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FUNGAL LEAF SPOTS OF TREES AND ORNAMENTALS

SYMPTOMS AND DISEASE DEVELOPMENT:

Fungal leaf spots are the most prevalent of plant diseases in the Northeast. Most, if not all, commonly grown trees and ornamentals are subject to attack by one or more leaf-infecting fungi. Leaf spot symptoms vary depending upon the plant host and the causal fungus. A typical leaf spot is a rather definitely delimited necrotic lesion, often with a brown, black, tan or reddish center and a darker margin. These spots vary in size from pin-head to those that encompass the entire leaf. Partial to complete defoliation of the tree or ornamental may occur under certain circumstances.

Although many different fungi are known to cause leaf spots, their disease cycles are often similar. In most cases, the causal fungus overwinters on fallen leaves. In spring, often in conjunction with rain and wet weather, spores are produced by the fungus and subsequently discharged and carried by wind or splashing rain to newly emerging leaves. Once on the leaf surface and with appropriate environmental conditions, the fungal spores germinate, penetrate the leaf, and cause infection. Leaf spots are generally favored by cool, wet weather early in the growing season. By the time symptoms are apparent, it is usually too late to apply fungicides for control.

CONTROL:

Control of fungal leaf spots can be achieved using a multifaceted approach. They are often effectively controlled by following good sanitary and cultural practices and are rarely serious enough to warrant chemical control. Since many of the leaf spotting fungi overwinter on fallen leaves, it is important to rake and remove fallen leaves from the vicinity of the tree in autumn. This reduces the number of spores available to infect emerging leaves in spring. Good plant or tree vigor should be maintained by proper watering and fertilizing (if necessary or as suggested by a soil test), appropriately timed pruning, and insect control. Leaf spots can become serious, causing permanent injury or even plant death, on weakened or stressed plants. In such cases, fungicide control is often necessary. Several fungicides are registered for use in control in Connecticut. Among these are thiophanate methyl, chlorothalonil, ferbam, and mancozeb. However, accurate diagnosis of the specific leaf spot is often necessary in order to select the most efficacious fungicide for control. The pesticide label will contain information for use with specific plant hosts and fungi, dosage rates, and safety precautions. Since most leaf spotting

fungi infect in spring as leaves are unfolding, the first fungicide spray is applied at budbreak. Two or three additional sprays are subsequently applied at 7-14 day intervals. Additional applications may also be necessary in unusually wet springs. Once again, when symptoms are visible on the leaves, it is too late for chemical control.

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