

PROBLEM SOLVERS

by Balakrishna Rao, Ph.D., and Thomas P. Mog, Ph.D.

Supplier for fish emulsion

Problem: Are you aware of any supplier of fish emulsion? This is occasionally specified for landscape use but no suppliers are given. (Virginia)

Solution: H.J. Baker & Bros. Inc., 100 E. 42nd St., New York, is listed in the Farm Chemicals Handbook as a distributor of fish meal and scraps.

Black locust blight

Problem: What caused the 1983 blight on black locust? (West Virginia)

Solution: I am not aware of a serious disease, i.e. blight, affecting black locust in your state this year. I have read where damage caused by the locust leaf-miner has been pretty dramatic in parts of West Virginia. The young (larvae) of this insect mine or eat the middle out of locust leaves. They don't eat everything but leave the upper and lower layers (epidermis) behind; like someone eating the meat out of a sandwich and leaving the bread behind. The leaves remain on the tree and the tree doesn't look too bad until it gets hot and dry. Usually around August the mined leaves dry up and turn brown. This apparent, sudden browning of the entire tree could be mistaken for a blight or wilt disease.

Check the fallen leaves. Break or cut some apart. If there is nothing inside, then the miner was the culprit. If you are not certain as to what I mean, just look at some leaves from a healthy tree and compare them with your "blighted" leaves.

Leafminer attack may make the trees look like they are dead, but unless something else is involved, they should recover. Losing all or nearly all of its leaves before autumn weakens the tree. Fertilization will help it recover. Locust leafminer passes the winter hidden in the dead leaves and litter. Raking and destroying leaves and other debris from beneath the tree eliminates some insects. Depending on how many miners make it through the winter, you may want to spray your trees with an insecticide in June-July. For more exact timing and what chemical to use, contact the West Virginia Department of Agriculture.

Saving trees from salt damage

Problem: The trees we have along the sidewalks on campus catch the run-off containing rock salt. This is causing problems. We heard that gypsum neutralizes salt. How much should we use? (Ohio)

Solution: That depends on how "salty" the soil is or gets. You should first have the soil tested for soluble salts and pH. In general, turfgrasses and ornamentals become stressed at salt levels greater than 1500 ppm. If the soil is both sodic (high sodium) and acidic (low pH) and you want to "de-salt" and lower pH, then lime can be used. For alkaline soils and for acid soils where a pH change is not desirable, use gypsum. Both lime and gypsum contain calcium. Salt, sodium chloride, is removed or "neutralized" by exchanging

calcium for some of the sodium (ions). Once the sodium has been released from the soil particles, it is mobile and can be leached away by rain or watering.

Excess salt is not only harmful to plants but degrades soil structure. A high sodium content leads to decreased water movement, permeability and aeration. Lime and gypsum are used as soil conditioners because they improve structure, drainage and facilitate leaching.

For your purposes, neutralizing salt, a rate of 50-75 pounds/1,000 square feet is the usual recommendation. Because movement of calcium can be slow, the treatment is not effective when the gypsum or lime is applied during the period of salt application and worked into a depth of six to eight inches. The amount of calcium sulfate in products sold as gypsum can vary.

The aforementioned rate is for 100 percent calcium sulfate and for lime applied as quicklime or limestone. If the gypsum you use is only 50 percent calcium sulfate then you should use twice as much, i.e. 100 to 150 pounds/1,000 square feet.

Leaching alone is beneficial if the water is salt (sodium) free and if the drainage is good. With good drainage and heavy watering, salt levels can be reduced as much as 50 percent. It takes good drainage and watering to get the most benefit from the soil conditioners, too.

Tilling wakes up dormant weeds

Problem: This fall I tilled an established, weed-free lawn and seeded with certified seed. Now there are lots of weeds. Where did they come from since they were not evident before? (Missouri)

Solution: Studies have shown various weed seeds can remain viable in the soil for several years and these may be triggered to germinate when the soil is disturbed and brought to the surface.

Mow the lawn at least two to three times before applying herbicides.



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Questions should be mailed to Problem Solver, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, Ohio 44130. Please allow 2-3 months for an answer to appear in the magazine.