

**EFFICIENCY OF RODENTICIDE OF GADUNG PAID
(*Dioscorea hispida*) ON RATS (*Rattus argentiventer*)
IN RICE PLANT**

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ABSTRACT

Rice field rat (*Rattus argentiventer*) is one of the pest damaging rice plants. Rats attack rice plants commonly at the generative stage by cutting off the stems. Gadung tuber (*Dioscorea hispida*) can be used as a natural rodenticide ingredients to control rice field rats which can reduce environmental pollution. This research was carried out in two stages, firstly Rodenticide Efficacy (ER) test (conducted in Plant Protection Laboratory of Jember State Polytechnic), and secondly mortality and rodenticide efficacy tests to determine the recommended concentration for field application compared to clerat rodenticide. The field experiment conducted in Mlokorejo Village, Puger District, Jember Regency from January 2021 to April 2021. The number of sample for field experiment was 50 rice plant clumps. The research used a completely randomized design with four treatments within five replications each, namely K1 (0%), K2 (30%), K3 (40%), and K4 (50%). The research used one male mouse used for each treatment. The data then analyzed using Least Significant Difference (LSD) of 5 while Rodenticide efficacy (ER) of 70% using Henderson and Tilton formulas. The research showed that the concentration of 50% of gadung tuber was the most effective concentration in this particular experiment. Moreover, the field experiment showed that attack intensity of gadung tuber application was 4% while attack intensity of clerat was 9%. In average, gadung tuber application yield was 90,4 grams per rice plant clump while cleric treatment gained 115 grams of yield per rice plant clump.

Keywords: *Dioscorea hispida*; *Rattus argentiventer*; Rice plant; Rodenticide