

The Soil, Plant & Water Analysis Laboratory

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by

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Where does a rancher with a 20 acre Coastal bermudagrass field go to find out how much lime and fertilizer is needed for maximum hay production? Where does a home owner go to find out how much fertilizer to put on the St. Augustine lawn or lime to put on the vegetable garden?

The answers to these questions and many more can be found at the SFASU Soil, Plant & Water Analysis Laboratory. This service Lab was charged with developing soil tests for the unique acidic, low fertility soils of the East Texas region. Since opening in 1952, the Lab has run over 200,000 soil samples, perhaps 50,000 forage samples, and hundreds of other special tests of water, soil, broiler litter, plants, and waste materials used by the homeowners and agriculture related businesses of the East Texas region.

When applied to that 20 acre field mentioned earlier, the results of a soil test can serve as a guide for the use of perhaps \$2,000 worth of limestone and \$13,000 worth of fertilizer in one growing season. Or in another case the farmer may not need any limestone and only \$3,000 worth of fertilizer. The farmer may want to substitute his neighbor's broiler litter for commercial fertilizer. The cost to the farmer for this soil test and recommendation is \$10.

A rancher may be trying to decide whether to buy 100 bales of hay from Grower A , who wants \$65 per round bale or Grower B who wants \$80 per round bale for highly fertilized hay. Hopefully the bale size of the two Growers is the same. The forage test results might show that Grower A's hay is actually of higher quality or they might show that Grower B's hay is far superior and well worth the higher price. The Forage Test from the SFA Soil Testing Lab will cost the rancher \$11 for each sample

A homeowner might be trying to establish a new St. Augustine lawn and has no idea what kind of lime or fertilizer rates to apply. Or, the lawn has been established for many years and the homeowner wants to be sure he is using the correct rates of fertilizer. A gardener may have one place at the end of the garden area where the soil is a different color and vegetables do not grow well there. The SFASU Soil, Plant & Water Analysis Laboratory can provide answers to these questions for the basic \$10 soil test.

Those \$10 and \$11 sample fees only cover about half of the operating expenses of the Soil Testing Lab with the remaining operating funds coming from special item appropriations from the Texas Legislature

to Stephen F. Austin State University. Special item appropriations have also made it possible for the Soil Testing Laboratory to have "state of the art" analytical instruments for use in soil and forage testing.

Because of the analytical capability of the Soil Testing Laboratory, numerous research projects have been carried out and the thesis research of numerous graduate students has been made possible. The Lab recently assisted faculty in Forestry with a carbon sequestration study and an Environmental Science graduate student measuring mercury in aquatic organisms.

Undergraduate students also benefit from the Soil Testing Laboratory. Approximately ten part time student technicians are employed in the Lab, assisting with routine analyses and procedures. This gives them the opportunity to earn and learn at the same time. The Lab also provides students enrolled in the various agronomy, horticulture, and animal science courses offered by the Department of Agriculture a chance to use the lab facilities in various projects and assignments. This provides unique "hands-on" experiences which increases learning.

Contact Dr. Leon Young, Soil Lab Director & Regents Professor of Agriculture, for more information on soil and forage testing services. He can be reached by telephone at: 936-468-4500. By mail at: Box 13025 SFA Station, Nacogdoches TX 75962. Or by e-mail at: [lyoung@sfasu.edu](mailto:lyoung@sfasu.edu).