



Insecticidal Effect of *Euphorbia hirta* on the Pests *Callosobruchus chinensis* and *Sitophilus granarius*

• Sindhu Kumari • Astha Singh
• Joyita Das

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Corresponding Author : Joyita Das

Abstract : The present study has been conducted to evaluate the effect of plant powder and ethanolic extract of *Euphorbia hirta* on the pulse beetle *Callosobruchus chinensis* infested green gram (*Vigna radiata*) seeds and on the grain weevil, *Sitophilus granarius* infested rice (*Oryza sativa*) in storage. The experiment was performed at room temperature in triplicate. Mortality, natality, survival and fecundity of these pests in different amounts of powder treatment was recorded at 10 days, 20 days and 30 days and of extract treatment was recorded at 1st day, 3rd day and 5th day interval. It was observed that the use of powder and extract of the selected plant *Euphorbia hirta* increased adult mortality on the pest *Callosobruchus chinensis* and also affected *Sitophilus granarius* but less effectively. Use of powder and extract also decreases oviposition of both the pests. 0.5 ml ethanolic

extract of *Euphorbia hirta* showed 100% mortality of *Callosobruchus chinensis* and showed significantly highest efficacy in controlling this pest. Moreover, plant extract and powder had no significant effect on the mortality of grain weevil, *Sitophilus granarius*. The controls of the two grains showed an increase in the number of pests and considerable damage and contamination of the grains. In the treated group, the pest population was decreased and damage to the grains was significantly less.

Keywords: *Callosobruchus chinensis*, *Sitophilus granarius*, *Euphorbia hirta*, Mortality, Insecticidal Effect.

Sindhu Kumari

B.Sc. III year, Zoology (Hons.), Session: 2016-2019,
Patna Women's College, Patna University, Patna,
Bihar, India

Astha Singh

B.Sc. III year, Zoology (Hons.), Session: 2016-2019,
Patna Women's College, Patna University, Patna,
Bihar, India

Joyita Das

Assistant Professor, Department of Zoology,
Patna Women's College, Bailey Road,
Patna-800 001, Bihar, India
E-mail : joyitadas11@gmail.com

Introduction :

In developing countries agriculture is the driving force for broad-based economic growth. One of the major problems with agriculture now-a-days is the demand for more production and more crops in order to provide food for the masses.

In realizing this, one of the stumbling blocks seems to be the yield losses due to pests. One of the most important constraints of having every day sufficient food is the post harvest preservation of food grains, both its quality and quantity. During storage, food grains and products are severely destroyed by insects and other pests.