

# Brinjal

## Pests

### **Shoot and Fruit Borer (*Leucinodes orbonalis*):**

Shoot and fruit borer cause a serious damage to the fruits leading to severe reduction in the yield. The damage to the fruits starts soon after transplanting and continues till harvest of the fruits. The adult female lays eggs on the ventral surface of the leaves, flower buds and on young fruits. Short pinkish larva of the pest initially bore into the terminal shoots resulting in withering and drying of the shoot. In the later stage, it bores into the young fruits by making holes and feeds inside which makes the fruits unfit for consumption. Such fruits rot in severe case.

**Control:** Continuous cropping of brinjal on the same piece of land should be avoided. As soon as the insect is detected, the affected parts should be clipped along with the insect and destroyed. Fruits showing any boring should be picked and destroyed. Spraying the crops with Carbaryl (0.1%) or Cypermethrin (0.5ml/litre of water) at fortnightly intervals starting from 35 days after transplanting controls the pest. Best results are obtained when all the affected fruits are removed before spraying.

### **Leaf Eating Beetle (*Epilachana vigintioctopunctata*):**

The yellowish coloured grubs and adults feed voraciously on the leaves and tender parts of the plant and often cause serious damage when they appear in numbers. As a result, the leaves are completely skeletonized leaving only a network of veins.

**Control:** Collection and destruction of infested leaves along with the grubs, adult and eggs reduces the pest incidence. Spraying the crop with Malathion (2ml/litre of water) or Carbaryl (2-4 g/litre of water) effectively controls the pest.

### **Jassids (*Amrasca biguttula biguttula*, *Cestius (Hishimonus) phycitis*):**

Both nymphs and adults suck the sap from the lower surface of the leaves. The infested leaf curl upward along the margins, which may turn yellowish and show, burnt up patches. They also transit mycoplasma disease like little leaf and virus disease like mosaic. Fruit setting is adversely affected by the infestation.

**Control:** Jassids are controlled by spraying Malathion (0.1%) or Dichlorvos (0.05%) 20 days after transplanting.

### **Leaf Roller (*Eublemma olivacea*):**

Caterpillars roll leaves and feed on chlorophyll while remaining inside the folds. The folded leaves wither and dry up.

**Control:** Collection and destruction of infested leaves along with insects in the initial stage help to minimize the infestation. Spraying of Carbaryl (0.1%) or Malathion (0.05%) controls the pest effectively.

### **RedSpidermite (*Tetranychus neocaledonicus*, *Tetranychus cinnabarinus*, *Paratetranychus indicus*):**

The mite is a pest of brinjal. Low relative humidity favours mite multiplication. Different stages of mites are found in colonies covered by white-silky webs on lower surface of leaves. Nymphs and adults suck cell sap and white patches appear on leaves. Affected leaves become mottled, turn brown and fall. Control: During egg stage and the resting stages, most miticides are ineffective. At high temperatures, it may be necessary to apply these at an interval of two days. Acaricides like Dicofol (0.05%) and Wettable Sulphur (0.3%) gives effective control of mites. Collection and burning of severely infested plant parts reduces further multiplication of mites. Proper irrigation and clean cultivation are essential to keep the pest population under control.

### **Mealy Bug (*Centroccus insolitus*):**

Nymphs and adults of mealy bugs suck sap from the leaves, tender shoots, and the fruits. Leaves show characteristic curling symptoms similar to that of a virus. A heavy black sooty mould may develop on the honeydew like droplets secreted by mealy bugs. If the flower blooms are attacked, the fruit set is affected. When the fruits are infested, they can be entirely covered with the mealy bug. The infestation may lead to fruit drop or the fruits remain on the shoots in a dried and shriveled condition.

Control: Unlike the adults, the crawlers are free from waxy coating and therefore the crawler stage is the most effective for spraying pesticides. Spraying of insecticides like Dichlorvos (0.02%) or Chlorpyriphos (0.05%) with fish oil rosin soap was found to control the insect population.

### **Lace Wing Bug (*Urentius hystricellus*):**

This is a specific pest of brinjal mostly attacking in the summer season. Nymphs and dark brown bugs with lace like wings suck the sap from leaves, which turn yellowish and are found covered with insect excreta. Affected leaves ultimately dry up.

Control: Proper crop rotation and spraying with Phosphamidon (0.03%) help in the reduction of the pest population.

### **Root-Knot Nematodes (*Meloidogyne incognita* and *Meloidogyne javanica*):**

The root-knot nematode damage is more harmful to seedlings than to older plants. The affected plants show the development of galls on the roots. The plants become stunted and the leaves show chlorotic symptoms. Fruiting is adversely affected.

Control: Crop rotation with root knot nematode resistant crops like marigold etc. help in the reduction of nematode population. Treating the nursery beds with Aldicarb or Carbofuran @ 2g a.i./m<sup>2</sup> is effective in increasing the seedling growth and reducing the nematode population.

Application of Aldicarb or Carbofuran @ 1-2 kg a.i. /ha effectively reduces the nematode population in the field.