



Extension FactSheet

Plant Pathology, 2021 Coffey Road, Columbus, OH 43210-1087

Controlling Rose Diseases

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For many years, roses have been a favorite of home gardeners and professional growers alike. Unfortunately, there are several diseases that commonly occur on hybrid teas, floribundas, moss roses, or whatever type of rose you are growing. To produce top quality roses, these diseases must first be identified and controlled.

Powdery Mildew *Identifying Symptoms*

Powdery mildew, caused by the fungus *Sphaerotheca pannosa*, appears as a white powdery growth on rose leaves, stems, buds, or flowers. It usually first appears on new growth in periods of warm, dry days followed by cool, damp nights. The new leaves may become curled or twisted and the shoots may look badly deformed. The fungus may also infect older leaves. Often, the upper surface of the leaves appears normal, but there is extensive fungus growth on the underside of the leaf.

Control

Although detailed information is lacking, some rose varieties are more resistant to powdery mildew. When planting new roses, find out from local rosarians which varieties are most resistant. The planting site can also be made less conducive to powdery mildew development. Do not plant roses in shaded spots, especially those areas that tend to dry out slowly in the mornings. Surrounding hedges or shrubs should be pruned or thinned to



Figure 1. Powdery mildew on rose leaves.



Figure 2. Powdery mildew on rose flower.
Note the distortion of petals.

allow for more air movement over the roses. Finally, a regular, preventive spray program with fungicides should be carried out (see below).

Black Spot *Identifying Symptoms*

The fungus, *Diplocarpon rosae*, produces round black spots with fringed margins on leaves or stems. On some varieties, yellowing may show up around the spots. These symptoms are often seen on the lower leaves first. Infected leaves will drop off and may leave the plant almost completely defoliated except for a few leaves that have recently grown at the tip of the canes. Such plants are badly weakened and may die over the winter.

Control

As with powdery mildew, some varieties of rose are less susceptible. Select and plant resistant varieties whenever possible. The fungus survives the winter in fallen leaves. Raking and removing these leaves each fall may provide some control. Avoid watering the plants by splashing water on or about the leaves. Plant in sunny locations where plants will dry quickly after watering, rains, or damp nights (dew). Begin a fungicide spray program as soon as new leaves appear in the early spring (see below).



Figure 3. Black spot on rose leaves. Infected leaves often turn yellow before they drop.



Figure 4. Closeup of black spot symptoms on rose leaf.

Rust

Identifying Symptoms

Rose rust caused by the fungus, *Phragmidium* sp., appears as orange or rust colored growth on the underside of the leaves. Older leaves tend to show symptoms before younger leaves. Under favorable conditions rust can cover the entire leaf and stem of the rose plant. Severe infections can cause premature defoliation.

Control

Whenever possible plant resistant varieties. Any practice that prevents the leaves from remaining wet for extended periods of time is beneficial for control. Never spray leaves with water in the evening so that the leaf surface is wet over night. Plant roses in areas that have full sun and allow air to flow freely around the plants. As a last resort, fungicides should be used (see below).

Stem or Cane Cankers

Identifying Symptoms

Several fungi cause stem cankers on roses. The different fungi cause slightly different looking cankers, but they usually produce brown, oval shaped, sunken or shriveled areas anywhere on the cane. When the canker completely surrounds or

girdles the cane, the cane dies and the leaves wilt from that point outward. Sometimes small black specks of fungus spore forming structures can be seen erupting on the cane surface within the cankered area.

Control

Always plant disease free material. Each year, prune out and destroy all diseased canes, making sure to cut well below the obviously cankered areas. Protect the plants from cold or freeze injury in the winter. This can be done either with mulch or another kind of cover. Keep the plants vigorous with proper fertilization, good watering practices, and black spot and powdery mildew disease control programs.

Mosaic

Identifying Symptoms

Rose mosaic is caused by a virus. Bright yellow patterns made up of wavy lines may appear on the leaves of some varieties. Other varieties may show no yellow lines, but may be stunted and weak due to virus infection.

Control

Virus infected plants cannot be cured. Plant virus resistant roses if possible. Try to control insects, particularly aphids, since

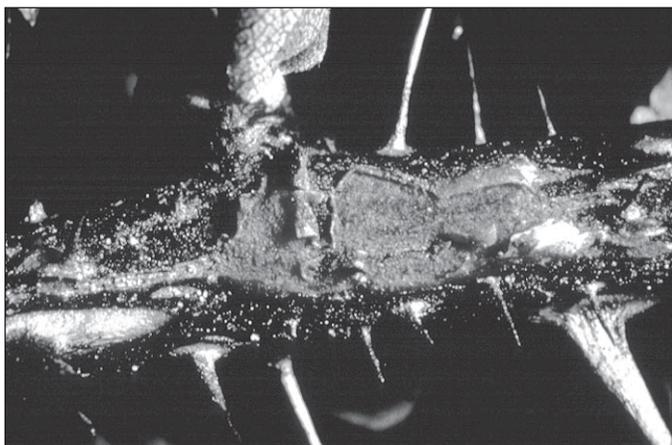


Figure 5. Rust symptoms on a rose cane.



Figure 6. Symptoms of rose rust on leaves. Note the distortion of infected leaves.

