



Common problems of roses

By Aileen Reid, Development Officer

Roses are susceptible to various fungal and viral diseases, insect attack, and physiological abnormalities. Control is possible for many but not for all problems, so identification of any problem is essential to avoid needlessly applying chemicals.

Often, the problem causes only minor blemishes and does not merit chemical control. While cut-flower producers require perfect blooms and foliage, in the home garden a few blemishes may be quite tolerable.

If a problem is so severe that it threatens the health of the whole plant, chemical control may be necessary as a last resort. Nursery or garden centre staff can recommend suitable products that contain the active ingredients mentioned in this Gardennote. Always follow the directions on the label and, in general, spray only when the temperature is below 28°C, to avoid burning the plants.

Practicing good garden hygiene can lessen the need for chemical control. The chance of a disease spreading is reduced by simple measures such as cleaning secateurs after pruning each bush, and collecting fallen leaves, affected flowers or prunings, and sealing them in black plastic bags before placing in the bin. Never add this material to the compost heap.

Black spot

Black spot, one of the most common diseases of roses, is caused by the fungus *Diplocarpon rosae*. Infection results in irregular black spots with fringed margins developing on leaves and young stems. Affected leaves



Black spot

turn yellow and drop prematurely and if defoliation is severe, stem dieback can occur. Spores are spread by wind and water-splash.

To control black spot, remove and destroy all diseased material. When new growth occurs, spray bushes with chlorothalonil, mancozeb or triforine.

Powdery mildew

The fungus *Sphaerotheca pannosa* causes the disease powdery mildew on roses. New growth is most susceptible. Leaves, stems, and flower buds develop a pale grey powdery coating, leaf edges may scorch and curl inwards, and buds may be deformed. The fungus can overwinter in infected buds. The disease spreads by wind-borne spores.

To control powdery mildew, remove and destroy diseased material. During the growing season, spray bushes with mancozeb, lime sulphur, or triforine.



Powdery mildew on leaves, showing characteristic curled-in edges.

Botrytis

The fungus *Botrytis cinerea* affects most aboveground plant parts. Flowers often become spotted or may fail to open, eventually becoming covered in a grey or brown mould. Purple lesions occurring on canes are often caused by botrytis. Spores are wind-borne and also can be spread on garden tools such as secateurs.

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To treat botrytis, remove and destroy diseased material. Spray bushes in late summer and autumn with chlorothalonil, iprodione, or mancozeb. When pruning, wipe secateurs clean before progressing to the next bush, and apply fungicide immediately to protect wounds from infection.



Cane canker caused by *Botrytis*.

Downy mildew

The fungus *Peronospora sparsa* causes downy mildew. Purplish-red or dark brown, irregular, and often angular, blotches develop on leaf surfaces, and during humid weather a blue-grey, downy growth of fungus may appear on the undersides. The leaves droop, turn yellow, and may drop. Stems and calyces develop purple or blackish spots, streaks, or blotches. Petals have brown, dead areas. Infected buds may produce deformed flowers. Spores are wind-borne but need free water on the leaf surface to germinate.

To control downy mildew, remove and destroy diseased material and spray bushes with zineb (not available as homepacks).



Defoliation following downy mildew.

Rust

Most rusts are host-specific. The fungus *Phragmidium mucronatum* that causes rust on roses does not infect any other plants. In spring and early summer, orange powdery pustules develop on the undersides of leaves, while upper surfaces become speckled yellow. These leaves drop prematurely. In late summer, black or brown spore masses appear with the orange pustules; these are the teliospores that can overwinter. The fungus spreads rapidly and can cause severe defoliation. The spores are spread by wind.

To control rose rust, remove and destroy diseased material. When new growth occurs, spray bushes with bitertanol, mancozeb, lime sulphur or triforine.



Rust

Anthracnose

The fungus *Sphaceloma rosarum* causes anthracnose, which is sometimes confused with black spot on rose leaves. The differences are that Anthracnose spots are smaller and initially have sharply defined margins. As the spots enlarge, the centres become ash grey and drop away, leaving the black margins intact. The leaves become red or yellow, and may drop prematurely, but not to the same degree as with black spot.

To control Anthracnose, remove and destroy diseased material. Spray bushes with chlorothalonil, mancozeb or triforine.

Cane canker

Apart from *Botrytis* (see above), two of the commonest fungi to cause cane canker are *Coniothyrium* and *Botryosphaeria* species. These diseases are more commonly seen on plants stressed through poor management practices such as inadequate nutrition or irrigation.

Water-borne spores enter mainly through pruning wounds or other injuries. The disease can affect any part of the stem, initially producing yellow or red spots on the bark. These enlarge into brown cankers with dark margins, and the bark cracks and becomes sunken. Tiny black fruiting structures are sometimes seen. Canker can encircle the stem or travel down it, killing the plant.

To treat canker, prune stems back to healthy buds and destroy diseased material. After pruning, apply mancozeb to protect wounds from infection.



Cane canker caused by the fungus *Coniothyrium*. (Photograph courtesy of New South Wales Department of Agriculture.)

