

EFFICACY OF *Azadirachta indica* NEEM SEED AND LEAF POWDER IN BAGS TO CONTROL *Sitophilus oryzae* L. ON VARIOUS RICE VARIETIES IN STORAGE

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ABSTRACT

Neem powder (*Azadirachta indica* Juss) if used as a botanical pesticide by mixing it directly into stored food to control rice beetles (*Sitophilus oryzae*) can cause contamination in a stored room. This research aimed to determine the effectiveness of bagged neem leaves powder and neem seeds powder for controlling *S. oryzae*. This study used a completely randomized design with a factorial pattern consisting of 2 treatment factors. The first factor was the type of neem powder (no powder/control, bagged leaves powder, and bagged seeds powder), and the second factor was the test rice variety (Mentik Wangi, IR-64, IR-42). Observation parameters include Mortality of *S. oryzae* imago (%), Effectiveness of Vegetable Pesticides, Number of *S. oryzae* imago that appears, Rice damage (%), Rice quality, Water Content, Repellency Level Test. The observation results were analyzed using analysis of variance (ANOVA) with a level of 5% and if there were significant differences, then continued using DMRT (Duncan Multiple Range Test) with a level of 5%. The results of the study showed that the use of neem seeds powder and the IR-64 rice variety gave the best results in the observed parameters including the highest effectiveness of botanical pesticides, the highest mortality of *S. oryzae*, the lowest emergence of *S. oryzae*, the lowest damage to rice, and the highest repellency of *S. oryzae*. The rice quality parameters in the neem leaf powder treatment and the use of the IR42 variety were most preferred by the panelists compared to other treatments.

Keywords: Botanical pesticides, neem, *Sitophilus oryzae* L.