Is your turfgrass sulfur-deficient?

■ Turfgrass response to sulfur is more common today than just a few years ago, according to the Potash & Phosphate Institute (PPI).

The reasons might be traced to more effective clean air programs, less sulfur in high analysis specialty fertilizers or plant protection chemicals, differences in variety of species requirements, and improved technology for measuring nutrient shortages. Whatever the reason, each turf plant still needs a certain amount of sulfur to develop properly.

Here is what a lack of sulfur can do to turfgrass:

● **Off-color turf:** The leaf mid-vein remains dark green while the remainder of the leaf becomes light green. Symptoms first show on new growth, since sulfur is slowly translocated within the plant. With more severe cases, the entire plant turns light green. Some die-back can develop from the leaf tip.

● **Slow growth:** Sulfur and nitrogen are both essential parts of amino acids, the building blocks of proteins. A sulfur deficiency can result in an inadequate amount of one or more of the sulfur-containing amino acids. Sulfur and potassium also serve the plant in similar ways: both are needed to help activate enzymes essential for driving major plant growth activities.

● **Low plant sulfur content:** Early stages of sulfur deficiency might not be visible to the naked eye or noticeable in plant development. But it can be detected through soil and plant analysis.

● **Poor response to nitrogen:** Sulfur helps plants use nitrogen efficiently. Research shows that growth response to nitrogen by bentgrass improves by nearly 70 percent when sulfur is also provided. Grass color also improves when sulfur is in balance with nitrogen.

● **Weed encroachment:** Turfgrasses become less competitive with weeds when nutrient shortages or imbalances develop.

Sulfur can be provided to turf from several sources. A small amount comes from rainwater, which captures sulfur released into the air from burning coal, oil or other materials. Plants obtain a part of their sulfur needs from the breakdown of soil organic matter.

The remainder must be provided through a balanced fertilization program, the PPI says. A few sources include:

- potassium sulfate,
- sulfate of potash-magnesia,
- ammonium sulfate,
- ammonium thiosulfate and
- elemental sulfur.

Colorants, mulch in the landscape

by Gary L. Wade, Ph.D.
University of Georgia

■ The fall months are typically the time when landscape professionals replenish mulch in plantings. This is done primarily:

● to help insulate the roots from winter freezes; and

● to freshen the mulch's appearance.

In the southern states, pine straw is the most widely used mulch. But it dries rapidly, becomes brittle and fades to gray.

Today, however, landscapers are looking at mulch colorants as a possible alternative to re-mulching. A wide variety of earth tones are available, and the landscaper can literally paint the landscape any color he or his client likes.

Becker-Underwood's Mulch Magic comes in light brown for pine straw and cypress mulch and dark brown for pine bark and other darker wood mulches.

Standard Tar's Bark Renewer comes in three colors: honey, California redwood and walnut brown.

Lesco's Nu-Mulch is apparently being formulated for them by Becker Underwood and is either similar or identical to Mulch Magic.

Applicators should use them cautiously; they can cause skin and eye irritation.

In the accompanying table, please note that the costs listed are suggested prices provided by the manufacturers in 1991 and may vary be locale and distributor. If labor costs were also considered, the cost of re-strawing would be proportionally higher than spraying because it is a more labor-intensive task.

The data provided are intended for information purposes only and do not imply endorsement of any one product, nor are they intended to exclude similar products that may also be available.

—Dr. Wade is extension horticulturist in landscape management for the University of Georgia, Athens, Ga.

RE-STRAWING VS. APPLYING COLORANTS TO MULCH

Product name	Avg. dealer price/gal.	Cost per oz.	Rate of application	Coverage/ gal. or bale	Est. Cost/ 1000 sq.ft.	Longevity in months
Mulch Magic	$65.00	$0.51	4 oz/gal.	200 sq.ft	$10.20	4-6
Bark Renewer	$95.95	$0.75	12 oz/gal.	200 sq.ft.	$45.00	12-24
Nu-Mulch	$59.00	$0.46	4 oz./gal.	200 sq.ft.	$9.20	4-6.
Pine straw	$2.50 (per bale)	—	—	150 sq. ft. (to 1" depth)	$16.65	6-12

Source: Dr. Wade

Corrections

■ A misnomer appeared in a chart on page 43 of our April issue, according to José Milan of Ciba-Geigy.

In the chart, Dr. Don Short of the University of Florida suggested using "Logic" bait for fire ant control. Milan says "Logic" is labelled specifically for agricultural uses such as pastures and farmlands.

Ciba-Geigy's product for fire ant control of turfgrass areas is "Award" fire ant bait.

■ Our March cool-season weed control article listed incorrect treatment for creeping speedwell. Creeping speedwell (*Veronica filimormis*) is controlled by Dacthal DCPA as a post-emergent. Corn speedwell (*Veronica arvensis*) or parslan speedwell (*Veronica peregrina*) may be controlled by Turflon D, Dacthal, DCPA or Trimec.

■ In the May disease control article, Rohm and Haas products were not correctly represented, according to Robert F. Gordon, manager of Turf & Ornamental Products.

● Rohm and Haas no longer sells maneb (Dithane) in the U.S.

● Dithane and Fore are the trade names for the fungicide mancozeb.

LM regrets any inconvenience these errors may have caused readers.