

Insecticidal properties of *Gymnema sylvestre* R.Br. against the storage pest, *Tribolium castaneum* Herbst.

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Abstract

Insecticidal activity of many plants against several insect pests has been demonstrated. In this regard, an attempt has been made to analyze the insecticidal effects of the medicinal herb, *Gymnema sylvestre* on a storage pest, *Tribolium castaneum*. *G. sylvestre* leaves were used to prepare different extracts. Prepared seven different formulations were studied for their effect on mortality and progeny production against insect pest *T. castaneum*. Adults of *T. castaneum* were exposed to the treated broken rice and the mortality was assessed after 24h, 72h, 7days, 14days and 21 days of exposure. Progeny count of *T. castaneum* was done at the same mentioned intervals. Separately ethanolic extract was assessed for mortality by residual film assay and the mortality was assessed after 24h and 48h of exposure. Exposed *T. castaneum* showed significant mortality in all formulations. Observed mortality percentage increased with increase in time intervals after application but the extract concentrations had no significant effect. Cumulative mortality (52.2%) and progeny suppression (82.4%) were higher in leaf powder paste. The mortality in ethanolic extract was 100% at 24h at 300mg dosage. LD₅₀ value was found as 17.5mg and 5mg for 24h and 48h, respectively.