

Sooty Mold Requires a Different Approach



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Sooty mold can be unsightly and ultimately unhealthy for many landscaping plants.

PHOTOS COURTESY OF SCOT NELSON, UNIVERSITY OF HAWAII AT MANOA.

There's nothing more disconcerting than having landscape plants covered by sooty mold, a powdery black substance that can give a gloomy appearance to the brightest setting. Furthermore, this substance is alive and not easily controlled.

According to Scot Nelson, a specialist in plant pathology at the University of Hawaii at Manoa, Hawaiian horticultural and agricultural plants can be infested with sooty mold at any time of the year. In almost anywhere else, it can be primarily a summertime problem. The mold itself is a fungus in one of several genera – the most common being *Cladosporium*, *Aureobasidium*, *Antennariella*, *Limacinula*, *Scorias* and *Capnodium* – with species varying by geographic region. It can usually be wiped or washed off affected plants, however cleanup can be difficult and time-consuming. Nelson, who has been examining sooty mold and other plant pests in Hawaii for 19 years, says the mold does not infect plants and is not deleterious to plant health other than as a physical barrier to sunlight and an inhibitor of photosynthesis.

"It can create an aesthetic problem, especially in areas where landscapes are manicured," says Nelson, who also notes the problem does not originate with the mold. The mold fungi are attracted to plants covered in honeydew, the sugary secretions of certain insects, such as aphids, scales, mealybugs and whiteflies. When large populations gorge on sap and excrete honeydew, they create a sticky, adherent, sugary coating that can completely coat leaves.

"I've never seen it on turf in Hawaii," he says, primarily because ornamental

turfgrass is mowed so intensively there that problem insects and fungi don't have time to mature before their habitat is cut away from them. The process makes it unlikely that sooty mold will appear on managed grasses as it does on shrubs and trees. "You might see it on the turf under a tree or shrub, where honeydew has been deposited on it."



The life cycle of sooty mold can be complex and include fungi, ants and sap-feeding insects.

The cycle is also complicated by ants. Because ants cultivate certain sap-feeding insects such as aphids, they actually drive the sooty mold problem. Many species of ants feed on sugar and benefit when large populations of sap-feeding insects build up. Ants facilitate the excretion of honeydew and, thus, sooty mold.

Nelson says that controlling sap-feeding insects and problem ants may be necessary in order to get sooty mold under control. First, there may be some cultural methods to alleviate the problem. Primarily, landscapers should be aware of how their fertility program may be affecting the situation. Too much nitrogen fertilizer in the soil can foster nutritious sap production that attracts problem insects. Second, look at the diversity of plants in the landscape. By reducing spatial concentration of sap-producing host plants, a landscape manager can break up populations of those insects.

Next, look at the ant populations on and around the site. One control method is to provide ant barriers on sap-producing plants. Nelson has seen sticky barriers such as Tanglefoot, a jelly-like ant mine, placed around tree trunks to restrict access. Even water can be used in some situations. These methods require periodic reapplication. Ant baits such as Amdro are also effective in controlling populations, Nelson says, but care should be taken to match the correct bait to the ant species. In organic gardens, Terro is a liquid ant bait that he has seen used effectively. In addition, a homemade boric acid concoction is often used successfully in Hawaii. It consists of a cup of sugar mixed with 3 teaspoons of boric acid and then mixed with 3 cups of water, and is spread around the target plant.

The other phase of sooty mold management is to control large outbreaks of sap-feeding insects that are secreting honeydew. Nelson says many insecticides are available, and each crop and pest insect should be matched with the proper labeled product. These can generally be divided into two categories: contact insecticides that can be sprayed on plant foliage, and systemic insecticides that are sometimes applied to soils as granular formulations.

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