

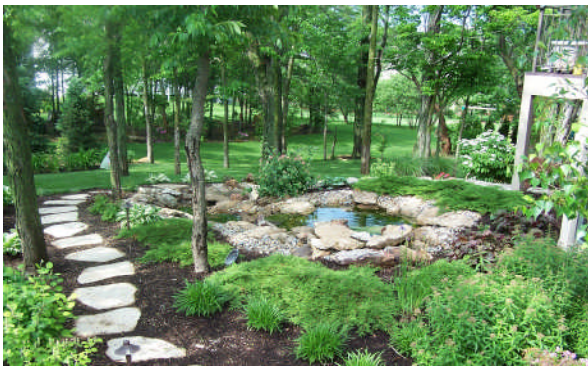
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**GUIDE TO
BLACK SPOTS
ON ROSES**

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SUPPLIES NEEDED: GORDON'S FUNGICIDE, IMMUNOX

ROSES

Roses are one of the most versatile and inspiring ornamentals for the garden. There are Roses adapted for any garden site and landscape purpose. Roses are not always easy to grow and may require more management. One of the challenges in growing Roses is disease control, the most prevalent being Black Spot.



CAUSE OF BLACK SPOT

Black spot, caused by the fungus *Diplocarpon rosae* Wolf, is the most important disease of Roses worldwide. It is by far the most troublesome disease of garden Roses. If not properly controlled, it will severely weaken plants. This can result in increased susceptibility to winter injury or dieback. The fungus tolerates a wide range of temperatures, but needs high relative humidity for leaf infection to occur. It does not require free moisture to infect, but infection is greater on leaves that remain wet for six or more hours.

SYMPTOMS

Leaf spots are nearly circular and black with margins that are fringed or feathery. The dark color and feathery look distinguishes black spot from other rose leaf diseases. Spots may vary in size, but remain as distinct spots. Surrounding leaf tissue turns yellow and drops from the plant. Lower leaves are usually the first infected. Excessive leaf drop reduces stem length and size as well as quality of leaves and blooms. In resistant cultivars, only small spots may form, without the yellowing and defoliation.



CONDITIONS FAVORING BLACK SPOT

Optimum conditions for infections and disease development are 75° F to 85° F, relative humidity above 85% and six or more hours of leaf wetness. Leaves are most vulnerable while still expanding. The fungus survives on the host as mycelia, in fallen leaves or in infected canes. During the growing season, spores produced are spread in rain water or dew and spread mainly by splashing water. Infected fallen leaves, are blown by the wind and disperse the fungus within the garden.

PREVENTION

There are several ways to prevent Black Spot from attacking your Rose plants. First, determine if the plant's site is appropriate. Does it have enough air circulation around it to dry off after a soaking rain? Consider transplanting them further apart to increase air circulation among the plants. Second, don't water late in the day. If the sun has gone down for the day and you've just watered your Roses, chances are that's enough for the fungus to infect your plant. Remember that when you do water your roses, don't soak or mist the foliage. Try to water at the ground level. Third, when fall comes and you're cleaning up the garden, remember to rake up any remaining leaves that have fallen from your rose plant. They may not be infected, but clearing them away from your plant greatly reduces the chance that Black Spot will strike the next spring. Don't compost any infected material because you could redistribute the fungi.

TREATMENT

Black spot can be controlled through a selection of a resistant cultivar, spaced planting, and an active fungicide spray program. Effective control depends on a mixed approach that uses timely application of appropriate fungicides and implementation of good horticultural practices. Fungicide sprays should be used when conditions favor black spot, usually from mid-May to mid-September. Success requires a weekly application to protect new foliage. Apply in the evening when there is less wind and cooler temperatures. Cover both sides of the leaf when spraying. Several fungicides can be used to control black spot. It is a good idea to use a different fungicide each season or alternate between fungicides during the growing season. Some fungicides that control Black Spot are Immunox or Gordon's Fungicide. Read label instructions carefully.

