● *RESEARCH ARTICLE* ●

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Repellent activity of *Callsobruchus maculatus* by *Annona squamosa* extract

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ABSTRACT

Annona squamosa is commonly known as custard apple.Chloroform extract showed *Callosobruchus maculates* using Petridish method. The repellencylosted for 50 hours period in the plant extract these of for it declines. Preliminary phytochemical screening of the plant extract indicates the presence of sesquiterpene which is yet to be ascurtained.

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Key words : *Annona squamosa*. *Callsobruchus maculates,* Repellent activity, Extract.

INTRODUCTION

Insects are most abundant fauna on earth. Variety of them are harmful to man among which insect of family Bruchidae has obvious economic importance because they breed on grain legume and consume valuable protein that would otherwise be eaten by man. The organic insecticides although highly efficacious against target species of insect but can be determental to a variety of animal life including man. The spray of insecticide crop pest as well as to the stored grain to the godowns, through food grains reach to the human being which effect health adversely. Therefore, kind of safe insecticide or repellent for use on stored grains, in this direction, it was thought essential to investigate the natural products as potent biocidal compound to be used.

Repellency is another mode of insect control through natural plant products, which could induce toxic effects to the target organism prior to their coming closure to the compound. Repellent property of neem seed(*Azadirachta indica*) to certain stored grain pest has been shown much earlier by Jotawani and Sircar(1965),Pandey *et al*.,(1976) who have described the use of some plant powders, oil and extracts as protactants and repellents against *Callosobruchus chinensis.* Bhuyan *et al.,*(1974)reported the repellent property of oil fraction of Garlic, *Allium sativum* against mosquito vector. Deshpande *et al.,* (1974), Kloke and Kubo(1982) and Koul (1983) have described the different fatty acids and terpenoids to posses biologically activities including repellency against various insect pests.The present report pertaining to repellent activity to *Ocimum sanctum* against *C. chinensis* is continuous effort for stored grain pest management (Dixit and Saxena *et al*.,1990; Saxena and Sexena, 1992).

Almost all the insect pests of stored grains have a remarkably high rate of multiplication and within one season they may destroy 10-15 per cent of grains and contaminate the rest with undesirable odours and flavours. Various plant products reported to possess chemicals preventing insect attacks have been used as stored grain protectants. Merit revaluation for their potential was environmentally safe and commercially viable compounds for their pest control.

The effectiveness of many secondary plant metabolites for use against grain pests have been reviewed by Burnett *et al.* (1974), Jscobson (1975) and Ketkar

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