

Plant Analysis: Plant analysis measures the nutrient content of plant tissue. Comparing the results against “normal” and “critical” values for the crop can indicate whether nutrient supply is adequate for optimum growth. Plant analysis is particularly useful for diagnosing micronutrient deficiencies.

Sampling: Time of sampling and the part of the plant sampled have a major effect on nutrient levels within a plant. See the table below for sampling recommendations. Results may be difficult to interpret if samples are taken at times other than recommended. However, plants suspected of being nutrient deficient should be sampled as soon as the problem appears. In these cases, it is advisable to take two samples, one from the problem area and one from a good area. Comparison of these samples will assist in interpretation.

Samples for plant analysis should be taken from at least 50 plants distributed throughout the area chosen for sampling. Each sample should consist of at least 200 grams of fresh material. Problem areas should be sampled separately. When taking samples for plant analysis take care not to contaminate the sample with soil. Even a small amount of soil will cause the results to be invalid, especially for micronutrients.

Sampling Recommendations for Various Crops

Crop	Stage of Growth	Part of Plant
Alfalfa or other perennial legumes	Late bud stage	Entire plant from mowing length
Corn	Initial silking	Middle 1/3 of ear leaf
Small grains or Forage Grasses	Early heading	Top two leaves
Soybeans or White Beans	Initial flowering	Top fully developed leaf

Other crops: a general recommendation is to sample the most recently developed plant parts, just prior to flowering.

Sample Preparation

1. Plant parts contaminated with soil will not provide accurate analyses, wash off with distilled water.
2. Avoid contact of samples with galvanized or brass materials or other possible contaminants.
3. Deliver fresh samples directly to laboratory. If samples will be stored or in transit for more than one day, they should be dried completely. Air-dry samples, or dry in an oven at temperatures up to 65°C.

Note: Do not store in plastic bag.

Soil Sample

A soil sample, representative of the area from which the plant sample was selected, should be taken and submitted at the same time as the plant sample. Be sure to keep soil and plant separate.

Sample Submission Instructions:

Mail or courier your sample to Agri-Food Laboratories, Unit 1, 503 Imperial Road, Guelph, Ontario N1H 6T9. Be sure to enclose this form and the required fees. Do not mail moist samples in plastic bags.