

Soil Testing Service Offered by Green Section

The Green Section of the United States Golf Association is now providing a soil testing service for USGA Member Clubs. The service consists of laboratory studies of sands, soils, and organic materials, the synthesis of trial mixtures, and recommendation of a suitable mixture for putting green construction. A complete study and recommendation of this kind will be available for \$100.

Some clubs may wish to have additional services performed. After materials are mixed according to the club's methods, it may be desirable to have samples of the mixture checked to determine uniformity of the mix. Such samples may be checked at a cost of \$25 each. Hydrometer analysis of soils by the Bouyoucous method will be \$25 and sieve analysis of sands will be \$10 per sample.

These laboratory services will be performed by a commercial laboratory under a contractual agreement. The laboratory results will be checked by Green Section staff members before being forwarded to the club.

Green Section "Specifications" Greens

In September, 1960, the Green Section staff produced an article entitled "Specifications for a Method of Putting Green Construction." This article was based upon a considerable body of research information derived through the study of soil physical properties under putting green conditions.

One of the fundamental premises upon which this method of construction is based is a laboratory study of the materials which are to be incorporated in the soil mixture. **Without such a**

study the green cannot conform to the specifications outlined.

Many greens have been built from the data obtained from a laboratory study of soils made for a neighboring course. In other words, the XYZ club builds its greens according to the analysis made on the soil materials of the ABC club. Yet there may be considerable differences in the sand, the soil, or the organic material used by the two courses. Because seemingly small differences in soil materials may sometimes produce very significant differences in the behavior of a mixture, such practices as "borrowing" a neighbor's formula can be misleading and may result in a completely unsatisfactory putting green.

It is the firm belief of the Green Section staff that one is better off to use no part of the Green Section specifications unless he intends to follow them precisely. The various components are designed to work together with all the other parts. Unless all parts are put together properly, one invites trouble. If any reader is not completely informed about the Green Section specifications, he may acquire a reprint of the article from any Green Section office.

What is Needed?

A laboratory analysis will require a minimum of one gallon of sand, soil, and organic matter available to your club. If there is a choice of sands, soils, and organic materials, send samples of each together with a note indicating your preference on account of cost, easy accessibility, etc. The laboratory will attempt to use your preferred materials in the recommended mixture.

All materials should be packaged securely. Plastic bags inside cardboard cartons or metal cans are satisfactory. Do not put moist soil or sand in a paper bag - it rarely arrives intact.

Where to Send?

Soil materials should be addressed to:

USGA Green Section
Southwestern Office
Texas A&M University
College Station, Texas

Time Required

Because the Green Section staff

members are traveling during a considerable part of the year, please allow at least three weeks for a report on materials submitted for testing. Usually less time will be required, but the analytical procedures require a minimum of one week even when everything works properly the first time. Anticipate your need for analysis sufficiently to allow time for the testing work to be done completely and thoroughly, and for Green Section members to study the results before relaying them to you.

New Fertilizer Labels Coming

Courtesy ASA Farm Press News

Plant food users in several parts of the country noticed two sets of numbers explaining plant nutrient (plant food) guarantees on their fertilizer bags last spring. The system, called **Dual Labeling**, is aimed at a gradual change to a uniform method of expressing primary plant nutrients. The present system is a **Mixture** of elemental and oxide values ($N-P_2O_5-K_2O$). The new method will guarantee **all** nutrients in the elemental form ($N-P-K$), according to the American Society of Agronomy.

With dual labeling, a fertilizer tag with the numbers 5-20-20 may also have a set of numbers like 5-8.7-16.6. The latter refers to the actual percentage by weight of nitrogen, phosphorus, and potassium guaranteed in fertilizer material.

The present oxide system of labeling phosphorus and potassium makes percentages of these plant nutrients look higher than they really are, because it includes the weight of oxygen combined with the elements. The elemental system is more meaningful and accurate and will eliminate some

confusion. It will make the method of reporting phosphorus and potassium conform to that of nitrogen, which has long been reported in the elemental form.

A number of universities have started or will soon start reporting soil test results in **both** elemental and oxide values for phosphorus and potassium. This is part of the educational program planned by several universities, and an example of a national approach needed from industry and colleges. Simple fertilizer scales will make it easy to convert elemental to oxide values and vice versa.

Currently, fertilizer is labeled as required by law in each state. All states require fertilizer manufacturers to print a guaranteed analysis or chemical composition on the fertilizer bag and/or attached tag. In all states the analysis of complete fertilizers is expressed in percentage by weight in the order of $N-P_2O_5-K_2O$.

Inaccuracies Of Present Form

Nitrogen is legally expressed on the elemental basis as "total nitrogen" (N). Phosphorus is legally expressed