ASEC 2022

Abstract

Potential of Inert Dust and Insect Growth Regulators against Different Life Stages of *Tribolium castaneum* †

Shahbaz Ahmad

Department of Entomology, University of the Punjab, Lahore 54590, Pakistan; shahbaz.iags@pu.edu.pk

† Presented at the 3rd International Electronic Conference on Applied Sciences, 1–15 December 2022; Available online: https://asec2022.sciforum.net/.

Abstract: *Tribolium castaneum* is a major pest of stored products, in warmer climates. It infests seeds, kernels and other products, that have already been wounded by other pests during harvest and storage. Red flour beetle is a secondary pest it feed on the broken grains or on the remains of primary pest. Experiment was conducted to evaluated the efficacy of inert dust and IGR's against the different life stages of *T. castaneum* through direct feeding bioassay. IGR's were tested on 20, 10, 5, 2.5, 1.25, 0.75 ppm and white kaolin clay was tested on 30, 25, 20, 15, 10 g/kg. Two formulations of diatomaceous earth (100% pure food grade and calcium bentonite clay) of dose (400, 500, 600, 700 and 800 mg/kg and 500, 400, 250, 200 and 100 mg/kg, respectively) were tested under lab conditions (22 ± 2 °C, R. H. 55 ± 5%, photo period 8 L:16 D). Results showed that white kaolin clay gave maximum control followed by Lufenuron > diatomaceous earth (100% food grade) > Methoxyfenozide > DE (calcium bentonite clay) > Pyriproxyfen after 21 days. Results also showed that all the treatments are dose and time dependent for the effective control. Further research work should be needed on residual studies to detect the deposited chemicals.

Keywords:

Citation: Ahmad, S. Potential of Inert Dust and Insect Growth Regulators against Different Life Stages of *Tribolium castaneum*. *Eng. Proc.* **2022**, *4*, x. https://doi.org/10.3390/xxxxx

Academic Editor(s):

Published: 1 December 2022