D-06 Ovipositional preference and developmental responses of the cowpea beetle *Callosobruchus chinensis* on different stored pulses

D U S Wijenayake, M M S C Karunaratne
Dept of Zoology, University of Sri Jayewardenepura, Nugegoda

Callosobruchus chinensis is one of the most destructive pests of stored pulses. As it is difficult to find suitable control methods, emphasis should be placed on developing new plant varieties that are resistant to bruchids and also produce high yields. A knowledge of pest-resistant characteristics of seeds and the growth characteristics of the pest on these seeds is therefore very important. In the present study, ovipositional preference and developmental responses of the beetle were investigated in the laboratory using 6 commonly available pulses. Experiments were carried out in glass vials covered with muslin cloth.

The beetle preferred smooth coated, well filled seeds for oviposition and rejected seeds with a rough coat. The most preferred seeds for oviposition were mung and soybean whereas chickpea was least preferred. The study revealed that the ovipositional preference was not an indication of suitability for larval development. Development was comparatively faster in mung and black and white varieties of cowpea than in the rest of the pulses tested. A 100% larval mortality was found in soybean. Considerably higher larval food consumption plays a significant role in the production of adults with higher weights and fecundities. Mung bean and white and black varieties of cowpea were most susceptible, while soybean was most resistant to beetle attack.