

**Pengaruh Aplikasi Bioinsektisida Umbi Gadung  
(*Dioscorea hispida Dennst*) Terhadap Keanekaragaman Arthropoda  
Pada Tanaman Padi (*Oryza Sativa L.*)  
Dibimbing oleh Dr. Ir. Mochammad Syarief, M.P.**

**Nur Afni Safitri**  
Program Studi Teknologi Produksi Tanaman Pangan  
Jurusan Produksi Pertanian

**ABSTRAK**

Keanekaragaman arthropoda dapat mempengaruhi dalam kualitas dan kuantitas produk tanaman budidaya. Insektisida nabati menjadi salah satu alternatif untuk pengendalian hama. Bioinsektisida umbi gadung merupakan salah satu biopestisida yang ramah lingkungan. Penelitian ini bertujuan untuk mengkaji keanekaragaman arthropoda, indeks shannon-wiener, indeks dominansi, kesamaan jenis sorensen, dan berat gabah kering sawah per rumpun padi. Penelitian ini dilakukan pada bulan Agustus – November 2022 di desa Balung Lor, kecamatan Balung, kabupaten Jember. Metode penelitian ini membandingkan pengaruh bioinsektisida umbi gadung dan insektisida sintesis berbahan aktif fipronil terhadap beberapa parameter penelitian menggunakan analisis non parametrik. Hasil penelitian ini pada bioinsektisida umbi gadung menunjukkan bahwa total 24 spesies. Sedangkan pada perlakuan sintesis fipronil dengan total 21 spesies. Indeks diversitas bioinsektisida umbi gadung 2,17 dan insektisida sintesis berbahan aktif fipronil 1,88 artinya masuk dalam kategori sedang. Indeks dominansi bioinsektisida umbi gadung 0,01 dan insektisida sintesis berbahan aktif fipronil 0,02 artinya tidak ada spesies yang mendominasi. Kesamaan jenis sorensen bioinsektisida umbi gadung dan insektisida sintesis berbahan aktif fipronil 93% artinya serupa. Serta untuk berat gabah kering sawah bioinsektisida umbi gadung 37,07 gram dan insektisida sintesis berbahan aktif fipronil 34,52 gram.

**Kata Kunci** : arthropoda, fipronil, bioinsektisida umbi gadung, indeks shannon-wiener, indeks dominansi, kesamaan sorensen.

*The Effect of The Application of Gadung Tuber (Dioscorea hispida Dennst) Bioinsecticide on The Diversity of Arthropod's in Rice Plant's (Oryza Sativa L.)*  
Supervised by Dr. Ir. Mochammad Syarief, M.P.

**Nur Afni Safitri**

Study Program of Food Crop Production Technology  
Departement of Agricultural Production

***ABSTRACT***

Arthropod diversity can affect the quality and quantity of cultivated plant products. Botanical insecticides are an alternative for pest control. Gadung tuber bioinsecticide is one of the environmentally friendly biopesticides. This study aims to examine the diversity of arthropods, shannon-wiener index, dominance index, sorensen species similarity, and paddy dry grain weight per rice clump. This research was conducted in August - November 2022 in Balung Lor village, Balung sub-district, Jember district. This research method compared the effect of gadung tuber bioinsecticide and synthetic insecticide with the active ingredient fipronil on several research parameters using non-parametric analysis. The results of this study on gadung tuber bioinsecticides showed that a total of 24 species. While in fipronil synthetic treatment with a total of 21 species. The gadung tuber bioinsecticide diversity index was 2.17 and the synthetic insecticide with the active ingredient fipronil was 1.88, meaning it was in the medium category. The domination index of gadung tuber bioinsecticide is 0.01 and the synthetic insecticide with the active ingredient fipronil is 0.02 meaning that no species dominates. The similarity of the type of gadung tuber bioinsecticide sorensen and synthetic insecticide with active ingredient fipronil 93% means similar. As well as for the weight of dry paddy rice paddy yam tuber bioinsecticide 37.07 grams and synthetic insecticide with the active ingredient fipronil 34.52 grams.

**Keywords :** arthropods, fipronil, gadung tuber bioinsecticide, shannon-wiener index, dominance index, sorensen similarity