DISEASES OF SHADE TREE

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FUSARIUM WILT OF MIMOSA

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One of the most charming of all southern shade and ornamental trees is the silktree or "Mimosa" (Albizia julibrissin). A native of Asia and a close relative of the true Mimosa, it was introduced into the United States in the eighteenth century where it has flourished in the warmer climate of the South. A destructive disease of Mimosa, Fusarium wilt, was first observed in 1935 at Tryon, North Carolina. Since that time, the disease has spread rapidly in epidemic proportions, killing thousands of susceptible specimens.

SYMPTOMS:

The first external symptoms are wilting and yellowing of leaves on one or more branches. The leaves droop, become shriveled and yellow, then fall. Death follows defoliation, which is usually complete within one year after the first wilting is apparent. Large trees, however, have been found completely wilted within one month after the initial wilt symptoms were first observed.

When a cut is made into the trunk or branch of a diseased tree, a somewhat continuous brown ring may be present in the outer wood (See Figure 1). This discoloration becomes less intense as one proceeds upward from the base of the tree. In some cases a splitting and "bleeding" of the trunk may occur in the advanced stages.

CAUSE AND TRANSMISSION:

This disease is caused by the fungus, Fusarium oxysporum f. perniciosum, which is present in the soil and enters wounds in the root system. By an unknown action, the fungus interferes with water uptake by the tree, even when the soil provides adequate moisture. Since the fungus is soil-borne, it is believed to be carried from an infested to a non-infested area by the movement of soil, plants, seeds from infected trees, or by man himself.

CONTROL:

Once a tree is infected, it cannot be cured and should be removed and burned. This destroys the fungus. Care should be taken to remove and burn as much of the root system as possible. If planting is desired in the area from which a diseased tree was removed, a tree other than Mimosa should be used. The use of resistant varieties provides the best current diseased wood means of coping with the disease in new plantings, and the only two available at this time are Charlotte and Tryon. No fungicide application of any kind is known to prevent or to retard disease development.

Figure 1. Discolored ring in diseased wood.