



Submitting a diagnostic soil sample with a problem plant sample

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Agronomic News for North Carolina Growers — June 2007 www.ncagr.gov/agronomi/ (919) 733-2655

Plant appearance problems — such as scorched leaf margins, brown or necrotic growing tips, or light green to yellow leaves — are often caused by poor nutrition. An excellent approach to solving these problems is to submit a plant sample for nutrient analysis. The report from that analysis will list the concentrations of most of the 16 essential plant nutrients. Included in the report are corresponding indices for each nutrient that help a grower interpret whether those concentrations are high, low or just right.

Sometimes this analysis and report will be all that is necessary to pinpoint the problem — especially when the nutrient(s) that is low or high is known to cause the exact plant symptoms observed. Often though, this analysis only provides a piece of the puzzle. To pull all the pieces together, growers should submit a corresponding soil sample from the problem area with each plant sample.

The Agronomic Division offers both of these services: plant nutrient analysis through the Plant/Waste/Solution laboratory and soil fertility analysis through the Soil Testing laboratory. These laboratories are two separate sections within the Agronomic Division. The information available to one section is only provided to the other section under special circumstances. To ensure that the agronomist reviewing the plant data also has access to the soil data and vice versa, growers must submit corresponding plant and soil samples appropriately. The ability to cross-reference the results from both the soil and the plant analyses completes the puzzle and ensures that growers receive the best recommendations.

It is very important that all essential information concerning your plant and soil samples be provided on the appropriate information forms. Here are some guidelines to follow that will guarantee that the information from both reports will be provided to the appropriate agronomist(s):

1. Submit the plant sample (this should include 15–30 of the most recently mature leaves) with a completed *Plant Sample Information* form.
2. Indicate on the *Plant Sample Information* form that there is a corresponding soil sample by writing the soil sample ID in the appropriate column. The soil sample ID given on the *Plant Sample Information* form must match the soil sample ID given on the *Diagnostic Soil Sample Information* form.
3. Use a *Diagnostic Soil Sample Information* form (it's the orange one) to submit the matching soil sample; if that form is not available, write the words DIAGNOSTIC and CORRESPONDING PLANT SAMPLE across the top of a routine *Soil Sample Information* form.
4. The grower's name and address must be identical on both the plant and soil information forms.
5. Provide all pertinent information on both forms such as crop appearance (use more specific terminology than “good” and “bad”) and any fertilizer and/or lime applied.
6. Both the plant and soil samples should be sent to the Plant/Waste/Solution Section of the Agronomic Division.
7. Procedures and forms for submitting agronomic samples are available on the Agronomic Division's Web site at www.ncagr.gov/agronomi/

Remember, submitting problem plant samples with corresponding soil samples assures a complete analysis when the problem is nutrition related.