

# The Use of Soil Tests

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# SOIL TESTS

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# The Use of Soil Tests

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The Soil Testing Laboratory of Texas A & M College receives many soil samples for testing. These tests are requested for various purposes. In many cases, however, the information desired cannot be obtained by soil tests. Much information desired is already available from other sources and can be given without a test.

*The information obtained from a soil test will AID:*

- 1) In determining whether there is a deficiency of one or more plant nutrients. This information will *AID* in making fertilizer recommendations.
- 2) In determining need for lime or other soil amendments.
- 3) In diagnosing certain plant deficiency diseases.
- 4) In diagnosing certain soil abnormalities, such as salt spots.
- 5) In determining toxic quantities of materials in the soil.

In many cases too much is expected from a soil test. Some request tests of samples to ascertain the best crops to grow on the soil. The suitability of soils to crops depends upon a number of conditions, of which the chemical composition of the soil some-

times is one of the least important. Some soils are so poorly drained, shallow or in such poor physical condition that they are not suited for the growth of cultivated crops. Climatic conditions affect the possibility of growing many crops, also the distance from markets, and whether or not the crop is perishable. Many crops, such as cotton, can be grown on a large variety of soils, provided other conditions are favorable. Information regarding the adaptability of the soils of a particular locality to growing different crops can, in a general way, be gathered from Soil Survey reports, the county agent, and local residents. The information desired cannot necessarily be ascertained by examination of soil samples in a laboratory.

*A soil test will not:*

- 1) Determine whether a plant has died of root rot or other disease. If a plant dies from disease, samples of the plant stem and root should be submitted to your county agent, or other trained observer for diagnosis. If they cannot diagnose the disease, the sample may be sent to the Plant Pathologist, College Station, Texas.
- 2) Determine the presence of nematodes, wire worms, or other root destroying pests. See your county agent.
- 3) Determine other physiological troubles unless caused by plant-food deficiency.
- 4) Determine plant troubles arising from drouth, temperature extremes, or excess water and drowning.
- 5) Determine physical characteristics of the soil.

If a soil test is desired, the laboratory should be furnished with as much detailed information regarding the area from which the sample was taken as possible. This information should include kinds of plants grown, how they grew, the yield, symptoms of disease, a description of these symptoms, what plants or crops are planned and any other details that are available. Also state what you are trying to find out. If the laboratory has this information, it will be in a better position in making recommendations.

times is one of the least important. Some soils are so poorly drained, shallow or in such poor general condition that they are not suited for the growth of cultivated crops. Climate conditions affect the possibility of growing many crops and the distance from markets and whether or not the crop is perishable. Many crops such as cotton can be grown on a large variety of soils provided other conditions are favorable. Information regarding the adaptability of the soils of a particular locality to growing different crops can in a general way be gathered from soil survey reports; the county agent and local residents. The information desired cannot necessarily be ascertained by examination of soil samples in a laboratory.

2) Determine whether a plant has died of root rot or other disease. If a plant has died, take samples of the plant stem and root and submit to your county agent or other trained observer for diagnosis. If they cannot diagnose the disease, the sample may be sent to the Plant Pathologist, College Station, Texas.

- 3) Determine the presence of nematodes, root worms or other root-destroying pests. Send some county agent.
- 4) Determine other physiological troubles which are caused by plant-food deficiency.
- 5) Determine plant troubles arising from drought, temperature extremes, or excess water and drowning.
- 6) Determine physical characteristics of the soil.

If a soil test is desired, the laboratory should be furnished with as much detailed information regarding the area from which the sample was taken as possible. This information should include things of plants grown, how they grew, the yield, symptoms

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