EFEKTIFITAS BIOINSEKTISIDA CAMPURAN EKSTRAK DAUN MIMBA DAN RIMPANG JERINGAU TERHADAP HAMA WALANG SANGIT PADA TANAMAN PADI

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui efektifitas bioinsektisida campuran ekstrak daun mimba (*Azadirachta indica*) dan rimpang jeringau (*Acorus calamus* L.) terhadap hama walang sangit (*Leptocorisa oratorius*) pada tanaman padi. Dalam penelitian ini dilakukan dua jenis uji yakni uji lab dan uji lapang. Uji laboratorium dilakukan untuk mengidentifikasi senyawa bioaktif menggunakan *Gas Chromatography Mass Spectrometry* (GCMS) dan guna menentukan mortalitas bioinsektisida terhadap hama walang sangit. Hasil uji lab menunjukkan senyawa utama dalam formulasi bioinsektisida adalah *cis-Asarone* (25,35%), yang berperan sebagai racun kontak dan racun perut bagi hama. Selain itu, nilai LC50 dan LC95 bioinsektisida yang didapati masing-masing sebesar 13,60 % dan 45,79 %. Pada uji lapang, bioinsektisida campuran dan insektisida sintetik berbahan aktif deltametrin diperbandingkan di beberapa parameter agronomik. Hasil menunjukan bioinsektisida campuran dapat menurunkan populasi hama dan menekan intensitas serangan dengan lebih baik dibanding deltametrin, serta mampu meningkatkan hasil panen padi sebagaimana terlihat pada berat gabah kering giling per rumpun (65,06 g), berat 1.000 butir (22,52 g), dan persentase gabah bernas (81,86%).

Kata Kunci: biopestisida, dringo, pesnab, pestisida, serangga

EFFECTIVENESS OF MIXED BIOINSECTICIDE OF NEEM LEAF EXTRACT AND DRINGO RHIZOME AGAINST RICE EAR BUGS ON RICE PLANTS

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ABSTRACT

This research aims to determine the effectiveness of a bioinsecticide made from neem leaf extract (Azadirachta indica) and dringo rhizome (Acorus calamus L.) against the rice ear bugs (Leptocorisa oratorius) on rice plants. This study consisted of two tests, a laboratory test and a field test. The Laboratory tests were carried out to identify bioactive compounds (using the Gas Chromatography-Mass Spectrometry (GCMS) method) and to test the mortality of bioinsecticides against rice ear bugs. The results show that the major active compound found in the bioinsecticide is cis-asarone (which acts as a contact poison and stomach poison for insect pests) by 25.35%. From the laboratory test, The values of LC50 and LC95 of bioinsecticides were acquired by 13.60 % and 45.79 % respectively. The field test compares bioinsecticides and deltamethrin synthetic insecticides in several agronomical parameters. The results show that bioinsecticides can reduce pest populations and reduce the intensity of pest attacks better than deltamethrin, and increase rice yields as seen in the parameter of weight of dry grain per hill (65.06 g), the weight of 1,000 grains (22.52 g), and percentage of full grain (81.86%).

Keywords*: biopesticide, insect, dringo, pesticide, plant-based pesticide.*

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