

## Lecture No. 3.

## RICE DEFOLIATORS

### 1. **Swarming caterpillar:** *Spodoptera mauritia*: Noctuidae: Lepidoptera

Symptom of attack: Nurseries found completely eaten away by the caterpillars' overnight.

Nature of damage: Caterpillars march in large numbers in the evening hours and feed on the leaves of paddy seedlings till the morning and hide during daytime. They feed gregariously and after feeding the plants in one field march onto the next field. Under severe infestation crop gives the appearance of **grazed plants**. Attacked plants are reduced to stumps. Nurseries situated in ill-drained marshy areas attacked are earlier than dry ground. Damage is severe during July to September.

Egg: Eggs are spherical and creamy in colour, which are laid in a group covered over with grey hairs.

Larva: The caterpillars are light green with yellowish white lateral and dorsal stripes in the early stages and later become dark brown or grayish green in colour with a crescent (semi-circular) shaped black spot on the side of each segment.

Pupa: They pupate inside the soil in earthen cocoons. Pupa is dark brown and measures 16-17 mm long.

Adult: The adult moth is medium sized, stout built dark brown with a conspicuous triangular black spot on the forewings. Hind wings are brownish white with thin black margins.

### 2. **Rice case worm:** *Nymphula depunctalis*: Pyraustidae: Lepidoptera

Symptom of attack: Plants stunted, caterpillars hanging on the leaf edges in a **tubular case**.

Nature of damage: The caterpillar cuts a piece of leaf, rolls it longitudinally into a tubular structure and remains inside. It feeds by scraping the green tissue of the leaf. The cases often float in the water. Its damage can be distinguished from damage by other pests in two ways, firstly the **ladder like appearance** of the removed leaf tissue resulting from the back and forth motion of the head during feeding and secondly the **damage pattern is not uniform** through out the field because the floating cases are often carried in the run off water to low lying fields where the damage is more concentrated.

Egg: Eggs are light yellow, disc like, smooth and irregular in shape. They are laid on the under side of the leaves floating on the water.

Larva: They hatch into green caterpillars with orange brownish head. Each caterpillar lives inside a tubular case and hang down the leaves. The tubular cases are open at one end. The inside of the case is lined with silk to hold a thin film of water, which is essential for respiration and preventing desiccation of the larvae. The cases are replaced with each moult. It moves up and down with the protruded legs and scrapes the green matter. It drops in the water when disturbed. It is semi aquatic and can breathe by filamental gills at the sides. Full-grown caterpillars measure upto 15 mm length.

Pupa: It pupates inside the leaf case. Fresh pupae are milky white, which gradually turn to light yellow.