THE EFFECTIVENESS OF SEVERAL NEEM LEAVES FORMULATIONS IN CONTROLLING STORAGE PESTS *Tribolium castaneum* ON RICE FLOUR

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ABSTRACT

Storing rice flour for a long time can cause a decrease in the quality of the material due to attack of storage pest insects, such as *Tribolium castaneum* . One alternative control is the use of botanical pesticides with various formulations. This research aims to obtain the best formulation of neem leaves and the concentration in suppressing *Tribolium castaneum*. The research has been carried out from January to April 2024 at the Plant Protection Laboratory, Faculty of Agriculture, Universitas Pembangunan Nasional "Veteran" Yogyakarta. The experiment was carried out using a two-factor Completely Randomized Design (CRD) method with three repetitions. There were 10 treatments, namely neem leaves liquid formulation 6% concentration (F1K1), neem leaves liquid formulation 9% concentration (F1K2), neem leaves liquid formulation 12% concentration (F1K3), neem leaves powder formulation 6% concentration (F2K1), neem leaves powder formulation 9% concentration (F2K2), neem leaves powder formulation 12% concentration (F2K3), neem leaves tablet formulation 6% concentration (F3K1), neem leaves tablet formulation 9% concentration (F3K2), neem leaves tablet formulation 12% concentration (F3K3), and control (K0). The results of the study showed that the liquid formulation with 12% concentration was significantly higher causing *T. castaneum* mortality and suppressing the *T. castaneum* population in the imago phase.

Keywords: *Tribolium castaneum*, rice flour, storage pest, neem leaves, formulation.