



TEXAS PLANT & SOIL LAB, Inc. 5115 W. Monte Cristo Rd EDINBURG, TEXAS 78541

Soil-Water-Plant Analysis - Consulting

Phone (956) 383-0739

Fax “ “ -0730

www.tpsl.biz

LEAF / PETIOLE (STEM) SAMPLING

For maximizing profit from adequate fertilization.

Plant samples need to be VERY SPECIFIC because nutrient content of leaves vary with LOCATION of the leaf on the stalk. The AGE of the leaf also makes a big difference.

Always inform the lab of the exact leaves sampled (young test different than old) so the proper standards of nutrient levels can be used for the interpretations. Any leaf sample is better than a guess; but an **ACCURATE SAMPLE** is a much better guide for fertilization. (One leaf per plant – exact same age & location for each of the composite sample.)

SIZE OF SAMPLE: Take 20 to 50 individual leaves or petioles (stems); numbers depend on size of leaf or stem. A larger sample results in too much volume in the lab and can result in sample segregation. – Too small results in poor aliquots – measurements of ingredients.

WHICH LEAVES: Take the most recent fully developed leaf. Take **LEAF** for long growing plants: citrus, pecan, shrubs, onions, etc. – Take **PETIOLE** (stem) for short-term plants: cotton, melons, peppers, soybeans, cabbage, etc.

LEAF: Pinch leaf off the stem for leaf sample. **GRASSES:** whole plant or clippings.

PETIOLE: For petiole sample discard the leaf and save the stem. (Include a few leaves for observation.)

REPRESENTATIVE SAMPLE: Select test station areas. Mark & map with Management Area ID.

Test areas should be confined to similar soil types and conditions and should not exceed 5-10 acres. It is better to be very selective in taking samples than to try to use volume to be representative. Results of specific samples from a similar area can be averaged with results from other samples for treatment as a whole. However, averaging samples from all over the field does not tell you the variations, which could show major differences that need separate treatment.

For best results, map areas (stations) that were sampled. Sample same area each time to compare with previous tests. (Report will have previous dates.) Avoid variations due to sampling of different areas.

SAMPLE same specific areas or plants each time as representing larger areas to be treated. As management is intensified, the entire farm can be placed under testing for each 10 to 40 acres. For the best soil fertility and plant nutrition management program, a history of specific site sampling information is better than an average sampling.

PLANT SAMPLE HANDLING: WASH samples gently before they wilt to remove any contaminants (dust-sweat).

Use a non-phosphate detergent (IVORY, JOY - DISHWASHING LIQUID). Lightly rub the surface of each leaf (only rinse petioles - do not crush), rinse at least once in clean water. The last rinse should be distilled water, if possible. Handle with clean hands and place only on clean surfaces or in paper bags. A simple rinse is better than nothing!

Place in paper BAG so leaves/petioles can dry. Do not enclose in airtight plastic; punch holes if plastic must be used so they do not mold in transit to the lab. The first thing the lab must do is dry the leaves. The process of drying can be started as soon as leaves are washed. **DO NOT CONTAMINATE.**

DRY plant samples can be stored for quite some time without deterioration. Dry slowly (100° F for 8 hours or longer). Use only low heat if any. (Air Conditioner exhaust - Vehicle dashboard - hair dryer, etc.)

IDENTIFICATION OF SAMPLE: should include date taken, size/age of plant, growth condition, soil moisture level, insect or disease damage, production and fertilizer history, a copy of any previous soil tests, and any other observations that could influence growth. Include all information with the samples in the shipment to the lab. (Make sure to fill out the entire **Plant Analysis Information Sheet** each time samples are submitted to lab.)

INTERPRETATION OF LAB RESULTS AND RECOMMENDATIONS are much better when all information about the soil and crop is furnished.

Attend a TPSL School for Precision Soil & Plant Service!

CROP LOGGING (multiple sampling dates) is a proven method for BEST NUTRIENT MANAGEMENT. Sample several times at critical plant requirement periods during the growing season to adjust this crop for better results.

(gensmplt.DOC 0503) Rev 2007 Jul