

**EFFICACY OF CERTAIN BOTANICALS ON MAIZE
WEEVIL (*Sitophilus zeamais* Motschulsky) IN STORED
MAIZE GRAIN**



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FAG543



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2018

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ABSTRACT

A laboratory experiment was conducted to evaluate the efficacy of botanicals obtained from five, locally available plant leaves viz. Annona (*Annona squamosa*), Marigold (*Tagitus minuta*), Shrub verbenas (*Lantana camera*), Neem (*Azadiracta indica*) and Tobacco (*Nicotinia tabacum*) against maize weevil *Sitophilus zeamais* following mortality and number of maize grains damaged during a storage of two and half months at RT and RH of 75%. The results disclosed that, petroleum ether extracts of liquid botanicals extracted from tested fresh leaves were effective in killing adult maize weevils fully or partially and reducing grain damage and its effect was significantly ($p < 0.05$) different from each other. The treatment without adding any botanicals showed the lowest mortality rate of 20 % and highest damaged stored maize grains of 49.2% at the end of 10 weeks of storage period. The application of *N. tabacum* and *A. indica* leaf extracts exhibited 100 % of weevil mortality rate in 8th week and 10th week of storage period, correspondingly and no damages resulted on stored maize grains throughout the storage period. The efficacy of the other tested botanicals of *A. squamosal*, *T. minuta* and *L. camera*, in terms of adult weevil mortality and number of damaged maize grains are 92, 90 and 78 % and 17, 10.3 and 8.6 %, respectively. Therefore, petroleum ether extracts of *N. tabacum* and *A. indica* could be used as botanical pesticides and could also be utilized as good alternatives to synthetic pesticides in the control of the pest *S. zeamais* in stored maize grain.

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