

# Field Crop Tissue Sampling Guide

Taking plant tissue samples correctly is the best way to make sure your results will be accurate. Our fact sheet, *How to Take a Plant Tissue Sample*, 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
<b>Corn</b> – Seedling	Seedling corn – 5-6 leaves	All leaf parts
<b>Corn</b> – Silk	Silk (mid-season when silk is visible outside the husk)	leaf opposite the corn ear (the ear leaf)
<b>Wheat/Barley/Oats</b>	Prior to flowering	4 upper leaves and flag leaf (the final leaf to emerge from a cereal plant before flowering)
<b>Alfalfa/Clover</b>	Prior to flowering	Leaves from top 6 inches
<b>Soybeans</b>	At first flowering	Upper fully-developed leaves (3 leaflets + stem)

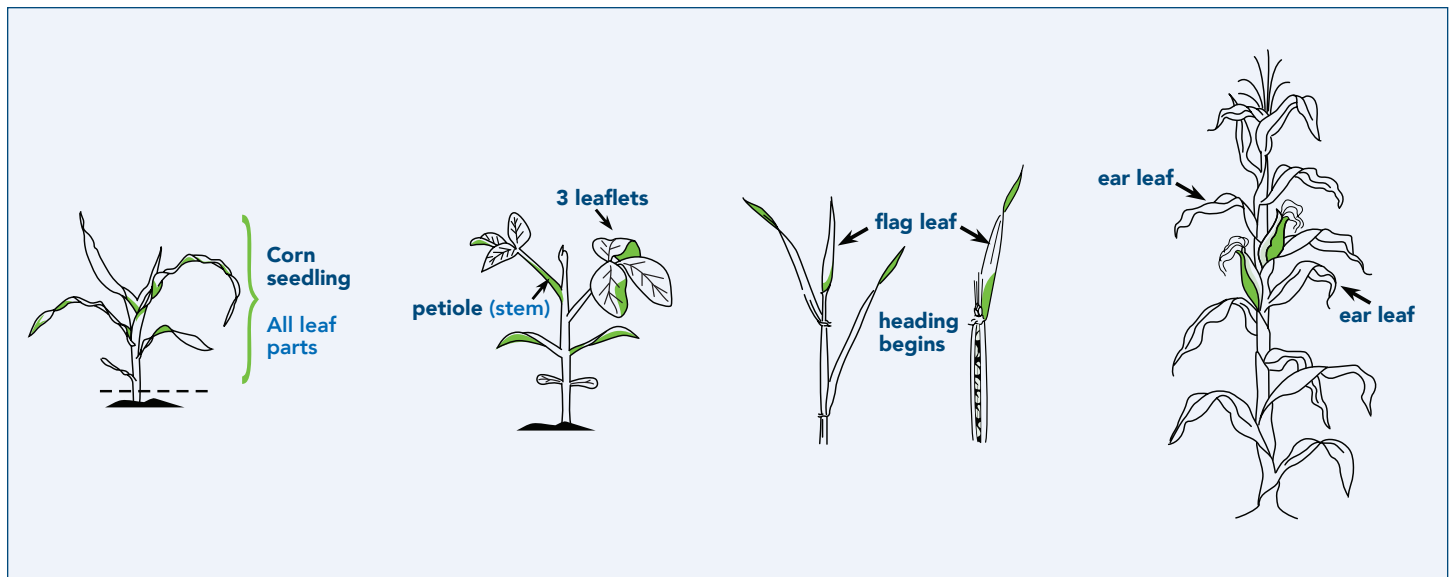


Table 2. Vegetable crop sufficiency table

CROP*	N %	P %	K %	Ca %	Mg %	B ppm	Zn ppm	Cu ppm	Mn ppm	Fe ppm
Corn – Seedling	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.

## 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

## LAB CONTACT INFORMATION

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