

## RINGKASAN

Lahan adalah komponen esensial dalam sektor pertanian. Namun, dengan fokus pembangunan ekonomi yang bergeser ke sektor non-pertanian seperti investasi dalam industri, infrastruktur, hotel, restoran, dan bangunan lainnya, lahan pertanian semakin menyusut. Salah satu solusi yang dapat diterapkan untuk menangani masalah tersebut adalah intensifikasi pertanian, seperti dengan mengimplementasikan budidaya mina padi. Dalam ekosistem mina padi, pengendalian hama tanaman padi dilakukan dengan metode ramah lingkungan termasuk penggunaan insektisida nabati yang dapat melindungi padi dari hama serta tidak mencemari lingkungan perairan.

Penggunaan insektisida harus dilakukan secara tepat agar tidak berdampak negatif terhadap ikan yang dibudidayakan dan musuh alami yang berguna bagi tanaman padi. Penelitian ini bertujuan untuk mengetahui pengaruh budidaya padi secara konvensional dan mina padi serta aplikasi insektisida terhadap serangan hama padi, musuh alami padi, hasil panen padi, dan persentase serta hasil panen ikan. Guna mencapai tujuan tersebut peneliti menggunakan pendekatan kuantitatif dengan metode pengumpulan data berupa praktik budidaya, studi literatur, observasi, dan dokumentasi.

Hasil dari penelitian ini menunjukkan bahwa keberagaman hama dengan intensitas serangan ringan hingga sedang, didominasi *Spodoptera* spp., *Oxya* sp., dan *Pomacea canaliculata*, serta *Atherigona* sp. yang tertangkap dalam jumlah tinggi pada perangkat kuning. Jenis dan jumlah musuh alami yang paling banyak ditemukan terdapat pada perlakuan budidaya sawah konvensional (P1) dengan total 19 spesies. Sementara keanekaragaman morfospesies sedang-rendah, dominansi sedang-tinggi, pemerataan rendah-sedang-tinggi, dan kesamaan rendah-sedang-tinggi-sangat tinggi. Perlakuan mina padi meningkatkan hasil panen ikan dengan tingkat kelangsungan hidup tinggi dan kenaikan bobot 124–150% dari bobot awal, hasil panen tertinggi dicapai pada perlakuan mina padi tanpa insektisida. Perlakuan mina padi dengan insektisida nabati meningkatkan hasil panen sebesar 14%, dengan

bobot basah 64,81 kg dan bobot kering 55,93 kg, tertinggi di antara semua perlakuan.

Kata kunci : hama, insektisida, mina padi, musuh alami



## SUMMARY

*Land is an essential component in the agricultural sector. However, with the focus of economic development shifting to non-agricultural sectors such as investment in industry, infrastructure, hotels, restaurants, and other buildings, agricultural land is shrinking. One of the solutions that can be applied to deal with this problem is agricultural intensification, such as by implementing rice-fish farming cultivation. In the rice-fish farming ecosystem, pest control of rice plants is carried out by environmentally friendly methods, including the use of plant-based insecticides that can protect rice from pests and do not pollute the aquatic environment.*

*The use of insecticides must be carried out appropriately so as not to negatively affect the cultivated fish and natural enemies that are useful for rice crops. This study aims to determine the effect of conventional rice cultivation and rice-fish farming as well as the application of insecticides on rice pest attacks, natural enemies of rice, rice yields, and fish yield percentages and yields. To achieve this goal, the researcher uses a quantitative approach with data collection methods in the form of cultivation practices, literature studies, observations, and documentation.*

*The results of this study show that the diversity of pests with light to moderate attack intensity, dominated by *Spodoptera* spp., *Oxya* sp., and *Pomacea canaliculata*, as well as *Atherigona* sp. caught in high numbers on yellow traps. The most common types and number of natural enemies are found in conventional rice field cultivation treatment (P1) with a total of 19 species. While the morphospecies diversity is moderate-low, medium-high dominance, low-medium-high evenness, and low-medium-high-similarity are very high. Rice-fish farming treatment increases fish yields with a high survival rate and a 124–150% increase in weight from the initial weight, the highest yield is achieved in rice-fish farming treatment without insecticides. Treatment of rice-fish farming with vegetable*

*insecticides increased yield by 14%, with a wet weight of 64.81 kg and a dry weight of 55.93 kg, the highest among all treatments.*

*Keywords: pests, insecticides, rice-fish farming, natural enemies*