Phytophthora and Pythium root rots

Roses affected by root rots wilt and may eventually die. The root ball may be water-soaked and brown and none or few new white roots may be seen. *Phytophthora* root rot may be caused by more than one species of the pathogen. Common sources of *Phytophthora cinnamomi* (jarrah dieback) are infected soil or irrigation water that has been in contact with the soil, for example, dam water. Other species of *Phytophthora* may be imported in potting mixes.

There is no cure for infected plants, but the disease may be suppressed with the use of phosphorous acid.

Pythium affects plants in a similar manner but is more often a sign that the plants are being stressed in some other way, for example, by high salinity, low pH, or waterlogging.

The best treatment for *Pythium* is to eliminate the causes of stress.

These root diseases will often show up first after a few warm days when plants wilt because their water conducting mechanisms are disrupted. Sometimes the disease affects only one side of the plant.

Nematodes

Nematodes of the genus *Meloidogyne* attack the roots of a wide range of plants including roses. The damaged root system develops root knots, which cause slow growth, wilting, and yellowing leaves. Nematodes are spread by introducing infested plants or soil to your garden, and also can be carried on garden tools. Growing roses grafted onto *fortuniana* rootstock will help to reduce problems from nematodes.

Nematodes may be treated using fenamiphos granules. This treatment will need to be repeated.

Crown gall

The bacterium *Agrobacterium tumefaciens* causes crown gall. The galls that develop on stems or just under the soil surface are round and rough textured. Young



Root knots caused by nematode attack.



Crown galls on roots. (Photograph courtesy of New South Wales Department of Agriculture).

galls are soft and white or pale green; older ones are dark and woody. Affected plants lose vigour and may become stunted, with poor leaves and fewer flowers. The bacterium is spread on garden tools.

Treat the soil with Nogall[®], which contains beneficial bacteria.

Rose mosaic virus

A complex of viruses causes mosaic, which can appear on leaves in a number of different formats – for example, narrow yellow bands along the veins, yellow mottling which spreads and merges, or broad bands of pale green or creamy white tissue. Sometimes the plant's vigour is reduced, but generally mosaic is not a serious problem.

There is no remedy.

Aphids

Aphids are sap-sucking insects that extract nutrients from the plant, particularly in spring. This activity can result in distorted leaves, drooping buds, stunted growth, and poor flowers. Aphids secrete honeydew, on which sooty mould may develop, further spoiling the plant's appearance.

Small populations can be removed by hosing at high pressure, but this needs to be repeated every two or three days. For large infestations, spray with imidacloprid, maldison, pyrethrins, or white oil. Chilli - or garlic sprays are also effective and are commercially available. The garlic acts as a repellent to further aphid attack.



Aphids

Thrips

Thrips are sap-sucking insects that can cause deformities in flowers, leaves, stems, and shoots. The insects are difficult to see because not only are they small but also they hide deep in the flower or on the undersides of the leaves, which become silvery on the upper surface. Thrips are most active during spring and autumn.

Small populations may not do enough damage to warrant chemical control. For large infestations, which can seriously weaken the plant, spray with imidacloprid or pyrethrins.

Two-spotted mites

Mites are sap-sucking arachnids that can cause yellowing or bronzing of leaves. If the population is large, leaf drop occurs and the health of the plant is reduced. Two-spotted mite, also known as red spider mite, is the most serious pest mite. Although mites are so tiny that they are difficult to see, the fine webbing that they build across leaves and between leaves and stems betrays their presence.

Being arachnids, mites are not susceptible to insecticides. Only miticides kill them. Spray with dicofol or lime sulphur.



Leafy calyces

This is also climate related. With physiological problems, certain varieties may be more prone than others.

How to reduce problems on roses

As is the case with other plants, maintaining the health of roses makes them less susceptible to disease and better able to withstand insect attack.

When buying new stock from reputable growers, ask them to recommend cultivars that are more resistant to certain diseases and physiological problems. Bear in mind, too, that some problems are seasonal and so present only a temporary nuisance.

Humidity encourages fungal disease, as does poor air circulation. Avoid planting roses too closely; avoid overhead watering; and prune to maintain a fairly open structure. Fortunately, in most parts of Western Australia the climate is generally dry, resulting in good conditions for growing roses.

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Leaf damage caused by two-spotted mites.

Leaf-cutter bees

Female leaf-cutter bees (*Megachile* spp) cut semi-circular holes in leaves and use the segments to line their nests. The damage is minimal and harmless. No control is necessary.



Telltale signs of a leaf-cutter bee.

Herbicide overspray

Roses are particularly susceptible to drift from glyphosate, so care is needed when tackling nearby weeds. The safest method is to paint the herbicide onto the weeds with a brush, rather than use a spray which can easily drift even when there appears to be no breeze. Glyphosate damage results in bleached, distorted foliage that is almost white at times. Plants will grow out of it in time.

Physiological problems

Physiological problems are often related to climatic conditions. Bull-heads are short, squat blooms triggered by low temperatures. Sometimes, leafy calyces develop, or leaves are seen emerging from the centre of a bloom.



Leaves emerging from the centre of a flower.

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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