



Toxicity of two plant powders as biopesticides in the management of *Callosobruchus maculatus* F. (Coleoptera: Chrysomelidae, Bruchinae) on two stored grain legumes.

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ABSTRACT

Objective: The present study aimed to evaluate effects of leaf powder of *Chenopodium ambrosioides* (wormseed) and *Adenia cissampeloides* (snake climber) on insect populations and seeds weight loss percentage.

Methodology and Results: Two leaf powders were applied at 2.5%, 5% and 7.5% (wt/wt). All bioassays were conducted at 27±2°C and 70±5%RH. Insect mortality was evaluated after 2, 4 and 6 days of exposure and the total progeny was assessed 34 days after. *C. ambrosioides* at 2.5% showed the best efficacy, recording 69.64% of mortality in *Vigna subterranea* groundnuts and 100% of mortality in *Kerstingiella geocarpa* one's, 6 days after treatment. The lowest LC₅₀ value after 6 days was obtained with *A. cissampeloides* applied at 2.37g/20g of *V. subterranea* groundnuts and with *C. ambrosioides* applied at 1.38 g/20g of *K. geocarpa* groundnuts.

Conclusion and application of findings: Because of their effectiveness, the leaf powder of these plants could be recommended as grain protectant against *C. maculatus*.

Key words: Botanical insecticides, pulses weevil, grain legumes, plant extracts, mortality rate.