

Grau: Take New Look at Lime

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⁷ certain trace elements and a few limestones contain amounts sufficient for correction of deficiencies".

Beneficial Side Effects

The whole subject of trace elements rapidly is coming in for well-deserved attention where there is heavy crop removal. Putting greens qualify in this category. This new information on trace elements in limestone gives us a new concept of the beneficial side effects of lime.

Most of the samples studied came from the eastern half of the U.S. (Central Neb. through central Tex. eastward). Fla. rock averaged high in fluorine and phosphorus; Neb. material was high in zinc, vanadium and molybdenum; Kan. limestone averaged high in aluminum, cobalt, sodium and copper; Minn. material yielded potassium and iron; and sulfur was found in Ky. limestone.

Wide variation in analyses occurred, leading authorities to suggest that a knowledge of the composition of agricultural limestones could lead to a more advantageous selection of materials containing quantities of trace elements desired.

Space limits further discussion of the subject here. The topic well could be discussed further at local meetings where experiment station personnel are invited to participate. The research reported here further emphasizes the value of lime. Don't sell lime short.

Lime for Golf Courses

Q. Our firm manufactures agricultural limestone, used to neutralize the acid in the soil. Attached is an analysis sheet on our pulverized limestone. You will note it is a high magnesium





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limestone which gives it a high neutralizing power of 108. In addition, the limestone also contains calcium and it is ground very fine in that it will pass 75 per cent through a 100 mesh screen.

Due to the high neutralizing power and fineness, our limestone does provide rapid neutralization of soil acid. We have quite a bit of information on the use of limestone in agriculture, but very little on its use on golf courses. We have sold some materials to courses in Ohio and would like to broaden our market. But we feel we should have some information as to whether or not limestone should be included in a course fertilization program.

Agronomists tell us that a pH level of 6.5 should be the goal for the farmer. While this is true for agricultural crops it might not be true for grass. Also, a supt. will use one type of grass on greens and possibly another on fair-



ways. What is the reaction of the various types of grass to a sour or alkaline soil? Here is another question: What would the proper pH level be for various types of grass?

We know that there are different types of soils in various sections of the country and that a farmer or supt. would actually have to make a test of the soil to determine the pH level. This would be the basis for limestone application. We would only be interested in contacting golf courses in Ind., Ohio and Mich., as we feel this is our immediate marketing area. (Ohio)

A. Lime neutralizes acidity but more important it provides a rich source of calcium and magnesium, critical nutrients for bacteria and plants. Most turfgrasses would grow satisfactorily in an acid soil if they had a source of available Ca and Mg. Most acid soils render unavailable the basic elements by forming insoluble iron and aluminum compounds. The practice of using dolomitic limestone is highly favored on most turf grass areas where soil acidity tends to develop.

Grass is an agricultural crop. The pH range of 6.5 to 7.0 is known to be most favorable to beneficial soil organisms and to most effective release of plant nutrients. This principle covers farms and turfgrass areas. Ranges above pH 7.0 are not necessarily detrimental to turf. Some of the best turf grows well at pH 8.0 to 8.5 in alkaline desert areas. Thus it can be seen that there is little danger of "over-liming" when dolomitic limestone is used.

Bentgrasses and fescues can tolerate acid

soils but they do better when the acidity level nears the neutral point (pH 7.0). Bluegrasses, Bermuda and zoysia perform better at or near the neutral point. A certain amount of acidity is very desirable for helping to dissolve minerals and to make them available to plants.

Periodic soil tests have been advocated for turfgrass areas as well as for farms. Several fertilizer companies that make soil tests for customers actually "sell" as much lime as fertilizer. It would be very helpful to have a lime company assist in the educational work in the testing of soil samples and in making sound agronomic recommendations. To the best of our knowledge, your company is the first lime outfit to come forward with this kind of positive thinking and planning.

Record Entry for Amateur

A record 2,019 players submitted entries in the 1961 National Amateur which will be played at Pebble Beach (Calif.) GC, Sept. 11-16. This exceeded the 1960 total by 282. The Pebble Beach field will consist of 200 players who have survived qualifying rounds or are exempt from qualifying. Deane R. Beman, Arlington, Va., is defending champion.

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