Research Article

COMPARATIVE EFFICACY OF SOME INDIGENOUS PLANT MATERIALS AS TOXICANT AGAINST PULSE BEETLE, *Callosobruchus chinensis* (L.)

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ABSTRACT

A laboratory experiment was carried out in the Department of Entomology, School of Agricultural Sciences and Rural Development (SASRD), Nagaland University (NU), Medziphema, Nagaland, to evaluate the toxicant effect of some indigenous plant materials against *Callosobruchus chinensis* L. The plant materials were leaves of *Jatropha curcas L.*, seeds of *Litsea citrata* and *Piper nigrum*. Plant extracts were prepared with two different solvent, acetone and distilled water at five different doses of 10, 25, 50, 75 and 100 mg/ml. The toxicant effect test was done by using dipping method. The insect mortality was recorded at 24, 48 and 72 hours after exposure. In acetone extracts the highest mortality was observed in *Litsea citrata* @ 100 mg/ml (83.33%) followed by *Piper nigrum* (76.67%) and *Jatropha curcas* L. (73.33%). Similar results were obtained with distilled water extract, where *Litsea citrata* @ 100 mg/ml gave the highest (86.67%) mortality followed by *Piper nigrum* (80%) and *Jatropha curcas* L. (80%). The finding showed the strong insecticidal effect of *Litsea citrata* extract against pulse beetle. All the plant materials with water extract was comparatively more effective than acetone extract.

KEYWORDS: Pulse beetle, plant extracts, toxicant, *Litsea citrate*, *Jatropha curcas, Piper nigrum.*