

ABSTRAK

PENGARUH EKSTRAK RIMPANG ALANG-ALANG (*Imperata cylindrica*) UNTUK MENGENDALIKAN GULMA *Praxelis clematidea* PADA PEMBIBITAN TANAMAN KAKAO (*Theobroma cacao*)

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Imperata cylindrica memiliki potensi sebagai herbisida nabati karena kandungan senyawa alelopati dalam rimpangnya. Tujuan penelitian ini adalah mengetahui pengaruh ekstrak rimpang *I. cylindrica* terhadap perkecambahan dan pertumbuhan gulma *P. clematidea* pada pembibitan kakao. Penelitian dilaksanakan pada Oktober 2024 sampai Januari 2025 di Laboratorium Ilmu Gulma, Fakultas Pertanian, Universitas Lampung dan Rumah Plastik Kedamaian, Bandar Lampung. Penelitian di laboratorium terdiri dari 6 taraf perlakuan yaitu kontrol atau tanpa ekstrak, konsentrasi ekstrak rimpang *I. cylindrica* 5%, 10%, 15%, 20%, dan 25% diulang 4 kali yang disusun dalam Rancangan Acak Lengkap (RAL) sehingga diperoleh 24 satuan percobaan. Penelitian di rumah plastik terdiri dari 6 taraf perlakuan yaitu kontrol atau tanpa ekstrak dan 5 taraf konsentrasi ekstrak diulang 5 kali yang disusun dalam Rancangan Acak Kelompok (RAK) sehingga diperoleh 30 satuan percobaan. Data dianalisis menggunakan Uji Bartlett untuk homogenitas, asumsi terpenuhi dilanjutkan dengan sidik ragam dan uji Beda Nyata Terkecil (BNT) pada taraf 5% digunakan untuk menguji perbedaan nilai tengah. Hasil menunjukkan ekstrak rimpang *I. cylindrica* konsentrasi 15% hingga 25% mampu menghambat perkecambahan gulma *P. clematidea* 75,99% sampai 90,36% dan menghambat pertumbuhan gulma *P. clematidea* 75,93% sampai 82,81%. Ekstrak rimpang *I. cylindrica* pada konsentrasi 5% sampai 25% tidak menghambat pertumbuhan bibit tanaman kakao.

Kata kunci: Ekstrak rimpang *Imperata cylindrica*, kakao, perkecambahan, pertumbuhan, *Praxelis clematidea*

ABSTRACT

THE EFFECT OF ALANG-ALANG (*Imperata cylindrica*) RHIZOME EXTRACT IN CONTROLLING *Praxelis clematidea* WEEDS IN CACAO SEEDLING CULTIVATION (*Theobroma cacao*)

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Imperata cylindrica has potential as a botanical herbicide due to the allelopathic compounds present in its rhizomes. This study aimed to investigate the effect of *I. cylindrica* rhizome extract on the germination and growth of *P. clematidea* weeds in cocoa seedling cultivation. The research was conducted from October 2024 to January 2025 at the Weed Science Laboratory, Faculty of Agriculture, University of Lampung, and the Kedamaian Plastik House, Bandar Lampung. The laboratory experiment consisted of six treatment levels: control (no extract) and *I. cylindrica* rhizome extract concentrations of 5%, 10%, 15%, 20%, and 25%, with four replications arranged in a Completely Randomized Design (CRD), resulting in 24 experimental units. The plastik house experiment also consisted of six treatment levels: control (no extract) and five concentrations of extract, with five replications arranged in a Randomized Block Design (RBD), resulting in 30 experimental units. Data were analyzed using the Bartlett is test to assess homogeneity. After confirming the assumptions, analysis of variance (ANOVA) was performed, followed by the Least Significant Difference (LSD) test at a 5% significance level to evaluate differences in mean values. The results showed that *I. cylindrica* rhizome extract at concentrations of 15% to 25% inhibited *P. clematidea* weed germination by 75.99% to 90.36% and suppressed seed growth by 75.93% to 82.81%. The *I. cylindrica*. rhizome extract at concentrations of 5% to 25% did not inhibit the growth of cocoa seedlings.

Keywords: *cocoa, germination, growth, Praxelis clematidea, rhizome extract Imperata cylindrica*