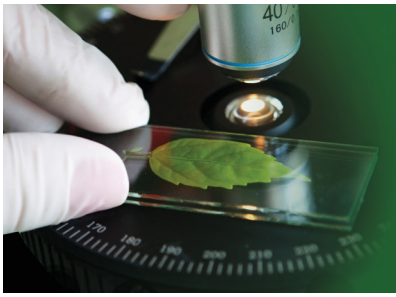

LOUISIANA
PLANT HEALTH
MANAGEMENT
Solving Plant Health Problems Caused by Biotic and Abiotic Stresses

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Sooty Molds

Sooty molds are non-plant-pathogenic fungi that grow superficially as a thin black layer on leaves, fruit, twigs and stems of various crop plants or trees. The fungi grow on the honeydew produced by insects with piercing-sucking mouthparts. The insects, including aphids, leafhoppers, mealy bugs, psyllids, scale insects and whiteflies, pierce the plant tissue with their stylets and feed on plant sap. While continuously feeding, these insects ingest a large volume of sap fluid into their bodies, and the sap fluid is not entirely digested. After extracting nutrients from the sap, these insects excrete excess water and sugars from their bodies in the form of a sticky, sugary substance called "honeydew." Most of the time, these insects feed on young, tender new plant growth, and the honeydew drops below on all plant parts previously mentioned. Additionally, the honeydew covers understory vegetation, concrete surfaces, sidewalks, furniture, parking lots, etc., under host plants infested by sap sucking insects.

Sooty molds are saprophytic fungi with dark, powderlike spores that breakdown honeydew and cause the thin black layer observed. There are several species of sooty molds, but the most common ones are *Capdnodium* spp. and *Fumago* spp. Sooty molds do not directly affect the host plant on which they reside but can inhibit the photosynthetic ability of the plant by covering leaves, twigs, fruit and stems. Under heavy insect pressure, plants entirely covered with sooty mold may lose vigor and be predisposed to other plant pathogens. Plant growth may also be retarded, and yields can be significantly reduced. The aesthetic value of the plants covered with sooty mold is greatly reduced too.

Figure 1: Crape myrtle leaves covered with sooty mold.

Figure 2: Citrus fruit and leaves covered with sooty mold.

Figure 3: Whiteflies feeding on the underside of a holly leaf.

Figure 4: Aphids feeding on a weed host.

Figure 5: Crape myrtle bark scale on a crape myrtle trunk.

All plant species that are hosts for sap sucking insects with piercing and sucking feeding are affected with sooty molds. Some of the common landscape plants heavily affected by sooty mold include azalea, camellia, citrus, crape myrtle, magnolia, oleander, pear, pine, roses, sago palm and viburnum. Hedges, small bushes, or other plants, such as boxwoods, Indian hawthorn and ground covers, get sooty mold if the trees under which they are planted are infested with these insects. This happens when the honeydew from insects high in the tree canopy drops on the vegetation underneath.

Managing sooty molds is very simple. Keep insects, such as aphids, mealy bugs, scale insects and whiteflies, in check. Once the insect problem is solved there will be no new sooty mold occurrence. The existing sooty mold infestation dries out after some time and easily sloughs off the infested areas. Pressurized water can be used to wash off the sooty molds. Care should be taken while using pressurized water because it may damage the plant.

Insect infestations are generally controlled with insecticides, insecticidal soaps or horticultural oils. Before applying any kind of chemical pesticide, it is very important to identify the insect properly. Samples of plants infested with insect pests may be taken to your LSU AgCenter extension agent for identification. Consult with your local extension agent on the use of chemicals for managing insects. LSU AgCenter's Plant Diagnostic Center is also available to diagnose your plant health problems.

Figure 6: Honeydew present on the upper surface of crape myrtle leaves shine in the sun.

Figure 8: Mulch covered with sooty mold under a crape myrtle tree heavily infested with crape myrtle bark scale.

Figure 7: Honeydew present on the upper surface of a rose leaf shine in the sun.

Figure 9: An Indian hawthorn covered with sooty mold planted under a large tree infested with aphids.

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