

# Management of Pepper Pests

By  
Megir Gumbek

Growing pepper faces several constraints which include pest infestations. The pepper vines are often infested by either sucking or boring insects. The major pests include the tingid bug, green pepper bug and pepper weevil. Direct losses are incurred when the flower spikes, berries and berry bearing branches are affected. Tingid bug and green pepper bug are seasonal pests, while the pepper weevil is found throughout the year.

## **Tingid bug**

The tingid bug is also known as the lace bug. It is a small black bug, about 5 mm long, with two humps on its thorax and has lace-like wings. The nymph is milky white in colour with very fine black stripes on its body. Both nymph and adult suck the sap from flower spikes, and in serious infestations, the young leaves and shoots are also affected. The symptoms of damage are brown spots and viscous exudate on the flower spikes and sucking marks on the young leaves and shoots. The damaged spikes will turn black and drop off prematurely.



Adult tingid bug



Nymph of tingid bug

### **Green pepper bug**

The green pepper bug is greenish brown and about 12 - 13 mm long, with long antennae. Both nymph and adult suck the sap from immature and mature berries. The damaged immature berries turn brown, become hollow and may drop. On mature berries, the insect damage results in puncture marks on the pericarp.



Adult green pepper bug



Nymph of green pepper bug

### **Pepper weevil**

The pepper weevil is also known as the stem borer. The adult is dark brown and about 4 – 5 mm long. It has a roundish body with a long snout. The larva is whitish in colour and about 3 – 4 mm long. Both the larvae and adults cause damage. The larvae are more destructive as they bore and feed in the branches and stems. The adults feed on the berries, flower spikes, terminal buds and young leaves. The damage symptoms include the yellowing of the node region of branches, presence of cracks on the bark around the node region, dieback branches, exit holes on the node region, and in new infestations, the larvae can be seen in the tunnels when the branches are spilt opened. In serious infestations, overall yellowing and wilting of the vines could occur.



Larva of pepper weevil



Adult pepper weevil

### **Pest management**

The approach towards overcoming pest problems should be integrated. Adoption of good agricultural practices which include both cultural and agronomic measures is a prerequisite for a sound pest management programme. Some of the measures that have been proven to be effective are as follows:

#### **Synchronisation of flowering and fruiting period**

Flowering and fruiting of pepper are actually seasonal and these naturally provide a break in the life cycles of tingid bug and green pepper bug respectively. Thus, off-season flower spikes and fruits should be removed, to prevent the build-up of the pest population. This practice should be carried out by all the farmers in a particular area as the bugs are capable of flying from one farm to the next farm.

#### **Choice of cultivar**

Choosing the right cultivar for planting is an effective preventive method for pepper weevil. The cultivar, 'Semongok emas' and 'Semongok aman' are more tolerant to pepper weevil.

#### **Natural habitat modification**

The environment in a farm can be modified, to encourage the breeding of beneficial insects, such as the predators and parasites. Growing of flowering cover crops is a good practice, as they provide nectar for the beneficial insects. There are two common wasps which parasitize the larva of pepper weevil and a number of wasps which parasitize the eggs of the tingid bug and green pepper bug. Actually, biological pest control exists naturally in the field without our notice. Spiders and ants are also general predators. They

are plenty in pepper farms. From our survey, we found that the rate of pest parasitism and predation can be very high, especially in those farms with minimal use of insecticides.



Flowering cover crop as ground cover for breeding ground of beneficial insects

### **Sanitation measures**

Removal and disposal of insect-infested plant parts and dieback branches are useful measures against pepper weevil.

### **Judicious use of insecticides**

The use of insecticides should be the last option. It is important when deciding to use an insecticide that the correct choice be made. Only products recommended for the target crops and pests are to be used. Always read the label and all instructions on the label must be adhered to, in particular the pre-harvest interval of the used product. The crop should not be harvested before the stated pre-harvest interval or waiting period is due. The use of home-made bio-sprays from extracts of ‘tuba’ roots or neem leaves are also encouraged.



Tuba roots