

Watching Your Tees & Q's

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Soil Test Awareness

As I travel from golf course to golf course, it is sometimes amazing the lack of reality that some golf course managers have for soil nutrient conditions. Many do not take soil tests with any type of frequency, and some take annual spot tests on their golf course. Unfortunately, the levels of various nutrients and in particular, potassium, magnesium and manganese are not measured with the degree of seriousness that they should be.

If potash levels are low or deficient in the soil, which is often the case, applying a 3:2 ratio or even a 1:1 ration of nitrogen and potassium two to three times per year is by no means adequate to build the potash levels up in the soil. It is critical to make separate potash applications three to four times through the year and also use fertilizers low in nitrogen and high in potash. Potash is a nutrient that is taken up in luxury consumption by the plant, but potash also leaches out of the soil as does nitrogen. Remember that potash is vital in:

- 1) Improving wear tolerance.
- 2) Improving drought tolerance.
- 3) Improving the root, rhizome and stolon vigor of the plant.
- 4) Improving the cold tolerance of bermudagrass.

Potassium displaces water in the individual plant cells and thus lowers the freezing point of that cell.

Magnesium and manganese are required in much less quantities in the soil and therefore their levels are more

easily built up. However, I do strongly recommend you take a serious look at levels of these various nutrients and apply fertilizers accordingly. Oftentimes, many other problems that turf managers believe they have such as root rot or nematode damage is in reality a very poor nutrient base in the soil.

Establishing and maintaining proper nutritional bases frequently offset high to moderate nematode levels. In areas of high traffic, nematodes or other stress, proper nutrition is most critical to keep the turf as active as possible.

Sul-Po-Mag, for example, is an excellent material for building up magnesium and potash levels, but then there are many other low nitrogen/high potash fertilizers on the market with minors to supplement. A common ratio of a low nitrogen/high potash fertilizer which is ideal for building up potash levels is potassium nitrate (13-0-44) or a complete analysis fertilizer such as a 5-10-30. Providing a small amount of nitrogen with a high potash application is helpful in improving the uptake of the potash, but it is not critical. Remember that the turfgrass does not know the difference in sources of nutrients. The important thing is to get the right amount of nutrients down at the proper time of the year.

Let's all be more aware of soil tests and the information they provide. It is impossible to plan a completely efficient fertilization program without basing materials and rates on current and routine soil tests. Using soil tests to plan fertilizer regimes and especially potassium, magnesium and manganese is one of the best tools available to us as turf managers today. ■



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