



Agro-One Soils Laboratory

Instructions for leaf sample collection from field crops, vegetable crops and hops.

General Guidelines

1. How to take the sample

Accurate sampling is needed to provide an accurate assessment of a crops nutritional status or determine if problem areas are the result of a nutritional problem. This requires that specific parts of a plant are collected at the specified stage of plant development. Refer to Table 1 for crop specific sampling guidelines.

Select plant parts that are representative of the variety and area tested (take separate samples from healthy areas and problem areas if trying to diagnose a possible nutrient imbalance). Document crop growth stage, plant height, soil characteristics and any other information that may be helpful when interpreting results. In general, it is best to sample leaves which have recently reached maturity.

- Avoid extremely young or old leaves.
- Avoid dead or diseased leaves
- Avoid insect damaged leaves
- Avoid cold, heat or moisture stressed leaves
- Avoid seeds since they do not accurately reflect the nutritional status of the whole plant

3. Sample preparation guidelines

Send at least 50 grams (~ 2 ounces) fresh weight or about 2 cups of lightly packed (softball size) sample of air dried plant tissue in a paper bag (not plastic). Gently rinse and air dry dirty samples using distilled water.

5. Submission Form.

Fill out the information sheet completely. **Keep a copy for your own records to aid in interpretation at a later date.** Label the leaf sample bag and information sheet with the same identification number or name.

6. Packaging, payment & mailing instructions.

If possible, sample and ship early in the week to avoid delays in sample delivery to the lab. Where available, use a Dairy One Pickup point for faster delivery of samples. To order sample bags or forms, contact Dairy One at 1-800-344-2697 x 2172 or print forms off from www.dairyone.com. Make check or money order payable to: Dairy One, 730 Warren Road, Ithaca NY 14850

4. REPORTS

The 180 Package cost per sample is \$24. It includes Total N, P, K, Ca, Mg, Zn, Cu, Fe, B and Mn. The 020 Package (Total N only) costs \$10 per sample.

At this time, reports for plant tissue samples from field crops, vegetables and hops will show RESULTS only. No interpretations or nutrient guidelines will be provided. Refer to the Interpretive Nutrient Levels for Plant Analysis from the Penn State University Agricultural Analytical Lab (Dairy One Link) and http://www.aasl.psu.edu/Plt_nutrients.htm

Table 1; Sampling Guidelines for Plant Tissue Analysis

Stage of Growth	Plant part to sample	Number of plants to sample
Field Crops		
Alfalfa		
Bud to 10% bloom	Mature leaves taken from top 6 inches of the plant	40-50
Corn		
Seedling – less than 12"	Entire above ground portion	20 – 30
Pre-Tassel	Entire fully developed leave below the whorl	15-25
Silking	Entire leaf at ear node	15-25
Sampling after silking is not recommended		
Soybeans		
Pre-bloom	2 or 3 fully developed leaves at top of plant	20-30
Early bloom	2 or 3 fully developed leaves at top of plant	20-30
Pre-pod	2 or 3 fully developed leaves at top of plant	20-30
Sampling after pod set is not recommended		
Wheat		
F1-5 Seedling to tillering	Entire above ground portion	50 – 100
F6-10 Stem Extension	4 uppermost leaves	40 – 50
F10.2 – 11 Heading	4 uppermost leaves	40 – 50
Vegetable Crops & Hops		
Tomatoes, peppers, eggplant (Field)		
Prior to or during early bloom stage	3 rd or 4 th leaf from growing tip	15-20
Sweet Corn		
Up to 6 leaves	Whole plant (not roots)	5 – 10
Prior to tasselling	1 st fully mature leave below whorl	10 – 15
At tasselling	Entire leaf at ear node	10 – 15
Cucumber, muskmelon, pumpkin, squash, watermelon		
Early growth stage	Newest expanded leaf	15-20
Hops		
Petioles from 5 – 6 foot height		50 - 60

Additional submission forms for download are available on our website: <http://www.dairyone.com>