

Effectiveness of Mixed Neem and Soursop Leaf Insecticides on Locust Pest Control (*Oxya chinensis*) in rice plants
Supervised by Rudi Wardana S.Pd, M.si.

Dwi Sanjaya Rahayu Ohee
Study Program of Food Crop Production Technology
Departement of Agricultural Production

ABSTRACT

Locust pest attacks can reduce crop yields by up to 50%. Farmers are more dominant in using synthetic pesticides as a control solution which can cause pests to become toxic and less environmentally friendly. This research was conducted from October 2022 to January 2023 in the plant protection laboratory and on rice cultivation land at the Jember State Polytechnic. This study consisted of 2 stages, namely mortality and toxicity tests to determine the concentration to be used in the field. Mortality and toxicity tests used 6 treatment levels, namely concentrations of 7%, 12%, 17%, 22% and 27%. The second phase of the study was a field test by comparing the two treatments between the bioinsecticide treatment of a mixture of neem leaves, soursop leaves and garlic with a concentration of 42% and 2 ml.l⁻¹ cypermethrin treatment. The results of the mortality test and the toxicity test of a mixture of neem, soursop and garlic bioinsecticides against rice bugs were LC50 13% and LC95 64%. Locust populations with mixed bioinsecticide application showed significantly different results with higher pest populations than cypermethrin. The intensity of attack at 74 HST showed significantly different results between the bioinsecticide and cypermethrin treatments with the attack intensity in the cypermethrin treatment being higher than the bioinsecticide. On the yield parameters of crown weight, number of productive tillers, dry paddy rice weight showed the results of the mixed bioinsecticide treatment showed significantly different results which were significantly lower with the cypermethrin treatment

Keywords: *bioinsecticide, garlic, grasshoppers, neem leaves, soursop leaves.*