EFFECT OF MAIZE VARIETIES ON THE MANAGEMENT OF PROSTEPHANUS TRUNCATUS (HORN) (COLEOPTERA: BOSTRICHIDAE)

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ABSTRACT
This paper advocates the application of non-chemical technologies in the management of insect pests of stored crops. The thrust of the study was to investigate the levels of susceptibility of some stored maize varieties to the Larger Grain Borer (LGB), Prostephanus truncatus (Horn) as a basis for identifying varieties, which are more resistant to attack. Experiments were carried out to determine the varietal effectiveness of some maize to P. truncates. The calculated Indices of Susceptibility (IS) were highest in variety UCA and lowest in Katumani. Sodium Dodecyl Sulphate-Polyacrylamide Gel Electrophoresis (SDS – PAGE) was conducted to assess amounts of vitellogenin in the insect reared on maize varieties namely Ukiiguru Composite A (UCA), kilima, Tanzania Maize Variety1 (TMV1) and Katumani. The percentage of vitellogenin (Vg) were in the order UCA>kilima> TMV1> Katumani ranging from 30% to 80%. Analysis of variance indicated significant difference among the varieties at P<0.001. IS and Vg levels showed a positive relationship, r=0.931, P<0.005. It was concluded that varietal resistance is an insect pest management technology.

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