

**Effect of Water Lakum Plant (*Ludwigia Octovalvis*) as Refugia
Against Arthropod Diversity in Rice Cultivation
(*Oryza sativa* L.) Organic**

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ABSTRACT

Refugia is a microhabitat planted around plants cultivated for predators and parasitoids to breed. The purpose of this study was to determine the effect of adding water lakum plants as refugia on arthropod diversity and organic rice crop yields. This research was conducted in the organic rice fields of Darsono Village, Arjasa District, Jember Regency. in October-December 2022. Based on the results of the study with 4 data collection on 2 observation plots, namely control plots (without refugia) the number of insects found was 447 individuals and 17 species consisting of: 7 Herbivores, 6 predators, 1 parasite and 3 polynators, while in the treatment plot (with refugia) there were 543 individuals and 20 species consisting of: 7 Herbivores, 6 predators, 1 parasite and 3 polynators. Arthropod diversity (H') on two plots showed moderate category, Dominance Index (C') in both treatments showed no dominance, type richness (R) in control plots and treatment plots classified as moderate, type evenness (E) was relatively high. The results of dry rice paddy fields showed significantly different results according namely a control plot (without refugia) of 36.50 g and a treatment plot (with refugia) of 40.74 g.

Keywords: Refugia, Organic Rice, Arthropod Diversity