Sooty Mold

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Have your ever wondered what the black, sticky covering is on plants? There are two varieties of black mold that grows on plant surfaces that resemble each other- sooty mold and black mildew. Black mildew (for example, species of *Asterina* and *Lembosina*), actually penetrates leaf tissue and live off plant nutrients resulting in loss of vigor and plant quality. On the other hand, sooty mold is fairly harmless and is a saprophyte, feeding on honeydew (a sweet, clear and sticky substance) that is excreted from sap-sucking insects like aphids, whiteflies, scale (both cottony and soft), mealy bugs and psyllids. Honeydew is mostly made of sugars (carbohydrates, up to 80%), with smaller amounts of amino acids, proteins, minerals and vitamins. These insects suck vast quantities of sap from plant tissues and cannot use it all. Some plants also naturally secrete fluid that sooty mold can grow on. Sap that oozes from a wound often has this mold growing upon it. Even natural nectaries in some plants can lead to sooty mold patches. Ants benefit from honeydew secretion and often protect aphids from natural predators and parasites. Some people say they “milk” honeydew from aphids or “farm” the aphids.

Sooty mold looks like black soot (sometimes compared to black tissue paper) that grows on plant surfaces, including leaves, stems, and flowers. It can also grow on manmade structures like lawn furniture, propane tanks, automobiles, and statuary. It grows anywhere that honeydew drops, especially on under story shrubs in a garden. Plants do not need to be infested with insects themselves, just under trees or larger plants that are infested. Sooty mold is both seasonal and perennial. It grows well on leaves while the environment is optimal and then over winters on twigs and branches. Sooty mold grows in warm areas with high humidity and will get worse when drought conditions prevail. Lack of rain concentrates honey dew and aphids may increase honeydew production.


Flakey sooty mold grows on gerbera leaves.

Sooty mold fungi include some ascomycetes and some fungi imperfecti. The dark color comes from the cell walls' melanoid pigments. The dark mycelial threads grow over hard surfaces. Some sooty mold forms sponge-like masses on thick-walled hyphae and are soft when moist and brittle when dry. There are several species of sooty mold, including *Capnodium* (most common species), *Fumago,* and *Scorias.* The specific species of fungus involved depends on the amount of light, environment and insect species.

- *Capnodium elongatum* affects tulip-tree, oleander, holly, osmanthus, and tulip-tree (from aphids or scale insects).
- *Capnodium* spp. affects gardenia (whiteflies), fig, crape myrtle (aphids), azaleas (mealy bugs) and magnolias (from scale insects).
- *Fumago vagens* affects linden, ornamental trees and shrubs, houseplants (from aphids, mealy bugs and scale insects).
- *Scorias spongiosa* affects trees like alder, beech and pine.

Sooty mold infestations can negatively affect plants because a heavy covering of the fungi can cut down the amount of light available for photosynthesis. Such plants can be stunted and coated, yellowed leaves may die prematurely. Affected fruit is smaller and more likely to decay than normal fruit. Sooty mold on fruit and houseplants can cause reduced marketability.


Sooty mold also grows upon stems like on these *Matthiola* (stock).

Control of sooty mold consists of washing off the mold and getting rid of the insects creating the honeydew. In greenhouses, plants may need to be frequently sprayed with water. Insects may be hard to notice since they tend to be very small and not always located on the plant with the sooty mold. Horticultural oil, Neem oil, insecticidal soap and various other chemicals (malathion, diazinon, chlorpyrifos etc.) can be used to kill insects. Systemic insecticide with dimethoate or Orthene is available for areas with persistent sooty mold. Light oil spray can also loosen sooty mold. You must check all chemical labels to be sure they are legal and appropriate for the use you intend.

Outdoor furniture, canvas umbrellas or shades and other manmade surfaces can be cleaned with this solution:

- Powdered household detergent- ½ c
- Household liquid bleach- 1 quart
- Trisodium phosphate- 2/3 c (a common cleaner often used to clean surfaces before painting)
- Water- 3 quarts

Wear rubber gloves since this is a caustic solution.

Prevention is the best control of sooty mold. Examine your plants frequently for insects and keep their populations under control. Prevention of a problem is always more effective than curing it once it happens.