



SCAB OF STONE FRUITS

Scab, caused by the fungus *Cladosporium carpophilum*, is an important disease of peaches and nectarines in warm, humid areas. The disease also occurs rarely on plums and apricots. In Illinois, scab occurs in orchards where the trees have not been sprayed timely.

Symptoms

Peach and nectarine.

Fruits, twigs, and leaves are infected, but the symptoms are most noticeable on fruit. Symptoms appear when the fruits are about half-grown. Small (less than 0.5 millimeter), greenish to olivaceous, circular lesions appear on exposed fruit surfaces, most frequently near the stem end. These lesions enlarge to 2-3 millimeters, become olivaceous to black, and sometimes have green to yellow halo on the blush surface. When numerous lesions coalesce, cracking occurs as the fruit enlarges. Cracked fruits are more susceptible to brown rot.



Figure 1. Symptoms of scab disease on peach fruits and twigs.

Twig infection occur on tender, green twigs of new growth, and some lesions appear simultaneously with fruit lesions. Initially, twig infections are barely visible. They are slightly raised, circular to oval and the same color as surrounding normal tissue. They gradually become brown with a slightly raised border. By the end of the growing season, the border becomes purple to dark brown, measuring 3-5 x 5-8 millimeters.

Leaves are infected on the lower surface. Initially, lesions are angular to circular and a color of similar to that of healthy tissue. Lesions turn olive green when the fungus begins to sporulate. Fully developed lesions are usually 1-2 mm in diameter. Lesions may coalesce, causing chlorotic and necrotic areas.

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Disease Cycle

The pathogen overwinters as mycelium in lesions on twigs and as chlamydospores on the bark surface. Conidia are produced first about two weeks before calyx split and increase in numbers until three to four weeks after calyx split. Viability of conidia decreases rapidly with age, but new conidia are produced when weather favors infection. Sporulation on twigs occurs at 70-100% relative humidity. Conidia geminate at 15-30°C, with optimum 25-30°C. Liberation of conidia from lesions on infected twigs decreases as relative humidity decreases from 100 to 40%.

Fruit infection seldom occurs until 30 days after petal fall. Young peach fruits have abundant hairs that discourage fungal penetration. Nectarines, lacking pubescence, presumably are susceptible to invasion earlier. Twig infection can occur whenever new growth is present, weather conditions are favorable, and spores are being produced.

The period of latent infection on fruit is 43-77 days. On leaves, it varies from 25 to 45 days. On twigs, symptoms may appear after 25 days, but the lesions do not become visible until the next spring

Disease Management

Scab on peaches and nectarines is managed by fungicide applications. Pruning allows good penetration of sunlight and air movement, which facilitate rapid drying thus reducing infection. Usually, fungicide application begins at calyx split and then applied every two weeks, for a total of four or five sprays. For up-to-date on fungicide management of scab of stone fruits, refer to the Midwest Fruit Pest Management Guide (https://ag.purdue.edu/hla/hort/pages/sfg_sprayguide.asp).