

Optimization of protocols for rearing the Cotton Bollworm/Legume Pod Borer, *Helicoverpa armigera* under laboratory conditions

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The ever increasing demand for large numbers of laboratory reared insects for bioassays has necessitated the development of efficient and economical methods for mass production of insect pests. Several methods have been developed for artificial rearing of cotton bollworm/legume pod borer, *Helicoverpa armigera*. However, it is difficult to maintain the culture of this insect in the laboratory for more than five generations because of onset of pathogen infection, and inbreeding depression resulting in reduce fecundity and egg hatching. Therefore, the present studies were planned to overcome the problems faced in maintaining the culture of *H. armigera* on a long-term basis under laboratory conditions. We evaluate plastic cups, glass vials, and cell well plates for maintaining the culture of this insect. The larval survival was significantly greater in insects reared individually in cell-wells (95.33%), followed by glass vials (79.33 %), and poor in plastic cups and Petri plates where the insects were reared in groups. The weights of the larvae were also more in insects reared in cell wells, although the differences between different methods were not significant. The indigenously available cell well plates were quite suitable for rearing *H. armigera*, and these are amenable to surface sterilization, reusable, and hence, suitable for mass rearing of *H. armigera*.

Biography

Chitti Babu Giddi has completed his M.Sc (Ag) with specialization in Agricultural Entomology in 2008 at Acharya N G Ranga Agricultural University. While pursuing Doctoral got selected in the post of Assistant Professor in ANGRAU. Presently he is working as Scientist (Crop Protection) at District Agricultural Advisory and Transfer of Technology Centre (DAATTC) which is an extension wing of ANGRAU.

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