



Afr. J. Agric. Res.

[Vol. 2 No.4](#)

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African Journal of Agricultural Research Vol. 2(4), pp. 168-172, April, 2007
ISSN 1991- 637X© 2007 Academic Journals

Full Length Research Paper

Potential of *Anisopteromalus calandrae* (Hymenoptera: Pteromalidae) as biocontrol agent of *Callosobruchus maculatus* (F.) (Coleoptera: Bruchidae)

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Accepted 15, February 2007

Abstract

The bruchid *Callosobruchus maculatus* (F.) (Coleoptera: Bruchidae) is a major pest of stored cowpea *Vigna unguiculata* (Walp.) in Africa and particularly in northern Cameroon. *Anisopteromalus calandrae* (Hymenoptera: Pteromalidae) parasitoid of its larval stages, could be used in the biological control of this grain pest. In field conditions, 5 months samples in small holder granaries established the phenological relationship between this parasitoid and its host. Large amount of *A. calandrae* may efficiently control *C. maculatus* infestations. Laboratory assays made an evidence of the preference of *A. calandrae* to parasitise 4th instar larvae of *C. maculatus*. To estimate the suitable density of the infesting population of parasitoid, other experiments pointed out that one mated female induced reduction of 4.97% of emergence of *C. maculatus* while 4 females performed more. The reduction of emergence observed was 42.34%. In suitable density, *A. calandrae* may play an important role in the biological control of *C. maculatus* on cowpea during storage.

Key words: *Anisopteromalus calandrae*, biological control, Cameroon, *Callosobruchus maculatus*, Cowpea.

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