

Problem: Rose Blackspot - *Diplocarpon rosae*



Host: Rose

Description: Roses are among the most beautiful flowers in the home landscape or garden. Blackspot is one of the most common and serious fungal diseases on rose plantings throughout Kansas. About mid- to late May, dark-brown to black leafspots develop on the upper leaf surface. The leafspot lesions are roughly circular and have distinctive irregular, feathery margins. The spots range in size from 1/16 to 1/2 inch in diameter. Individual leaves may develop multiple leafspots. At the beginning of the growing season, blackspot will start to develop on the lower leaves and will move upward through the plant as the season progresses. Infected foliage eventually turns yellow and falls off the plant. Heavy infections can seriously defoliate a plant.

The blackspot fungus can also develop on one-year-old canes. Infected canes develop raised, purplish-red spots or blotches, which eventually blacken and appear blistered. Cane lesions rarely kill affected branches; however, they can act as an important overwintering site for the fungus.

Blackspot development is favored by warm (75°F), wet weather. This means the disease is primarily active in late spring or early fall and whenever warm, wet weather occurs. Blackspot primarily overwinters on infected leaf litter beneath the rose bushes. In the spring, fungal spores are windblown or splashed up on to newly emerging leaves on the lower portion of the plant. As the season progresses, spores from newly infected foliage are splashed or blown upward to infect more leaves. The spores are only spread in water droplets. The fungus has not been found to survive in the soil.

Recommendations: Blackspot disease control should start with the selection of an appropriate planting site and the use of resistant cultivars, if possible. Roses should be planted in an area which receives plenty of sunlight and good air movement. Good air circulation will reduce the length of time moisture remains on the foliage. This is important, as blackspot infection can take place after just seven hours of continuous leaf wetness. Avoiding dense plantings, not watering late at night, and misting or hosing down the foliage will help reduce conditions favoring infection. Fall leaf debris should be raked up and discarded. Removal of leaf litter combined with pruning out diseased canes will help reduce the amount of overwintering blackspot fungi. Diseased plant material should not be composted. Unless the composting process completely breaks down the plant material, it is possible it may be redistributed into the landscape setting.

When selecting plant material for a rose planting, there are few cultivars with resistance to blackspot. The occurrence of different pathogenic races makes it difficult to develop roses with resistance to blackspot. Rose groups susceptible to blackspot include teas, hybrid teas, hybrid perpetuals, Pernetianas, Austrian briars, and polyanthas. Roses which show some resistance include Rugosa hybrids, moss roses, and wichurianas (Table 1.).

Control measures for susceptible roses should include fungicide applications throughout the growing season. Starting at the first sign of disease, fungicide applications should be made at 7- to 14-day intervals depending on weather. The most effective disease control strategy will include a combination of cultural practices, sanitation measures, and fungicide treatments.

Table 1. Rose cultivars with blackspot resistance (see Ohio State University reference below for more complete list)

<u>Hybrid Teas</u>	<u>Floribundas/Grandifloras</u>	<u>Shrub Roses</u>
First Prize	Carefree Beauty	Knockout Series
Pink Peace	Nearly Wild	Hansa
Forty-niner	First Edition	Eutin
Grand Opera	Sonia	Meidiland Series

Table 2. Fungicides for blackspot control(1)

<u>Common or Examples of Generic Name</u>	<u>Trade Name</u>
copper fungicide	Basic copper sulfate, Kocide, Bonide Copper Fungicide Tenn-Cop, Monterey Liqui-Cop, and others
chlorothalonil	Daconil, Ortho's Garden Fungicide, Fertilome Broad Spectrum Lawn & Garden Fungicide, Bonide Fungonil Conc.
myclobutanil	Immunox, F-Stop Lawn & Garden Fungicide, Eagle, Susthane
neem oil	Rose Defense, Monterey Neem Oil, Neem Concentrate, Shultz Fungicide 3
propiconazole	Banner, Fertilome Liquid Systemic Fungicide II, Bonide Infuse Systemic Disease Control
sulfur	Various names
tebuconazole	Bayer All-in-One Rose & Flower Care, Bayer Disease Control for Roses, Flowers & Shrubs
triticonazole	Ortho Rose & Flower Disease Control)
thiophanate methyl	Clery's 3336, Fungo

References:

1. [Black Spot of Rose](#), Pest Management Fact Sheet #5097, University of Maine
2. Horst, Kenneth, ed. 1983. Compendium of Rose Diseases. pg. 9-11. APS Press.

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