

ABSTRAK

KEANEKARAGAMAN SERANGGA AIR PADA LAHAN PADI ORGANIK DAN ANORGANIK DI DESA TULUNG AGUNG KECAMATAN GADINGREJO KABUPATEN PRINGSEWU LAMPUNG SEBAGAI EVALUASI KUALITAS AIR

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Keanekaragaman serangga air merupakan bioindikator dalam ekosistem pertanian karena mencerminkan kesehatan perairan, terutama di lahan sawah organik dan anorganik. Pertanian organik yang menggunakan bahan alami cenderung meningkatkan keanekaragaman hayati, sedangkan pertanian anorganik dapat menurunkannya akibat penggunaan pestisida dan pupuk kimia. Penelitian ini bertujuan menganalisis keanekaragaman, dominansi, kemerataan, dan faktor abiotik yang memengaruhi kelimpahan serangga air di lahan organik dan anorganik di Desa Tulung Agung, Kecamatan Gadingrejo, Kabupaten Pringsewu, Lampung, pada Desember 2024–Februari 2025. Hasil penelitian menunjukkan keanekaragaman serangga air lebih tinggi pada lahan organik ($H' 2,3386$), dengan dominansi rendah ($D = 0,058$) dan kemerataan tinggi ($E = 0,9411$), sedangkan di lahan anorganik keanekaragaman lebih rendah ($H' 0,9743$), dominansi sedang ($D = 0,5188$), dan kemerataan rendah ($E = 0,3312$). Faktor fisika–kimia air di lahan organik tidak berpengaruh signifikan, sementara di lahan anorganik terdapat korelasi yang kuat dan signifikan ($r = 0,905$; $p = 0,035$).

Kata Kunci : Serangga Air, Keanekaragaman, Pertanian Organik, Pertanian Anorganik, Kualitas Air.

ABSTRACT

AQUATIC INSECT DIVERSITY IN ORGANIC AND INORGANIC RICE FIELDS IN TULUNG AGUNG VILLAGE GADINGREJO DISTRICT PRINGSEWU REGENCY LAMPUNG AS AN EVALUATION OF WATER QUALITY

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The diversity of aquatic insects serves as a bioindicator in agricultural ecosystems because it reflects water quality, particularly in organic and conventional (inorganic) rice fields. Organic farming, which utilizes natural materials, tends to enhance biodiversity, while conventional farming may reduce it due to the use of chemical pesticides and fertilizers. This study aims to analyze the diversity, dominance, evenness, and abiotic factors influencing the abundance of aquatic insects in organic and conventional rice fields in Tulung Agung Village, Gadingrejo Subdistrict, Pringsewu Regency, Lampung, from December 2024 to February 2025. The results showed that aquatic insect diversity was higher in organic fields ($H' = 2.3386$), with low dominance ($D = 0.058$) and high evenness ($E = 0.9411$). In contrast, conventional fields exhibited lower diversity ($H' = 0.9743$), moderate dominance ($D = 0.5188$), and low evenness ($E = 0.3312$). Physicochemical factors in organic fields had no significant effect on aquatic insect abundance, while in conventional fields, a strong and significant correlation was found ($r = 0.905$; $p = 0.035$).

Keywords: *Aquatic Insects, Diversity, Organic Farming, Inorganic Farming, Water Quality.*