Diagnostic Facts

Project GREEEN

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Maple Tar Spot

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Tar spot gets it name from the shiny black lesions it creates on infected leaves. Tar spot is rarely serious enough to threaten the health of trees, but make trees unsightly. Heavy infections can also cause early leaf drop.

There are two species of the fungus *Rhytisma* that cause tar spots on maples. Other species cause tar spots on various woody ornamentals and a few herbaceous hosts. *Rhytisma acerinum* causes large tar spots (0.5-2cm). *R. punctatum* causes small spots (about 1mm in diameter), sometimes called speckled tar spots. Maples susceptible to one or both species include bigleaf, mountain, Norway, red, Rocky Mountain, silver, sugar and sycamore.

Fig. 1 Silver maple leaf infected with tar spot.

SYMPTOMS

Tar spot infection occurs in early spring as the leaves are expanding. Though the characteristic tar-like spots do not arise until mid to late summer. The first symptoms of infection are light green to yellowish green spots. The spots enlarge and their color intensifies as the season progresses. During mid to late summer the raised, black stromata develop within the spots. The black spot grows in diameter and thickness until, by late September, it truly does look like a spot of tar. The surfaces of spots caused by *R. acerinum* become convoluted and appear rippled (Fig. 1). Leaves infected with *R. punctatum* result in several pinhead-sized stromata within the yellow area (Fig. 2).

BIOLOGY

Rhytisma spp. 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 spores are ejected. The spores are disseminated by wind. They land on newly expanding leaves of a susceptible host and start a new disease cycle. Symptoms appear 1-2 months after infection.

CONTROL

Historically, significant outbreaks of tar spot occur infrequently. In Michigan, however, we have seen severely infected trees for the last three years. Trees in moist, sheltered locations, which allow the pathogen to easily survive the winter, may be repeatedly infected. This disease is usually a cosmetic problem and does not affect the long-term health of the tree. The most effective management procedure is to rake and destroy leaves in the fall. Applications of fungicides are possible but control of the disease is difficult. Complete coverage of leaf tissue is needed for success and this can be difficult on mature maples. To be effective fungicide applications should be coupled with good sanitation practices.

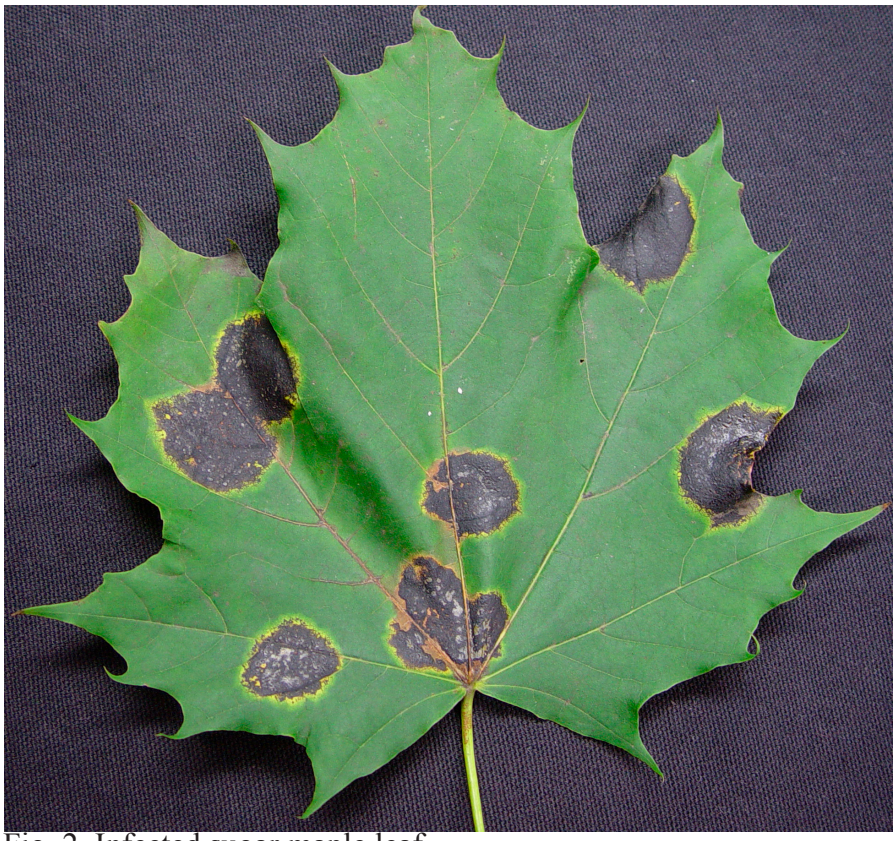

Fig. 2 Infected sugar maple leaf.

Landscape situations where fungicide use may be warranted include young trees with limited foliage and trees in aesthetically valuable locations.

The recommended fungicide applications for tar spot are at bud break and twice thereafter at 7- to 14-day intervals. Fungicides recommended include triadimefon or mancozeb. These are the active ingredients; products are sold under a variety of trade names so you will need to look at the fine print on the product container.

Adequate chemical coverage on large trees is difficult and often requires specialized spray equipment. Contact the Michigan Nursery and Landscape Association (MNLA) at 1-800-879-6652 to find a landscape professional in your area who can assist you with fungicide applications and other disease management procedures.