

Field Crop

Tissue Sampling Guide



Taking plant tissue samples correctly is the best way to make sure Laboratory Services results will be accurate. Our fact sheet, [How to Take a Plant Tissue Test](#), explains how to sample correctly.

Different crops require different sampling times and plant parts to sample. Table 1 shows which growth stage and plant part to sample for field crops.

TABLE 1.
GROWTH STAGES AND PLANT PARTS FOR FIELD CROP SAMPLES.

CROP	CROP GROWTH STAGE	PLANT PART TO SAMPLE
Corn – Seedling	Seedling corn – 5-6 leaves	All leaf parts
Corn – Silk	Silk (mid-season when silk is visible outside the husk)	leaf opposite the corn ear (the ear leaf)
Wheat/Barley/Oats	Prior to flowering	4 upper leaves and flag leaf (the final leaf to emerge from a cereal plant before flowering)
Alfalfa/Clover	Prior to flowering	Leaves from top 6 inches
Soybeans	At first flowering	Upper fully-developed leaves (3 leaflets + stem)

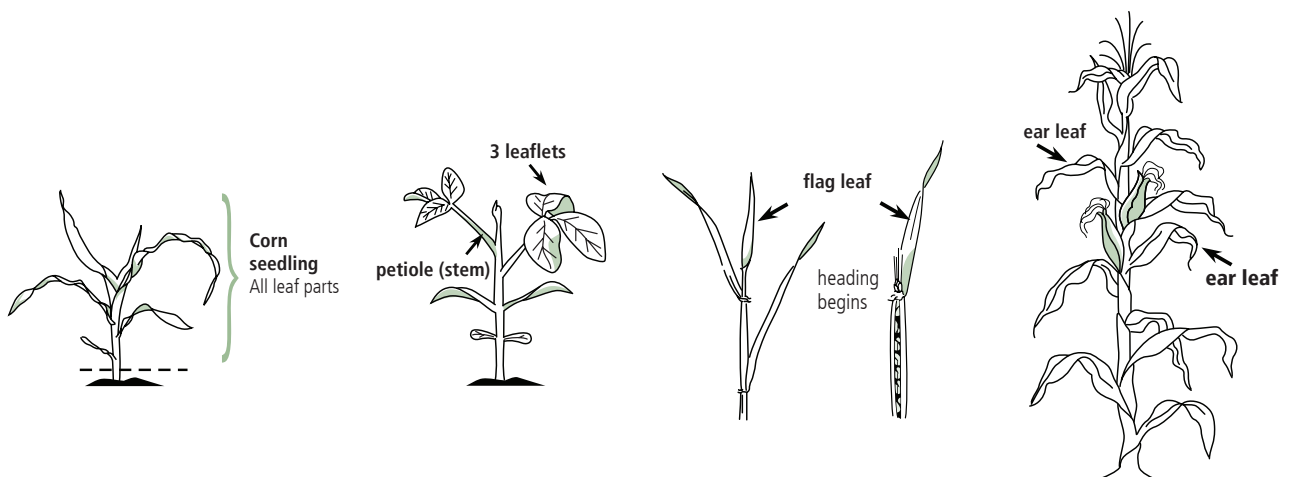


TABLE 2.
VEGETABLE CROP SUFFICIENCY TABLE

Crop*	N %	P %	K %	Ca %	Mg %	B ppm	Zn ppm	Cu ppm	Mn ppm	Fe ppm
Corn – Seed-ling	2.5-3.5	0.35–0.7	1.2–2.5	0.4-1.5	0.1–0.6	2–25	20–70	2–20	15–150	20–249
Corn – Silk	2.5–3.5	0.28–0.50	1.2–2.5	0.4–1.5	0.1–0.6	2–25	20-70	2-20	15-150	20–249
Wheat/ Barley/Oats	2.0–2.7	0.1-0.5	1.0–3.0	1.0	0.15-1.0	3-40	10–70	3–10	15–200	25–300
Alfalfa/Clover	4.5–5.5	0.2–0.5	1.7–3.5	4.0	0.2–1.0	20–90	10–70	5–30	20–100	30–250
Soybeans	4.0–6.0	0.35–0.50	2.0–3.0	0.6–1.4	0.3–3.0	20–55	12–80	4–30	14–100	50–350

Ontario Ministry of Agriculture, Food and Rural Affairs (critical to normal concentrations)

There are a number of Crop Sufficiency Tables that are available from various jurisdictions. Most crop sufficiency ranges are similar. If you use a different Sufficiency Table, be sure to sample at their specific growth stage.

An example of another crop sufficiency tables are: A&L Great Lakes Lab, in Indiana. Determine the plant part and growth stage at http://www.algreatlakes.com/PDF/Plant_Misc/Plant_Analysis_Crop_List.pdf and then compare the test analysis to the Crop Sufficiency Table at http://www.algreatlakes.com/PDF/factsheets/ALGLFS35_Plant_Tissue_Testing_Sufficiency_Levels_of_Row_Crops.pdf

Common mistakes of taking field crop tissue samples

- Corn silk has begun to turn brown
- Soybean is in full flower
- Cereals and grasses are at flowering
- More than 10 per cent of legumes are in bloom