

**The study of duration of effectiveness of neem seed oil against
Callosobruchus chinensis (Coleoptera:Bruchidae) on green gram seeds**

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Green gram is a protein rich source on which the major pest *Callosobruchus chinensis* cause severe damage. Neem seed oil at 2-5 ml/kg was found to be a good protectant of green gram seeds against *C. chinensis*.

To determine the duration of effectiveness of neem seed oil on green gram seeds against *C. chinensis* on the basis of oviposition and adult emergence, infestation free green gram seeds mixed with neem seed oil (5 ml/kg) and stored for different periods before mated adults were introduced. One batch of untreated seeds was served as control. The results were analysed by using ANOVA, T-test, and Duncan's Multiple Range Test (DMRT).

It was found that significantly lesser ($P < 0.05$) mean number of eggs were laid on green gram seeds treated with neem oil three months before storage than on untreated seeds, whereas after six months of treatment there was no significant difference ($P > 0.05$) in number of eggs laid on treated seeds and untreated seeds and also between seeds those treated three months and six months before storage. From DMRT analysis treated seeds stored for three months and six months shows equal effect on number of eggs laid and greater number of eggs laid than on one months stored seeds.

Although there was no significant differences in number of eggs laid on seeds treated with neem oil before six months of storage, significantly lesser number of adults were emerged ($P < 0.001$) compared with the untreated seeds and 50 % ,77 % of the adult emergence was observed in those treated with three months and six months before storage respectively, therefore 5 ml neem seed oil / kg of green gram seeds gave good protection for up to three months against *C. chinensis* by reducing oviposition and emergence of adults.

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