

Fighting black spot

Problem: We are finding small (pinhead size), raised spots on wooden decks and house sidings. There are large trees which hang over decks or roofs in some instances, but no evidence of any insects present. What do you think is the possible cause and remedy? (Minnesota)

Solution: The black spots on house structures are often mis-identified as scale insects or insect excrement.

Recently, Dr. Rayanne Lehman from the Pennsylvania Department of Agriculture reported that the black spots are the spores of the fungus *Sphaerobolus stellatus*. I think the problem you are dealing with is related to this fungus. It is a relative of bird's nest fungus, and is commonly called artillery fungus.

Black spot problem caused by *Sphaerobolus stellatus* has been reported in many parts of the U.S. It grows on substrate such as dung or rotted wood chips as foundation mulches. Reportedly, it prefers open areas with little shade and good moisture. It can even produce spores on mulch used on indoor plant pots and shooting spores on walls, draperies, etc. With sufficient light, the spores can be produced at 10-20°C, indicating the problem is primarily during spring and fall.

These black spots are one to two millimeters in diameter and slightly raised to globular. When scraped open, the center is found to be whitish in color. The fungus produces spores (glebal mass or peridole) inside the fruiting bodies. At maturity, the fruiting body wall splits apically and discharges the glebal mass and can throw it up to six meters.

The sticky coating adheres the mass to any substrate. The fruiting bodies are attracted to light (phototropic) and therefore, the glebal mass is shot toward the source of light.

Because of increasing reports of black spotting due to this fungus, composting industries and researchers are now interested in trying to find solutions to deal with the problem. At this time, no fungicidal treatment is recommended. Consider using an alternate form of mulch around foundation plantings. Experts feel that a yearly addition of fresh, treated tanbark or wood chips may lessen the problem if the old mulch is completely covered.

Simply scraping the glebal mass may not work well because the spores have been reported to be viable for up to 11 years. Therefore, practice good sanitation. Hot soapy water may help remove the spots without affecting the paint.

Frequent spraying harmful

Problem: Can you damage tree foliage by applying spray applications too close together? (Canada)

Solution: There would be a potential for damage from applying spray treatments too close together. It depends on several factors:

- sensitivity of the plant material to certain treatments;
- moisture conditions near the rootzone;
- temperature during and around treatment period;
- interval period between treatment;

- application method and/or the pressure used during treatment; and

- circulation of mix in the hose prior to treatment.

Normally, when we follow label specifications concerning treatment rate and intervals, there should not be any adverse effect on target plant species. However, if the growing conditions and/or environmental (climate) situations are not favorable for the treatments, then there would be a potential for damage from spray applications on foliage. The best advice is to read and follow label specifications.

Because of environmental and regulatory concerns, the treatment intervals should be done "as needed" rather than on a calendar date basis. Frequent supplemental treatment should be based on the label or extension and research data.

Managing pine needle scale

Problem: We had a severe problem with pine needle scale last year. How can we manage this problem, and when is the best time? (New York)

Solution: Pine needle scale on pines, particularly mugo pine, can be severe in some years. Severe infestation can be unsightly and can stress and weaken the plant. These plants may recover very slowly and poorly and may require prompt removal.

Dr. Douglas Caldwell, Davey Tree Co. staff entomologist, recommends using 2 percent horticultural oil. He prefers to provide the treatments coinciding with certain plant blooming. This is called phenology. With this approach for crawler (young scale insect) management, he recommends that the first application of horticultural oil be made when Mugo pines are producing pollen. This would be around April 21 to May 19.

The second treatment of oil should be made when the trumpet creeper (bright orange) is in flower (June 25 to August 15).

To catch the majority of the settled crawlers, applications made around the last target dates (May 19 for first application; August 15 for second) are preferred.

A third application may be needed to clean up the escaped crawlers from oil treatments. If needed, consider providing this around September or October before the female matures.

Horticultural oil treatments alone should manage the pine needle scale problem. However, if the problem is severe, an application of insecticidal soap plus either Sevin or Dursban can be used between the oil treatment "windows" as needed.

Read and follow label specifications for best results.

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Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.