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Effectiveness of methanolic leaf extracts of *Vitex negundo* Linnaeus and *Citrus aurantifolia* Christm. on rice weevil *Sitophilus oryzae*, Linnaeus (Coleoptera: Bruchidae) infesting rice.

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The rice weevil, *Sitophilus oryzae* Linnaeus is one of the most destructive pests of stored rice. Traditionally, in storages plant leaves, leaf powder used to protect stored products from insect pests. Different insects react in varying ways to different plant products. The present study aimed to determine the efficacy of methanolic leaf extract of *Vitex negundo* (Nishinda) and *Citrus aurantifolia* (lime) on mortality, adult emergence and development of adult of *Sitophilus oryzae* fed on rice.

The 0.025g/ml, 0.075g/ml and 0.125g/ml methanolic leaf extracts of *V. negundo* and *C. aurantifolia* were mixed with 5 gm of rice and allowed to dry then tested separately against *S. oryzae* concurrently with solvent and untreated controls. Three replicates were carried out under laboratory conditions at 27 - 31° C temperature, 70-75% relative humidity and 12: 12 L: D photoperiod. Data were analyzed by using analysis of variance (ANOVA), t-test and LSD. Higher concentrations (0.075 g/ml, 0.125 g/ml) of methanolic leaf extracts of *V. negundo* and *C. aurantifolia* indicated significantly ($P<0.05$) less adult emergence, long developmental period of adult and reduction in weight loss compared to other treatments. Effect of methanolic leaf extract of *C. aurantifolia* (0.075 g/ml, 0.125 g/ml) was found to be significantly ($P<0.05$) high in prohibiting adult emergence (99% and 100% respectively) and prolonging the developmental period of adult and reducing the damage to grains when compared with other treatments. 0.125 g/ml of methanolic leaf extract of *C. aurantifolia* caused significantly high adult mortality (67%) but no adult mortality was observed in all three concentrations of leaf extract of *V. negundo* .

The overall results of this study reveals that the 0.125 g/ml methanolic leaf extract of *C.aurantifolia* and *V. negundo.* could be used for the protection of rice grains in storages against *S .oryzae* and extract of *C.aurantifolia* found to be more effective and showing adult mortality ,reducing adult emergence and extend the developmental period of adult *S. oryzae* than the leaf extract of *V . negundo.*

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