

VEGETATION MANAGEMENT

By Roger Funk, Ph.D., Davey Tree Expert Co., Kent, Ohio

Q: We have been treating leaf spot in English ivy beds with several fungicides but it is getting worse. What would you recommend? (California)

A: The problem could be bacterial leaf spot which is not controlled with fungicides. Ask your local cooperative extension agent for help in identification.

Bacterial leaf spots at first are small, round, light green and water-soaked on the lower surface. As the spots increase in size, they become angular and develop dark brown or black centers with reddish margins. Stem tissue also can become infected and appear black and shriveled, often with girdling cankers.

Warm, moist conditions favor the disease, particularly when the foliage remains wet throughout the night. To minimize the disease potential, water in the morning with a method such as drip irrigation that does not wet the foliage.

Q: We have been hearing a lot lately about the effect of acid rain. How acid is this rain and how harmful is it to trees? (New York)

A: Acid rains have been reported with a pH as low as 2.1 but normally are in the pH range of 4.0 to 5.8.

Acid rains have influenced the ecosystems in lakes leading to the extinction of fish. The effects on soils and trees are less clear.

Under laboratory conditions, simulated acid rains have inhibited seed germination, injured foliage, and accelerated the leaching of nutrients from soils and decreased growth of trees. However, trees in the natural environment may not be injured in the same manner or to the same degree. Further research is needed.

Q: When should you prune trees to get the most rapid healing? (Pennsylvania)

A: Wound closure is most rapid in pruning cuts made before May. Little callus formation occurs after July.

Q: Is there any chemical control for ground pearls?

A: No effective control, other than fumigation, is available.

Q: Can Basagran be used to control nutsedge in Bermudagrass lawns? (Florida)

A: Basagran will control yellow nutsedge, but it is not effective on purple nutsedge. MSMA and DSMA reportedly give good control of purple nutsedge and can be used safely in established Bermudagrass.

Q: I heard recently about a product called DOOM that is supposed to control beetle grubs for 20 years. Does it really work?

A: DOOM is a trade name for one of the milky spore disease products labeled for Japanese beetle control. Refer to the May 1980 Vegetation Management column for further information.

Q: Could you recommend a ground cover to plant in an area too shady to grow grass?

A: Ivy (*Hedera helix*), pachysandra (*Pachysandra terminalis*), myrtle (*Vinca minor*).

Q: Other than pruning, what can be done to improve grass growth under trees? (Michigan)

A: Some turfgrasses do better than others in shade. If the existing grass is not shade-tolerant, reseed with creeping red fescue or a mixture of fine fescue and Kentucky bluegrass cultivars recommended for shade such as 'Glade' or 'BenSun.' Early spring is the best time to seed to assure sufficient sunlight for germination and establishment. Autumn seeding is sometimes recommended but falling leaves may mat and smother young seedlings.

Mow the grass about 1/2 inch higher than in sunny exposures to increase the photosynthetic leaf area.

Control diseases such as powdery mildew that are more prevalent in shade to allow turfgrasses to remain healthy and vigorous.

Subsurface fertilization of trees may encourage deeper rooting and reduce competition with turfgrasses for water during drought periods.

Q: How can you identify ozone injury on trees? (Michigan)

A: On deciduous or broadleaved trees, ozone injury symptoms appear as flecking or stippling caused by dead cells on the upper surface of the leaf. Usually only the palisade cells are affected. The susceptibility of the leaves to ozone is greatest just after maximum leaf expansion. Very young or very old leaves are seldom injured.

On gymnosperms, mild ozone injury appears as chlorotic mottling of needles. Acute injury causes death of the needle tip or the whole needle.

Unfortunately, trees are often subjected to more than one polluting substance, which makes it difficult to identify the problem. Combinations of pollutants can significantly alter the injury symptoms.

Q: I have access to a large amount of rabbit manure. Can it be used like cattle manure in vertical holes to fertilize trees, or is the fertilizer value too low?

A: Rabbit manure, which contains 2.4% nitrogen, .62% phosphorus and .05% potassium, calculated on an oven-dry basis, compares very favorably with cattle manure.

Q: We have some areas in our fairways that dry out every summer because of poor water infiltration. Will the use of wetting agents correct this problem? (Ohio)

A: Wetting agents can be used to improve water infiltration into thatch and hydrophobic soil but do not correct poor soil conditions caused by compaction or poor drainage. The effect of wetting agents usually is retained for two or three rains or irrigations.

Continued use of wetting agents on the same turfgrass area may not be advisable. The long-term effects of multiple applications of wetting agents on soil structure and turfgrass plants are not known.

Send your questions or comments to: Vegetation Management c/o WEEDS TREES & TURF, 757 Third Avenue, New York, NY 10017. Leave at least two months for Roger Funk's response in this column.