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The Effect of Four Local Plant Extract on the Control of Rice Weevil, Sitophilus oryzae L.

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Abstract : Four local species (Allium sativum, Capsicum annum, Anethum graveolens, and Ocimum basilicum) were evaluated in the laboratory of Biolog Department, College of Education, for their ability to protect stored rice from the infection by weevil Sitophilus oryzae. Aqueous extracts of the plant species were applied as direct admixture of three concentrations levels of 1%, 2.5%, and 5% (W/V) to assess for mortality, adult emergence, and repellency and weight losses. The results showed that Al. sativum extracts was the most effective as it gave the highest mortality (90%)at 5% concentration followed by Capsicum annum (80%) on the 4th day post treatment, the result showed that the plant extract of different concentrations exhibited different level of reduction in adult emergence and different repellency of adults of Sitophilus oryzae. Allium sativum recorded the lowest mean number of adult emergence (8) followed by Capsicum annum (10) at 5% concentration, while Capsicum annum was found to be revealed complete repellent agent (100%) repellency on the 6th hours against Sitophilus oryzae followed by Allium sativum and Anethum graveolens (81.8%). There was a significant (P>0.05) reduction in the weight lossed by the weevils with less damaged recorded on grain treated with Allium sativum and Capsicum annum (1.6%) and (2.3%) respectively.

Keywords : plant extraction, rice, protectant, pest
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