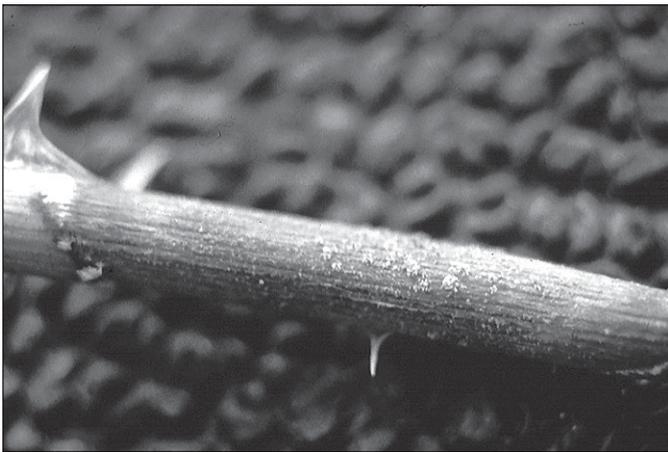


Figure 7. Cane canker on rose.



Figure 8. Symptoms of rose mosaic virus on leaves.

Table 1. Rose varieties reported to have resistance to black spot.

<p><i>Resistant hybrid teas:</i></p> <ul style="list-style-type: none"> Carla Cayenne Charlotte Armstrong Chrysler Imperial Duet Electron First Prize Forty Niner Granada Miss All-American Beauty Mister Lincoln Olympiad Pascali Peace Pink Peace Portriat Pristine Proud Land Smooth Lady Sutters Gold Tiffany Tropicana 	<p><i>Resistant floribundas/grandifloras:</i></p> <ul style="list-style-type: none"> Angel Face Betty Prior Carousel Cathedral Europeana Fashion First Edition Gene Boerner Goldilocks Impatient Ivory Fashion Love Mirandy Montezuma Pink Parfait Prominent Queen Elizabeth Razzle Dazzle Red Gold Rose Parade Sonia Sunsprite 	<p><i>Resistant shrub roses:</i></p> <ul style="list-style-type: none"> All that Jazz Carefree Wonder <hr/> <p><i>Resistant miniatures:</i></p> <ul style="list-style-type: none"> Baby Betsy McCall Gourmet Popcorn Little Artist Rainbow’s End Rose Gilardi <hr/> <p><i>Resistant Rugosa hybrid:</i></p> <ul style="list-style-type: none"> F. J. Grookendorst Polyantha The Fairy
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Information taken from Pest Resistant Ornamental Plants by Deborah C. Smith-Fiola. Rutgers Cooperative Extension.

they help spread the virus. If you are pruning virus-infected plants, don't prune healthy plants unless you have disinfested your pruners. Pruners can be disinfested by dipping in a 10% solution of chlorine bleach in water. Severely infected plants should be removed and destroyed.

Rosette and Witches Broom

Identifying Symptoms

Rapid stem elongation may be an early symptom of this disease. Later on, certain branches of the plant will develop thickened, thorny stems. Many short, deformed shoots will form, often with red pigmentation and tiny misshapen leaves. These shoots give the appearance of a witches broom. Plants die within one to two years as symptoms spread from branch to branch.

Control

The exact cause of this disease is unknown. Infected plants cannot be cured. Try to control insects, particularly leaf hoppers and plant hoppers. To protect other plants against the possibility of an infectious agent, symptomatic plants should be dug and discarded as soon as the disease is noticed.

Crown Gall

Identifying Symptoms

Irregularly shaped, bulbous masses of tissue (galls) appear on stems near the soil line. These can appear as small swellings,

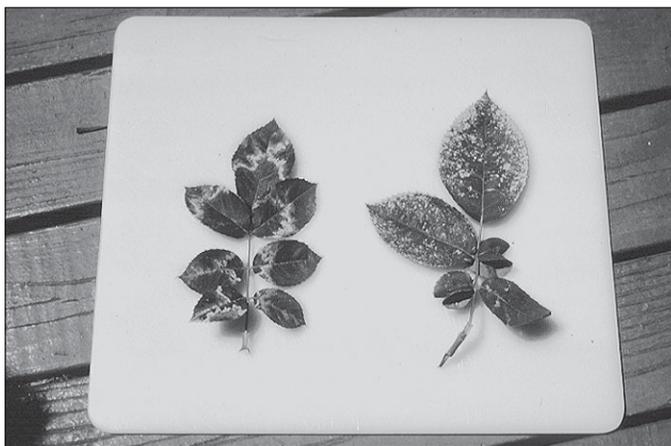


Figure 9. Symptoms of rose mosaic virus on leaves.



Figure 10. Symptoms of rosette on rose.

or be several inches across. Severely infected plants become stunted and fail to produce acceptable flowers.

Control

Avoid buying infected material with suspicious swellings or galls on lower stems or crowns. Protect plants from injuries on the stems. Maintain vigor with fertilization and watering. Pull and destroy badly infected plants. There is no chemical control for this disease.

Fungicide Spray Programs

Fungicides generally recommended for powdery mildew control include: Triadimefon (Bayleton, Strike); Triforine (Funginex), Thiophanate-methyl (Cleary's 3336, Domain). Propiconazole (Banner) and sulfur fungicides. Frequently used fungicides for black spot include Folpet (Phaltan), Captan, Mancozeb (Fore), Chlorothalonil (Daconil) and Triforine (Funginex). For rust, Triforine (Funginex), Mancozeb (Fore) and Chlorothalonil (Daconil) are effective. Follow labeled instructions regarding dose and frequency of application. It is important to spray on a regular schedule.

Follow all labels carefully. Be sure and spray both surfaces of all leaves thoroughly. With some wettable powder materials, it may be well to add about a teaspoon per gallon of a spreader-sticker to properly wet the rose foliage.

This publication contains pesticide recommendations that are subject to change at any time. These recommendations are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. Due to constantly changing labels and product registration, some of the recommendations given in this writing may no longer be legal by the time you read them. If any information in these recommendations disagrees with the label, the recommendation must be disregarded. No endorsement is intended for products mentioned, nor is criticism meant for products not mentioned. The author, The Ohio State University and Ohio State University Extension assume no liability resulting from the use of these recommendations.

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