

ABSTRAK

UJI EFEKTIVITAS BIOHERBISIDA EKSTRAK METANOL DAUN WALISONGO (*Schefflera arboricola*) (Hayata) Merr. DALAM PENGENDALIAN GULMA

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Gulma merupakan tumbuhan pengganggu yang dapat menurunkan hasil tanaman budidaya. Penggunaan herbisida sintesis dinilai efektif, namun berpotensi menimbulkan dampak negatif terhadap lingkungan dan kesehatan. Penelitian ini bertujuan untuk menguji efektivitas bioherbisida dari ekstrak metanol daun walisongo (*Schefflera arboricola*) (Hayata) Merr dalam mengendalikan pertumbuhan gulma. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan lima konsentrasi, yaitu kontrol negatif (0%), ekstrak metanol daun walisongo konsentrasi 25%, 50%, dan 75%, serta kontrol positif glifosat 0,5%, masing-masing dengan lima ulangan. Parameter yang diamati meliputi jumlah gulma, tinggi gulma, gejala klorosis, berat basah, berat kering, dan analisis vegetasi. Hasil uji fitokimia menunjukkan bahwa ekstrak metanol daun walisongo mengandung senyawa flavonoid, alkaloid, saponin, tanin, fenol, dan terpenoid yang berpotensi sebagai agen alelopati. Hasil penelitian menunjukkan bahwa ekstrak metanol daun walisongo berpengaruh nyata terhadap jumlah gulma daun lebar, gejala klorosis, serta berat basah dan berat kering gulma, namun tidak berpengaruh nyata terhadap tinggi gulma. Konsentrasi 50% menunjukkan efektivitas terbaik di antara perlakuan ekstrak dalam menekan biomassa gulma, meskipun masih lebih rendah dibandingkan glifosat 0,5%. Dengan demikian, ekstrak metanol daun walisongo berpotensi sebagai bioherbisida alami yang ramah lingkungan dalam pengendalian gulma.

Kata kunci: Bioherbisida, Ekstrak Metanol, Walisongo (*Schefflera arboricola*) (Hayata) Merr), Gulma Bandotan, Gulma Teki

ABSTRACT

EFFECTIVENESS TEST OF BIOHERBICIDE FROM METHANOL EXTRACT OF WALISONGO LEAVES (*Schefflera arboricola*) (Hayata) Merr. IN WEED CONTROL

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Weeds are pests that can reduce the yield of cultivated plants. The use of synthetic herbicides is considered effective, but has the potential to cause negative impacts on the environment and health. This study aims to test the effectiveness of bioherbicides from methanol extract of (*Schefflera arboricola*) (Hayata) Merr leaves in controlling weed growth. This study used a Completely Randomized Design (CRD) with five concentrations, namely negative control (0%), methanol extract of walisongo leaves at concentrations of 25%, 50%, and 75%, and positive control glyphosate 0.5%, each with five replications. The parameters observed included the number of weeds, weed height, chlorosis symptoms, fresh weight, dry weight, and vegetation analysis. The results of phytochemical tests showed that the methanol extract of walisongo leaves contains flavonoids, alkaloids, saponins, tannins, phenols, and terpenoids that have the potential as allelopathic agents. The results showed that the methanol extract of walisongo leaves significantly affected the number of broadleaf weeds, chlorosis symptoms, and the wet and dry weight of weeds, but did not significantly affect weed height. The 50% concentration showed the highest effectiveness among the extract treatments in suppressing weed biomass, although still lower than 0.5% glyphosate. Thus, the methanol extract of Walisongo leaves has the potential to be an environmentally friendly natural bioherbicide for weed control.

Keywords: Bioherbicide, Methanol Extract, Walisongo (*Schefflera arboricola*)
(Hayata) Merr, Bandotan Weed, Nutcracker Weed