

UNITED STATES GOLF ASSOCIATION
GREEN SECTION
Southeastern Office
Georgia Coastal Plain Experiment Station
TIFTON, GEORGIA

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SOUTHEASTERN TURFLETTER



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RESULTS OF SOIL TESTS
FROM GOLF CLUBS IN SOUTHEAST INDICATE NEED FOR FERTILIZATION

Take Guesswork Out of Fertilizer Applications

Soil Tests as Indicators.

The first Turfletter discussed the purpose of soil testing, how to take soil samples, and stated that soil tests are used to determine the need of grasses for plant elements. Other requirements for good growth as weed, insect, and disease control; proper moisture; good drainage; etc., must be satisfied before plants can make proper use of plant elements. Soil tests should not be considered as a cure-all, but only as one of the steps used to determine grass growth requirements.

The Important Five Percent.

Plant nutrients are obtained by grasses from the air, water, and soil. The soil, however, furnishes only about 5.0% or less of the total elements. It is this very small percent which is often the limiting factor in the production of turfgrasses. Soils in the Southeast, generally, are low in nitrogen, phosphorus, potash, calcium, magnesium, and in some areas, various minor elements as zinc, iron, manganese, etc. To maintain good turf these elements must be supplied by fertilizers. Proper fertilization of a soil to supply the needed elements, then, is very important. Soil tests point the way to a good fertilizer program.

The foundation for the fertilization of grasses was laid in 1840 when a German, von Liebig, first explained the nature of plant nutrition. Even though fertilizers have been manufactured for about 100 years, the need for applying elements to plants was recognized by ancient people who used fish, bones, and etc. In many cases fertilizers are the turf producer's best defense against poor turfgrass

What are the Fertility Requirements of Your Soils?

Golf Clubs Located on Sandy Soils or Along Coastal Areas Need--

- Phosphorus. Ninety-five percent of all greens tested had an adequate to excess amount of phosphorus present.
- Twenty-five percent of all fairways needed more phosphorus.
- Potash. Seventy percent of the greens and forty-five percent of the fairways needed additional potash.
- Lime. More lime was needed on twenty-five percent of the greens and forty percent of fairways.

Golf Clubs Located on Loamy Soils as Upper Coastal Plain Need--

- Phosphorus. Additional phosphorus was needed on thirty percent of greens and seventy percent of fairways.
- Potash. Sixty percent of greens and seventy-five percent of fairways need potash.
- Lime. Twenty-one percent of greens and fifty percent of fairways need lime.

Golf Clubs on Clay Soils as Piedmont Areas Need--

- Phosphorus. Ninety-five percent of the greens had a plentiful supply while fifty percent of the fairways needed phosphorus.
- Potash. Sixty-five percent of the greens and no fairways needed potash.
- Lime. Fifteen percent of greens and thirty percent of fairways need more lime.

All Soils Need A Continuous Supply of Nitrogen--THE KEY TO GOOD TURF!

The amount of nitrogen needed according to tests in each area is not given. Nitrogen is quickly exhausted from soils by leaching, plant growth, etc., and, therefore, must be replaced frequently to maintain a good turfgrass cover. Of all the elements applied to soils for grass growth nitrogen is the most important. Knowing the nitrogen requirements for turfgrasses in an area will help to overcome the lack of good turf.

Where Can Soils Be Tested?

Actually soil tests are no better than their interpretation. For best results interpretation and fertilizer recommendations should be made by trained personnel. Most State Agriculture Experiment Stations have soil testing facilities available for golf clubs. In some cases the fertilizer industry is equipped to run proper tests. Tests can be obtained at the Georgia Coastal Plain Experiment Station by addressing samples in care of this office. Always take samples and label as indicated in the first 1954 turfletter.

Southeastern Turfletter

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