



Efficacy of two plant powders as cowpea grain protectants against *Callosobruchus maculatus* Fabricius (Coleoptera, Chrysomelidae: Bruchinae)

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Original submitted in on 22nd July 2016. Published online at www.m.elewa.org on 30th September 2016
<http://dx.doi.org/10.4314/jab.v105i1.11>

ABSTRACT

Objective: This study was carried out to study insecticidal effect of powders from *Chenopodium ambrosioides* leaves and *Aframomum melegueta* seeds on cowpea weevil *Callosobruchus maculatus*.

Methodology and Results: 5g of both powders of *A. melegueta* and *C. ambrosioides* were used in the proportions of *C. ambrosioides* 100%:*A. melegueta* 0%, *C. ambrosioides* 0%: *A. melegueta* 100%, *C. ambrosioides* 30%: *A. melegueta* 70%, *C. ambrosioides* 70%: *A. melegueta* 30% and *C. ambrosioides* 50%: *A. melegueta* 50%. Plant powders were added to 20g of cowpea grains. Bioassays were conducted at 26.64±0.74°C and 72.55±4.38% relative humidity. Insect mortality was evaluated from 24 to 144 hours after treatment. Results obtained indicated that plant powders had significant effect on *C. maculatus* mortality. The highest mortality rate (70.00±26.45%) was recorded in jar treated with *C. ambrosioides*.

Conclusion and application of findings: Either plant powders, alone or mixed had high insecticidal effect on *C. maculatus*. Because of their effectiveness, these plant powders could be recommended as grain protectants against *C. maculatus*.

Key words: *Chenopodium ambrosioides*, *Aframomum melegueta*, *Callosobruchus maculatus*, Insecticidal activity