK

Daun bambu mengandung flavonoid, fenolik dan tanin, dan asam fenolat. Asam asetat mampu menghambat gulma melalui kerusakan membran sel sehingga dimanfaatkan sebagai bioherbisida. Penelitian bertujuan untuk mengetahui kombinasi paling baik dari berbagai konsentrasi ekstrak daun bambu dan asam asetat untuk mengendalikan gulma *Asystasia gangetica*. Penelitian dilaksanakan pada bulan Juli hingga September 2025 di rumah kaca Kebun Percobaan Fakultas Pertanian UPN “Veteran” Yogyakarta, Daerah Istimewa Yogyakarta. Penelitian disusun secara Rancangan Acak Lengkap (RAL) menggunakan 2 faktor. Faktor pertama konsentrasi ekstrak daun bambu terdiri atas 20%, 40%, dan 60%. Faktor kedua konsentrasi asam asetat yaitu 10%, 20%, dan 30%. Pengamatan dianalisis menggunakan Sidik Ragam pada taraf $\alpha = 5\%$. Apabila terdapat pengaruh nyata dari perlakuan yang dicoba, maka dilanjutkan dengan Uji Jarak Berganda Duncan (DMRT) pada jenjang nyata 5% untuk mengetahui beda nyata antar perlakuan. Hasil penelitian menunjukkan tidak ada interaksi antara ekstrak daun bambu dan asam asetat. Kombinasi perlakuan dengan konsentrasi yang semakin meningkat maka semakin tinggi nilai fitotoksisitasnya, memperlambat pertumbuhan gulma, serta menurunkan berat basah dan berat kering tumbuhan. Perlakuan ekstrak daun bambu 60% memberikan efek penghambatan terbaik terhadap pertumbuhan gulma ara sungsang.

Kata kunci: Asam asetat, daun bambu, gulma *Asystasia gangetica*, bioherbisida, pengendalian gulma

Effectiveness of Bamboo Leaf Extract (*Gigantochloa apus* Kurz) and Acetic Acid to Control the Growth of *Asystasia gangetica* Weed

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ABSTRACT

Bamboo leaves contain flavonoids, phenolics and tannins, and phenolic acid and acetic acid are able to inhibit weeds through cell membrane destruction so that they are utilized as bioherbicides. The research aims to determine the combination of various concentrations of bamboo leaf extract and acetic acid that is best for controlling *Asystasia gangetica* weed. The research was conducted on July until September 2025 in the greenhouse of the Experimental Garden of the Faculty of Agriculture UPN “Veteran” Yogyakarta, Yogyakarta Special Region. The study was arranged in a completely randomized design (CRD) using 2 factors. The first factor of bamboo leaf extract concentration consisted of 20%, 40%, and 60%. The second factor was acetic acid concentration of 10%, 20%, and 30%. Observations were analyzed using variance analysis at the $\alpha = 5\%$ level. If there was a significant effect of the treatments tried, then continued with Duncan's Multiple Range Test (DMRT) at a real level of 5% to determine the real difference between treatments. The results showed no interaction between bamboo leaf extract and acetic acid. The combination of treatments with increasing concentrations resulted in higher phytotoxicity values, slowed weed height growth, and reduced wet and dry weights of plants. The 60% bamboo leaf extract treatment had the best inhibitory effect on the growth of *Asystasia gangetica* weeds.

Key words: Acetic acid, bamboo leaves, *Asystasia gangetica* weed, bioherbicide, weed control