

**1. Spotted bollworm, *Earias vittella*, Noctuidae, Lepidoptera**

**Spiny bollworm, *Earias insulana*, Noctuidae, Lepidoptera**

Symptom of attack: Terminal shoots wither and droop; shedding of buds, flowers and bolls, flaring of bracts, bore holes on bolls plugged with excreta, bolls eaten and lint discoloured.

Nature of damage: Larva bores into the tender top shoot during vegetative stage and during reproductive stage they bore into the buds, flowers and bolls.

Egg: Sculptured, shining bluish eggs are laid singly on tender parts of the plant.

Larva: *E. vittella*: Chocolate brown with dorsum showing a white median longitudinal streak. *E. insulana*: Last 2 thoracic segments and all the abdominal segments have two pairs of fleshy tubercles.

Pupa: Boat shaped, dirty brown cocoons seen on the base of the bolls or amongst the fallen leaves.

Adult: *E. vittella*: Buff coloured small moth, forewings buff coloured with a green wedge in the middle. *E. insulana*: Buff coloured small moths, forewings uniformly green.

**2. Pink bollworm, *Pectinophora gossypiella*, Gelechiidae, Lepidoptera**

Symptom of attack: Premature shedding of the buds and bolls, infested flowers are spun together to form rosette shaped bloom and boll fails to open, premature opening of the bolls, seeds destroyed, lint quality declines seed germination reduced, presence of interocular burrow in the opened bolls.

Nature of damage: Larvae feed inside the buds, flowers and bores into bolls. They feed on the developing anthers and style and occasionally ovary. The external injury caused by them heals up.

Egg: Flat eggs, laid singly on tender leaves, flowers or immature bolls

Larva: Initially white later turn pink with several dark and light alternating bands running the entire length. They also hibernate.

Pupa: Pupates amongst the fallen leaves, debris or under a clod of soil.

Adult: Small brown moth with black spotted forewings and fringed hindwings.

**3. American bollworm, *Helicoverpa armigera*, Noctuidae, Lepidoptera**

Symptoms of attack: Regular circular boreholes on bolls, presence of granular faecal pellets outside the bore hole.

Nature of damage: Caterpillar cuts a hole on the boll and feed on the boll by thrusting their heads alone inside. The affected bolls may rot due to fungus attack. Yield is considerably reduced.

**4. Red bollworm, *Rabida frontalis*, Noctuidae, Lepidoptera**

Symptom of attack: Bolls showing irregular bore holes.

Nature of damage: Larvae remain inside the bolls and feed.

Larva: Stout light pink caterpillar.

Pupa: It pupates in the ground for a period of 3 to 4 weeks in Oct to Nov.

Adult: Pale brown with yellow marking on forewings and white hindwings.