

Pomegranates

Pests

Pomegranate Butterfly (*Virachola isocrates*) :

It is mostly prevalent during the 'mrig' bahar. The adult female eggs on flower only or on young fruits. On hatching, the caterpillar bores into fruit and feed on the pulp. The fruits rot and drop off.

Control : the affected fruits should be collected and destroyed. From the stage of flowering to fruit development regular sprays of Carbaryl (3mg/litre of water) at fortnightly interval is effective in controlling the pest.

Bark-eating Caterpillar (*Inderbela telraonis*) :

The caterpillar bores the bark and feeds inside. Several holes can be seen on the trunk and the trees loose productivity. Wood dust and faecal matter hanging in the form of a web around the affected portion is indication of the borer activity.

Control : The webs around the affected portion should be cleaned. Cotton swab soaked in petrol or kerosene should be inserted in the holes and sealed with mud. Alternate sprays with Carbaryl (2.5 g/litre of water) or Quinalphos (2 ml/litre of water) or Methomyl (3.5 g /litre of water) is effective in controlling the pest.

Whitefly (*Siphoninus phillyrae*) :

Adult females lay eggs on the lower surface of apical leaves often in circles or small groups. Eggs hatch after a week. The crawlers dig their mouth parts into the leaf tissue for sucking the sap and remain static as "scales" throughout the remaining part of their larval and pupal period.

Serious damage is caused by the excretion of honeydew secreted by the by whitefly, which runs down to the fruit and the upper surface of leaves. Under moist conditions, sooty molds can develop on the honeydew, reducing photosynthesis and hindering respiration of plants. The damage by whitefly also leads to yellowing of leaves and stunted growth, in severe cases leading to shedding of leaves

Control : White flies can be trapped by hanging bright yellow sticky traps coated with polybutene adhesive at the height of the crop canopy. Spraying water with high volume sprayer by focussing the nozzle towards the under surface of leaves helps in washing out the honeydew, eggs, larvae, pupae and adult whitefly. This should be followed by spraying Triazophos 40 EC (1.5 ml/litre of water) or a mixture of 1.5 ml of Monocrotophos 36SL + 1.0 ml of Dichlorvos 76 EC per litre of water. The sprays are repeated at an interval of 8-10 days.

Aphids :

Aphids are yellowish green in colour. They suck the cell sap from the lower surface of the leaves and devitalize the plant. They secrete sweet sticky substance, which attracts fungal growth. The affected leaves show chlorotic patches. High humidity favours the multiplication of aphids.

Control : Spraying with Dimethoate (0.03%) or Monocrotophos (0.05%) or Malathion (0.1%) at 15 days interval effectively controls the aphid population.

Mealy Bugs :

Adult females are oval with waxy filaments all over the body. Nymphs and adults of mealy bugs suck sap from the leaves and tender shoots. 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. The infestation may lead to fruit drop. The bugs lay eggs into the soil remain dormant till the next bahar. The nymphs hatch from the eggs during the next bahar and attack the plants.

Control : An integrated approach is followed for successful control of the pest. The plants in the vicinity of the vineyard serving as alternate hosts for the mealy bugs should be destroyed. Pasting a grease band of 5cm width on the main stem prevents the crawlers from reaching the bunch. 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 Malathion (0.2%) with fish oil rosin soap was found to control the insect population. Application of Phorate 10G (20 g/plant) is effective in controlling the pest population in the soil.

Scale Insects :

The scale insects can be identified by presence of small black swollen spots on the branches and the fruits. Adults and pupa suck the cell sap from the fruit and tender shoots causing drying of branches. In case of severe infestation, the whole tree dries up. The insects secrete honey dew like substance which attracts black sooty mould. As a result, all the leaves and the branches turn blackish affecting the growth of the plant.

Control : Removal and destruction of alternate hosts, which harbor the scale insects. Spraying the affected patches with Rogar (0.1%) or Quinalphos (0.06%) at 15 days interval helps to control the pest.

Fruit Fly :

The attack is prominent during the rainy season. The female lays eggs under the rind of the fruits by puncturing. After hatching the caterpillars feed on the pulp. The affected fruits cease to develop and drop. During the rainy season, water enters through the small holes created by the females leading to fruit rot. The damage leads to severe economic losses.

Control : Since the pest remains inside the fruit chemical control measures are ineffective. Using 'fly traps' containing Methyl Eugenol and an insecticide can control the pest.