

Problem Solvers

Michigan State University Extension - Oakland County

Tar Spot Disease

Tar spot is caused by the fungus "*Rhytisma acerinum*" and most commonly affects the leaves of silver and Norway maples. Other maples susceptible to tar spot are: big leaf, mountain red, Rocky mountain, sugar, and sycamore. The fungus infects the leaves and causes raised black spots to form on upper leaf surfaces. The diseases are called "tar spots" because their appearance so closely resembles droplets of tar on leaf surfaces. Tar spot is rarely serious enough to threaten the health of trees but sometimes there can be so many spots that the tree becomes unsightly. Heavy infections can also cause early leaf drop—a circumstance that causes the greatest consternation to homeowners because lawns are littered and must be raked before autumn officially arrives. Tar spot on Norway maple is particularly troublesome because of early leaf drop.

SYMPTOMS

The first symptom of infection by tar spot fungus usually shows up in mid-June as small (less than 1/8-inch diameter), pale yellow spots. The spots enlarge and their yellow color intensifies as the season progresses. On red and silver maple, a single black spot usually develops in each yellow spot by early August. The black spot grows in diameter and thickness until, by late September, it truly does look like a spot of tar. The surface of the spot may have a pattern of wavy indentations or ripples.

Another form of tar spot affects striped and Norway maples. On these trees 20 to 50 small spots, each no larger than a pinhead, appear in late July or early August. On striped maple, the spots do not enlarge much after they first appear. On Norway maple, however, the spots grow and eventually coalesce to yield a large black mass up to 1½ inches in diameter. The fungus may also attack the seeds.

DISEASE CYCLE

The fungi that cause tar spots overwinter on infected leaves that fall to the ground. The following spring, just

as new leaves are unfolding, the fungal tissue in the leaves on the ground ripens. The surfaces of the spots split and minute, needle-like spores escape. The spores are carried about by wind and if they land on new leaves of a susceptible host they may germinate, penetrate the leaf tissue, and start a new disease cycle.

MANAGEMENT STRATEGIES

Current research has shown that the tar spot fungus does not cause long-term damage to the host. The most effective management procedure is to rake and destroy leaves in the fall. This will reduce the number of overwintering spots that can produce spores the following spring.

Application of fungicides are possible when high levels of infection become unacceptable, but control of the disease is difficult. Complete coverage of leaf tissue is needed for success and this can be difficult on mature maples. Also, appearance of the disease has become widespread and if others in the neighborhood setting are not managing the disease with fungicides or proper sanitation, the act of spraying may be a waste of time and money. Two or three applications of any appropriate fungicide as new leaves expand in the spring are recommended. If fungicides are used, applications may be needed every year.

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