



(Director's Column)

entitled "Safe Handling of Pesticides". The Idea Bank in Tempe, Arizona has videos entitled "Applicator's Guide to Pesticide Safety" and "Elements of Pruning". GCSAA member Eugene Stoddard has produced two videos in Spanish entitled "Operating the Toro GM3" and "Cup Changing". His company is Video Training, Inc., 1881 Jeffrey Ave., Escondido, CA.

While we have dealt with long term solutions to overcoming a language barrier there may be a few bits of advice that could be of use immediately. Establish a Personnel Policy Manual and have it translated into Spanish. This will enable management and labor to use the same set of ground rules. Use written instructions when handing out job assignments. It will minimize miscommunication and you should no longer hear "I thought you said". Our Assistant Superintendent, Rick Bowden, writes up the daily work assignments on a blackboard and changes them as necessary. A map of the golf course is also helpful to show employees their assigned work areas.

The Grounds Department at Bob O'Link Golf Club is currently comprised of 4 Americans and 12 Hispanics. We are not alone in this trend in the Chicago area. I couldn't ask for a better staff of hard working and dependable men. Language barriers do present some problems but they are not insurmountable. The golf course superintendent now has a number of resources at his disposal to help the situation. Communication is the key to succeeding in our business today. A well-trained staff can give you optimal results with proper communication.

What Every Good Turf Manager Needs to Know About Soil Testing

by S. J. Donohue Virginia Tech University

A healthy vigorous turf is a primary goal of every good turf manager. One of the most important management practices for establishing and maintaining a vigorous turf is soil testing.

There are several reasons for testing soil. First, soil testing assists in determining fertilizer needs, by indicating both how much fertilizer is needed and what kind of fertilizer to apply. Second, soil testing tells us how much lime is needed to correct soil acidity, as well as what kind of limestone to apply (e.g., dolomitic, calcitic, regular agricultural lime). Third, soil testing helps to detect potential minor element needs, both directly, through minor element testing, and indirectly through the soil pH test. Fourth, soil testing assists in identifying causes of poor turf growth. If the problem is one of poor plant nutrition, the soil test will help indicate this. In some cases, factors other than inadequate plant nutrition such as disease, insects, etc. are responsible for the poor plant growth. However, a soil test in this case will help eliminate nutrition as the cause of the poor growth, thereby narrowing down the real cause of the problem. Fifth, soil testing enables one to utilize research in turf production. Researchers have developed a considerable amount of information on turf growth and management. Soil test recommendations are based on these research findings. Therefore, one can utilize this research in turf production through soil testing. Sixth, soil testing helps to protect your investment. When one (cont'd. on page 9)



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considers the cost in labor and materials that go into establishing and/or maintaining a good turf, the importance of soil testing for maintaining adequate fertility levels and ensuring good turf growth to protect the investment becomes apparent.

As discussed, it can be seen that soil testing is an important agronomic tool for a turf manager. The question today is not "why" test soil, but rather "how" to take a good meaningful soil sample. Sampling is perhaps the most important part of a soil testing program. When one considers that a two pound soil sample must represent, on the average, 25-50 tons of soil in the area being sampled, the importance of collecting a good soil sample becomes apparent.

To begin the sampling process, the first step is to separate the turf to be sampled into uniform areas, i.e. areas that have been fertilized and limed the same and areas that have the same soil type. A separate soil sample is required from each uniform area in order to obtain an accurate representation of the fertility status of that area. As an example, the lawn around a house might be separated into two areas for sampling purposes, the front lawn and the back lawn, for situations where the front lawn received more attention (i.e. more fertilizer, lime, and general care) than the back lawn. Tees would be considered apart from greens and fairways.

Within each uniform area, 10 or more subsamples or soil cores should be collected in a random fashion. Care should be taken to avoid flower borders, etc. which might have a fertility level quite different than that of the general turf area. In regard to sampling depth, an established turf should be sampled from the surface to the 2-4 inch depth. The reason for this is because phosphate, potash, and lime, when surface applied, move downward very little in the soil. In addition, most of the grass roots feed within this area. Sampling at this depth will give a reliable indication of the fertility status of the soil as the plant sees it. When establishing a new turf, the sample should be collected down to the depth at which the soil is being tilled. The mixing effect of the tillage operation makes the fertility status of the soil fairly uniform throughout the tilled area.

After taking each subsample, be sure to scrape away and discard the surface mat of grass. Otherwise, this will affect the soil test. After 10 or more subsamples have been collected from the uniform area, these should be mixed thoroughly in a pail in order to obtain a good representative composite sample. Soil from the pail is then put into a sample box for sending to the soil testing lab.

The laboratory needs to know exactly what kind of grass is being grown and whether the recommendation will be for maintaining an already established turf or establishing a new turf. The reason for this is that recommendations differ considerably depending on whether one will be applying fertilizer to the surface (maintenance application) or mixing it into the soil (establishment application).

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