POTENSI EKSTRAK DAUN TANAMAN MANGKOKAN (*Nothopanax scutellarium* Merr) TERHADAP ULAT CROP KUBIS *Crocidolomia pavonana* Fabricius (Lepidoptera: Crambidae)

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Abstrak

Tanaman Mangkokan (*Nothopanax scutellarium* Merr) memiliki potensi sebagai pestisida nabati karena daun tanaman mangkokan mengandung berbagai senyawa bioaktif, seperti alkaloid, tannin, saponin, dan flavonoid, Penelitian ini bertujuan untuk mengetahui potensi ekstrak daun tanaman mangkokan (*nothopanax scutellarium* Merr*)* untuk ulat crop kubis (*Crocidolomia pavonana* F). Penelitian dilaksanakan dari bulan September sampai Desember 2024 di Laboratorium Bioekologi Serangga dan Pengelolaan Hama Terpadu, Departemen Proteksi Tanaman, Fakultas Pertanian, Universitas Andalas, Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan metode celup daun. Penelitian terdiri dari 6 perlakuan (0% (kontrol) ; 0,25%; 0,35%; 0,50%; 0,70%; dan 1,00%) dengan 5 ulangan dengan setiap ulangan terdiri dari 10 ekor larva *C. pavonana* instar II. Parameter yang diamati adalah mortalitas larva C. *pavonana* , Aktivitas anti makan (*antifeadean*), lama stadia larva *C. pavonana*, persentase pupa *C. pavonana* terbentuk, persentase imago *C. pavonana* terbentuk. Data yang diperoleh dianalisis dengan analisis sidik ragam (ANOVA) dan jika berbeda nyata dilanjutkan dengan uji *Least Significant Different* (LSD) pada taraf 5% menggunakan aplikasi statistik 8, Hubungan konsentrasi dengan mortalitas larva *C. pavonana* dianalisis dengan probit (POLO PLUS) untuk menentukan nilai LC_{50} dan LC_{95}. Pada konsentrasi 1,00% menyebabkan mortalitas tertinggi sebesar 82,00% dengan LC50 sebesar 0,504% dan LC95 sebesar 2,543% memiliki aktivitas anti makan (*antifeedant*) tertinggi sebesar 90,92% memperpanjang lama stadia larva instar 2-3 selama 1,00 hari; dan instar 2-4 selama 2,36 hari, persentase pupa terbentuk sebesar 10,00% serta persentase imago terendah sebesar 6,00%, maskipun ekstrak etanol daun tanaman mangkokan menunjukan potensi dalam mengurangi mortalitas larva, tetapi untuk pengendalian di lapangan penggunaan ekstrak etanol daun tanaman mangkokan tidak efesien digunakan karena memiliki nilai LC95 yang tinggi .

Keywords: Tanaman Mangkokan , *Crocidolomia pavonana*, Ekstrak etanol daun

The Potential of Mangkokan (*Nothopanax scutellarium* Merr) Leaf Extracts in Cabbage Crop Worms (*Crocidolomia Pavonana* Fabricius) (Lepidoptera: Crambidae)"

Abstract

Mangkokan plant (*Nothopanax scutellariu*m Merr) has potential as a botanical pesticide due to its leaves containing various bioactive compounds, such as alkaloids, tannins, saponins, and flavonoids.. This study aims to determine the potential of mangkokan plant leaf extract (*nothopanax scutellarium* Merr) to cabbage crop caterpillars (*Crocidolomia pavonana* F). The research was conducted from September to December 2024 at the Laboratory of Insect Bioecology and Integrated Pest Management, Department of Plant Protection, Faculty of Agriculture, Andalas University, The research used a completely randomized design (CRD) with the leaf dipping method, The study consisted of 6 treatments (0% (control); 0.25%; 0.35%; 0.50%; 0.70%; and 1.00%;) with 5 replicates with each replicate consisting of 10 larvae of *C. pavonana* instar II. The parameters observed were mortality of *C. pavonana* larvae, anti-feeding activity (antifeadean), length of *C. pavonana* larval stadia, percentage of *C. pavonana* pupae, percentage of C. pavonana imago. The data obtained were analyzed by analysis of variance (ANOVA) and if significantly different followed by the *Least Significant Different* (LSD) test at the 5% level using statistical application 8, The relationship between concentration and mortality of C. pavonana larvae was analyzed by probit (POLO PLUS) to determine the LC50 and LC95 values. At a concentration of 1.00%, it causes the highest mortality of 82.00% with an LC50 of 0.504% and LC95 of 2,543% , has the highest antifeedant activity of 90.92%, extends the length of larval stadia instar 2-3 for 1.00 days; and instar 2-4 for 2.36 days, the percentage of pupae formed by 10.00% and the lowest percentage of imago by 6.00%. %, Although the ethanol extract of *Mangkokan* plant leaves shows potential in reducing larval mortality, its use for field control is inefficient due to its high LC95 value.

Keywords: Mangkokan plant, *Crocidolomia pavonana,* Ethanol leaf extraks.