

## Main diseases of fruit trees in the home garden

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Home gardeners frequently see diseases affecting their fruit trees. There are occasions when a home gardener may notice a new pest, which is different to the pests they have seen in the past. Exotic pests are a concern for the farming community, as they could threaten the agricultural and horticultural industries and increase the price of production and cost to the consumer.

This Gardennote describes the most common diseases of fruit trees in home gardens. Please report anything unusual to the Pest and Disease Information Service (see end of Garden Note for details).

### Bacterial diseases

Shot-hole is caused by a bacterium and affects stonefruit, especially plums. In early spring, greenish-yellow spots on the leaves dry out and this results in holes in the surface. Fruit can also become spotted, cracked and pitted. The bacterium can infect the trunks and branches, causing cankers on the surfaces of affected parts, and discoloration of the wood underneath. Twigs may become cankered and should be removed with winter pruning and burnt.



Shothole on plum fruit



Shothole on plum leaves



Bacterial canker on plums



Bacterial canker on plums

Bacterial canker can kill stonefruit, especially young trees. Gum exudes from affected branches and the trunk. Cankers are produced and shoots die back.

Control both diseases with copper oxychloride or cupric hydroxide in autumn, winter and pre-budburst.

### Fungal diseases

#### Anthracnose

Anthracnose causes damage to almonds, avocados, olives and mangoes. Spots may develop on all parts of the plant and lead to large dry necrotic areas in the leaves and leaf-fall. Fruits also develop spots.

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*Anthrachnose on mangoes*



*Anthrachnose on avocados*

Twig canker and dieback may occur. Anthracnose is specific to each type of fruit tree and is not cross-infective. Control with cupric hydroxide or mancozeb.

#### **Brown rot of stonefruit**

Brown rot starts as a superficial circular spot which expands, causing a soft decay of the flesh. Tufts of grey-brown fungus develop on the lesions. Fruit which has been damaged (by birds and insects) is especially susceptible to brown rot. Blossoms and twigs can also be damaged. Remove and destroy infected fruit and any cankers on shoots and small branches. Control with copper oxychloride.



*Brown rot on a peach*

#### **Downy mildew of grapes**

In warm and humid conditions, small yellow spots appear on the upper surface of young leaves, with patches of whitish-grey fungal growth on the undersurfaces. This can then cause the leaf to wither and die. Branches and fruits can also be damaged. Make sure that the plants are well pruned so that the canopy is not too dense. Control with copper oxychloride or cupric hydroxide.



*Downy mildew on grape leaves*



*Different stages of downy mildew in grape bunches*

### Dieback

This disease, which also affects the roots of jarrah trees in the South West forests may also be a problem in home gardens, especially with avocados, chestnuts and macadamias. Leaves of affected plants become yellow and can wilt and die in hot weather. Make sure that the soil is well drained and it has plenty of organic matter.



*Dieback on an avocado tree*

### Leaf curl of peaches and nectarines

Leaf curl can be a problem from July to December. Leaves become thickened, blistered and distorted, with pink tinges. Leaf-fall is common. Spray with copper oxychloride, at or just before early bud swell. Repeat spraying after heavy rain.



*Leaf curl on stonefruit*

### Pear scab

Scab first appears as dark spots on leaves and then on the bottom, and later on the side of pears. Infected fruit can also become misshapen.

Remove fallen diseased leaves in winter. Infection of flowers can be severe. Control with copper oxychloride or cupric hydroxide.



*Pear scab*

### Powdery mildew

In warm, moist conditions, white patches occur on older leaves and leaves turn brown and shrivel. The disease is common with apples, grapes and strawberries. Infected apples can be small with russetting. Spray grapes from two weeks after bud-burst. Sulphur sprays will help to control the disease, but do not spray on hot days.



*Powdery mildew on apple leaves*



*Powdery mildew on an apple*

Sulphur plus mancozeb can also be used to control powdery mildew.

### Sooty mould

Sooty mould is a black covering on the leaves, which blocks the sunlight from the leaves. It occurs as a result of the feeding of aphids, mealybugs and soft scales such as soft brown scale, pink wax scale and white wax scale. They produce a sugary honeydew, which supplies food

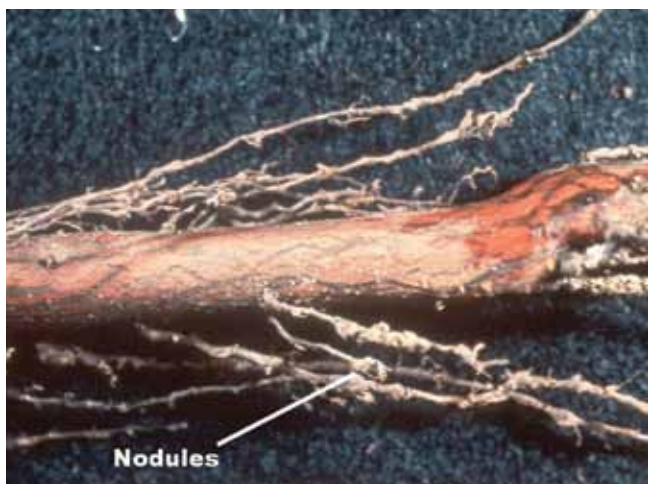


Sooty mould (Photo by HortIPM, Texas Agricultural Extension Service)

for fungi and this results in sooty mould. Honeydew is not produced from hard scales such as red scale on citrus. Control sooty mould by removing the insects that produce honeydew. However, after the insects have been killed, sooty mould may remain on old leaves for some time. It may be necessary to control ants which feed on the honeydew and protect honeydew producing insects from their natural enemies.

### Nematodes or eelworms

Nematodes are small worms that live in the soil, but they are microscopic in size and cannot be seen with the naked eye. The root knot nematode or eelworm, and the root lesion nematode may severely damage the roots of some fruit trees, especially in sandy soils. Root knot nematode damage is seen as enlarged swellings on the roots and by wilting of the plants. Nematodes also provide sites for increased disease infection. Increasing the amount of organic matter in the soil will help to control nematodes. Some stonefruit trees may be purchased with nematode-resistant rootstocks.



Nematodes on fruit tree roots



Split oranges

### Other Problems

#### Fruit splitting

Fruit splitting may occur with some fruits, especially citrus, grapes, cherries and plums. It is not a disease and is normally caused by environmental factors such as water stress and temperature and humidity fluctuations.

#### Further Reading

'Citrus fruit loss in the home garden'. Department of Agriculture Western Australia, Gardennote No 38.

### Specimen identification requirements

When sending or delivering samples, the following information is required:

- Collector's name, location (where the specimen was found), full address, telephone number and e-mail address, description of the damage and date collected.

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