



University of Connecticut

College of Agriculture and Natural Resources

Department of Plant Science and Landscape Architecture

Soil Nutrient Analysis Laboratory, 6 Sherman Place, U5102, Storrs, CT 06269

Phone: (860) 486-4274 Fax: (860) 486-4562 Email: soiltest@uconn.edu Website: www.soiltest.uconn.edu

Questionnaire for Plant Tissue Analysis

The cost for Plant Tissue Analysis is \$20/sample payable to University of Connecticut

Name: _____ Co. Name: _____
Mailing Address: _____ City, State: _____
Zip Code: _____ Phone: _____ Email: _____

Customer Sample ID:

LAB #:

Crop _____ Variety/Cultivar _____ Rootstock (if applicable) _____

Purpose of Sample _____ Routine Assessment _____ Problem _____

Stage of Growth ___ Early ___ Mid ___ Mature Plant Vigor ___ Weak ___ Good ___ Vigorous

Age (if applicable) ___ Young, Non-bearing (1—3 yrs) ___ Young, bearing (4-7 yrs) ___ Mature (8 + yrs)

Expected Yield ___ Low ___ Moderate ___ High

Pruning ___ Light ___ Moderate ___ Severe ___ None Plant Spacing _____

List Fertilizers Applied This Year _____

List Fertilizers Applied Last Year (if applicable) _____

List Nutrient Sprays or Pesticides That May Contain Nutrients _____

How Many Samples to Submit?

As a general rule of thumb, sample different varieties and cultivars separately (i.e. McIntosh apples vs. Golden Delicious). Do not mix plants of different ages (i.e. 1-3 yr old vs. mature) If plants of the same variety/cultivar exhibit different patterns of growth (i.e. poor vs. good) take samples from both groups for a comparison. If soil conditions, past fertilizer programs or spray programs differ, separate samples should be submitted for the different situations (i.e. poorly drained loam vs. well-drained loamy sand). Most informative results will be obtained when samples represent the average condition the plant of interest experiences.

See next page for general sampling instructions. Click here for more **crop specific sampling instructions**.

Make a copy of this filled in questionnaire for your records.

UCONN TISSUE ANALYSIS SAMPLING INSTRUCTIONS

WHEN TO SAMPLE?

Results from your sample are compared to known nutritional values at specific stages of growth. In order to compare your sample to these typical values, samples need to be collected from a certain plant part, at a certain stage of growth. Timing of sample collection is of utmost importance. See brief guidelines below or contact the lab for more specific information at (860) 486-4274.

HOW TO SAMPLE?

With many plant species, the most recently developed leaves/tissues are sampled. For grape tissue analysis, petioles are typically sent in for testing. For turf grass samples, clippings are collected for analysis. Sample healthy plant parts, well exposed to sunlight, that are not damaged by disease, insects, or physiological stress. Select shoots of average vigor.

Tree Fruit - Sample between 60 to 70 days after petal fall. Collect at least 50 leaves from trees of same age and same variety growing in similar conditions. Do not include spur leaves. Remove leaves by pulling downward so petiole is still attached to leaves.

Small Fruit

For **strawberries**, sample the first fully expanded leaves after renovation or within 6 weeks after harvest. Collect a minimum of 30 leaves.

For **raspberries**, sample healthy leaves on non-fruiting canes in early to mid August. Collect a minimum of 30 leaves.

For **blueberries**, sample healthy leaves from July 1st until August 31st. Collect a minimum of 50 leaves.

For **grapes**, sample **petioles** between August 15th and Sept. 10th. 25 to 50 vines of the same variety will comprise one sample. Select the youngest mature leaf from a bearing primary shoot. Choose 2 leaves from each plant and discard the leaf blade keeping only the petiole. Minimum sample would be 60 petioles and 100 would be preferable for smaller petiole sizes.

For information on how to sample other crops, contact the UConn Soil Nutrient Analysis Laboratory or view a more extended guide to sampling at www.soiltest.uconn.edu.

GENERAL SAMPLING PROTOCOL

- 1) Sample an average of 10 - 30 plants of one variety from a representative area.
- 2) If there is a plant growth problem, submit a sample from the problem area along with a sample where normal growth is occurring.
- 3) Collect appropriate number of leaves/petioles/clippings per sample. Call us at (860) 486-4274 or go to our website for specific collection information for various plant species not listed on this sheet.
- 4) Wash leaves/petioles with a dilute (phosphate-free) dishwashing detergent in tap or distilled (preferred) water quickly (less than one minute). Rinse well, shake excess water from, and air dry at room temperature on paper towels or other clean, absorbent surface. Do not let plant samples sit in water as nutrients will leach out.
- 5) Place dried leaves in clean paper bags and submit to UConn Soil Nutrient Analysis Laboratory along with questionnaire and payment. Fresh, rinsed samples may be brought directly to lab or shipped overnight.

Results should be received in approximately 2 weeks.

Note: Fertilizer recommendations are not made for samples submitted for plant tissue analysis. Sample results should be compared to typical values (on results sheet) for that crop. Soil tests and observation of visual symptoms should also be incorporated when evaluating fertility programs. UConn resources and contacts for commercial growers will be included with results .