Bio control:: Mass production::Parasitoids

Mass Production of *Corcyra cephalonica*

Introduction

Corcyra cephalonica commonly called as rice meal moth or rice moth is a pest of stored foods, *viz.,* cereals, cereal products, oilseeds, pulses, dried fruits, nuts and spices. Many of the natural enemies mass-bred in the laboratory for use in field against crop pests are dependent on either egg or larval stages of *Corcyra* due to the simple reason that it is easier and cheaper to produce natural enemies on different stages of *Corcyra*(Fig.1) than on their original hosts.

Morphology and Biology of *Corcyra*

The eggs are oval and measure 0.5 x 0.3 mm. The white surface is sculptured and has a short nipple-like process at one end. The larvae are generally creamish – white except for the head capsule and the prothoracic tergite, which are brown. There are well-developed prolegs on abdominal segments 3-6 and 10. A fully matured larva measures 15 mm. The last-instar larva spins a closely woven, very tough, double-layered cocoon in which it develops into a dark-brown pupa. The anterior portion of the cocoon has a line of weakness through which the adult emerges. The adults are small. The hind-wings are pale-buff, and the fore-wings are mid-brown or greyish-brown with thin vague lines of darker brown colour along the wing veins. The males are smaller than the females.

Sexual activity usually begins shortly after adult emergence. There is a pre-oviposition period of about 2 days. Egg-laying mainly occurs during the night. The greatest numbers are laid on the second and third days after emergence, although oviposition may continue throughout life. Eggs take about 2-3 days to hatch. Optimum conditions for larval development of *C. cephalonica* are 30 – 32.50C and 70 per cent RH, at which, the period from egg hatch to adult emergence is only 26-27 days. There is considerable variation in the number of larval instars; however, males generally have 7 and females have 8. The last-instar larvae pupate within the food. The adults emerge through the anterior end of the cocoon, where there is a line of weakness. The sex ratio is 1:1. The adult moth is nocturnal and is most active at nightfall.

Mass production of *Corcyra*in the laboratory

Materials required

Absorbent cotton	Storage racks
Blotting paper	Streptomycin sulphate
Broken cumbu grain	Rubber band
Camel hair brush	Measuring cylinder
Enamel Tray	Oven
Honey	Home milling machine
Khada cloth	Sieves
Mosquito net	Formaldehyde 40%
Moth aspirator (collector)	Filter paper
Oviposition drums	Moth scale egg separator
Plastic basin	Face masks
Shoe brush	Storing drums
Soap	Ground nut kernel
Specimen tube	Sulphur (WP)
Yeast	Coarse weighing balance

continue...