

following infection, and the canker increases in size. The repeated killing of twigs and accompanying canker formation throughout the crown causes abnormal branching and gnarled growths on many trees. Occasionally small trees are killed.

The four stages of anthracnose are described as follows:

Bud blight. The fungus present in the twig girdles and kills the tissue surrounding an individual bud before the bud expands or opens in the spring.

Twig blight. The fungus present in the twig girdles and kills the distal (tip) portion of the twig prior to bud expansion in the spring.

Shoot blight. This is similar to bud and twig blight but occurs later in the season. The fungus present in the twig girdles and kills tissue surrounding shoots that emerge from individual buds, or girdles and kills the entire twig containing many emerging shoots. Shoot blight occurs when the leaves on the emerging shoots are from 1/2 to 2 inches wide. It is often confused with frost injury.

Leaf blight. This stage occurs still later in the growing season. The first symptoms on the leaf blade are small faded, chlorotic spots. Spots that occur alongside or near veins increase in size and become necrotic (dried and shriveled). Necrotic areas along the midrib or main veins increase rapidly in size. When a major portion of the leaf blade or the petiole becomes diseased the leaf falls.

How to Protect Sycamores

Sycamores can be protected from anthracnose by application of an organic mercury fungicide. In areas where anthracnose occurs frequently, and where the American sycamore is highly valuable, the fungicide should be applied annually. In areas where sycamore is less valuable, the fungicide should be applied the year following disease occurrence to prevent excessive weakening of affected trees due to attacks during two consecutive years. Spraying of London plane is usually not warranted.

In most instances one appli-



Leaf blight. Necrotic areas along the leaf veins are characteristic leaf blight symptoms of sycamore anthracnose.



A 2-year-old canker on a twig of American sycamore.

cation of the fungicide, properly timed, is adequate. Application of the fungicide following appearance of disease symptoms is of little or no benefit. The spray must be applied in the spring when the sycamore buds are swelling and the bud caps are breaking.

Suggested organic mercury fungicides and rates of usage per 100 gallons of spray are as follows:

Coromerc, 1 1/2 pounds; Puratized Agricultural Spray, 1 1/2 pints; or Phix Apple Spray, 1/2 pound. In those unusual years when the weather remains cold for an extended period following application of the fungicide, a second application is recommended after 14 days and at two-thirds the previously suggested rate.

Why the organic mercury fungicides are effective in controlling anthracnose is not fully understood. Apparently they are able to penetrate the bark or wood of twigs in sufficient con-

centration to reduce fungus growth and prevent girdling of the buds or twigs.

The sycamore is a fast-growing tree that has been used extensively in recent years as a shade tree for home plantings. In areas where anthracnose is severe, sycamore will need special care, and planting other tree species is recommended.

Systemics Promising For Shade Trees

Systemic insecticides, which are absorbed by trees and translocated to stems and leaves, have definite advantages over spraying, according to Dr. Carlton S. Koehler, associate entomologist at the University of California, Berkeley. However, he does not expect systemics to replace conventional sprays.

Cautioning that some trees cannot be treated with systemics, the California entomologist adds that an overdose of systemic insecticide can do more harm to a tree than overspraying. He lists the advantages of systemics as their long residual action, economy, freedom from destruction of natural enemies of tree pests, simplicity of equipment required for treatment, and the ability to treat trees with systemics in unsatisfactory spraying weather.

Dr. Koehler also reports that in tests with Bidrin implantations at 6" intervals around elm trunks, aphids were controlled for 50 days and elm leaf beetles for an entire season.

T-H Improves Tedion

A new wettable powder formulation of its Tedion miticide has been announced by Thompson-Hayward. Containing 50% actual Tedion concentrate, the new W-50 formulation is said to be more economical and easier to handle than products previously available. Also marketed in an emulsifiable concentrate, W-50 is formulated for killing mite eggs, larvae, and nymphs.

Additional information on the new formulation and its uses can be obtained from Thompson-Hayward Chemical Co., Kansas City, Kans. 66110.