

**THE EFFECT OF BIOINSECTICIDE APPLICATIONS OF SOURSOP
LEAF (*Annona mucirata*) ON ARTHROPODA DIVERSITY
IN RICE (*Oryza sativa* L.)**

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ABSTRACT

Soursop leaf bioinsecticide can be used as an alternative control because its more selective and safe against non-target organisms. The purpose of this research were to determine the components of soursop leaf bioactive, LC₉₅ toxicity, the effect of soursop leaf bioinsecticide application on arthropod diversity and rice crop yields. This research was conducted in July-October 2022 at the Biosciences Laboratory, Plant Protection Laboratory, Seed Production Technology Laboratory of the Jember State Polytechnic and Rice Cultivation Land in Balung Lor Village, Balung District, Jember Regency. Arthropod sampling with Sweep net, Sticky Trap, Yellow Pan Trap and Pitfall Trap. The highest compound in soursop leaf bioinsecticide is Palmitic acid of 18.39%, Oleic acid of 17.40% and Acetic acid of 13.83% which have potential as bioinsecticides. The LC₉₅ toxicity of soursop leaf bioinsecticide based on probit analysis was 28.92%. In soursop leaf bioinsecticide treatment the number of insects found was 2036 individuals and 32 species, while in the Fipronil was 1198 individuals and 26 species. Arthropod diversity (H') in the two treatments showed medium category, the Dominance Index (C') in both treatments showed no dominance, the species richness (R) in the soursop bioinsecticide and fipronil treatments was medium, the species evenness (E) in both treatments was evenly distributed, and the similarity of species in both treatments was same with a value of 89,66%. The results of dry grain in rice fields showed significantly different results according to the Man Whitney test, bioinsecticide treatment of soursop leaf 38,25 gr and insecticide fipronil 33,29 gr.