

STUDIES OF SOME SELECTED BOTANICALS, ANTI
MICROBIAL FOOD ADDITIVE AND ACTELIC ON THE
BIOLOGY OF
Sitophilus oryzae (L).

BY

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ABSTRACT

This study was conducted at Eastern University during the period of September 2000 to December 2000 to evaluate the effect of powdered *gardenia* bud (1.2gm and 1.6 gm of lakada/ 100gm rice seeds), neem kernel extract (5 and 10%, w/w), acetic acid (3%v/w) and of actellic 2ml/100Kg of rice seeds on the survival and emerging rate of *Sitophylus oryzae* reared on rice seeds. More over the repellent activity of botanicals and acetic acid on the survival of *S.oryzae* was also evaluated.

All the treatments used in this study substantially reduced the survival and emerging rate of *S.oryzae* over control. Findings from this study showed that actellic is significantly ($P<0.05$) more effective than other treatments on both survival percentage and emerging rate of *S.oryzae* it was found to be very effective for control of insects. Survival of *S.oryzae* was significantly affected by acetic acid however there was no significant ($P<0.05$) difference between acetic acid and high concentration of neem on the emergence rate of *S.oryzae*.

Among the botanical treatments, high concentration of powdered lakada (1.6gm/100gm rice seeds) and neem (10%w/w) were more effective than low concentration of botanicals. All these botanicals are effective protectants for stored grains. Among the botanicals tested in this study 10%w/w neem kernel powder was found to be more effective.

Based among this treatment actellic is very efficient in reducing the survival and emergence of *Sitophylus oryzae*.

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