a&lgreatlakes LABORATORIES

Scientists who don't mind getting dirty.™

ALGL FACT SHEET

PLANT TISSUE SAMPLING CORN / SOYBEANS / WHEAT

One of the more important factors affecting crop quality and yield is the **nutrient status** of the plant...or the flow of nutrients to plant tissues during the growing season. Nutrient status is an "unseen" factor in plant growth, except when imbalances become so severe that visual symptoms appear on the plant. The goal of plant tissue analysis is to accurately diagnose problems in time to correct them in the current crop or before the next crop in rotation.

When collecting plant tissue samples in row crops, follow the guidelines in this Fact Sheet. Be sure to collect the correct portion of the plant and at the correct growth stage so results can be compared to published sufficiency levels. Collect enough plant tissue to represent the area you are investigating and use a clean container to ship the sample in.

- ***Never send fresh samples in sealed plastic bags.***
- ***Do not include roots/soil in plant tissue samples.***
- ***Do not refrigerate or freeze samples.***

If plant samples have soil, dust, fertilizer, or spray residues on them, they will need a light washing, as follows: With the aid of a plastic colander, spray off the sample with deionized or distilled water. Blot-dry the sample with a clean paper towel. Allow the sample to air-dry and ship as soon as possible in a tissue sample bag or paper bag to allow air movement in transit.

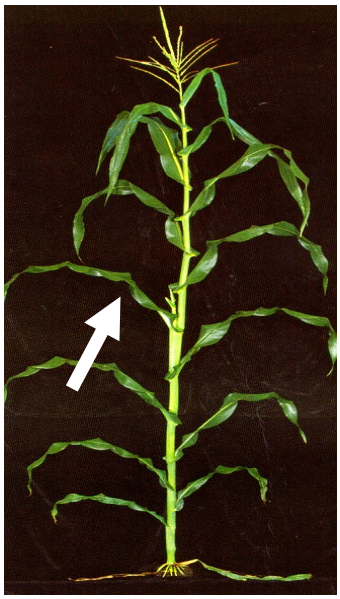
SAMPLING GUIDELINES FOR FIELD CORN

Depending on growth stage, the plant part collected differs.
- *Please identify V/R growth stage on submittal form*.

- Seedling stage less than 12" high - VE thru V4: Cut and sample whole plant from 1" above soil surface. Collect 15 plants.
- Prior to tasseling - V5 thru V(n): Sample the most recently unfurled leaf below the whorl with a visible collar. Collect 15 leaves.
- Silking through reproduction—VT thru R6: Once the ear is visible, sample the leaf below the ear. Collect 15 leaves.

seedling Stage

prior to tasseling



silking though reproduction

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SAMPLING GUIDELINES FOR SOYBEANS

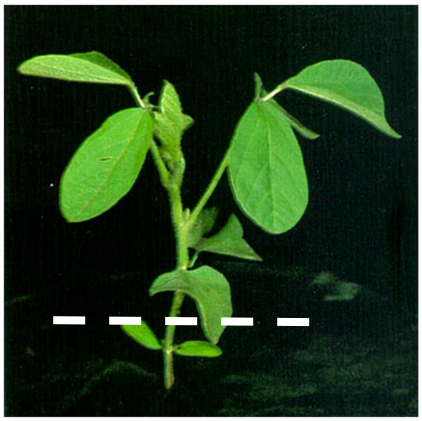
Depending on growth stage, the plant part collected differs.
- *Please identify V/R growth stage on submittal form*.

- VE thru V2: Cut and sample whole plant from 1" above soil surface. Collect 15 or more plants.
- V3 thru R8: Sample the most recently matured leaflet without petiole. Collect 25 leaflets.

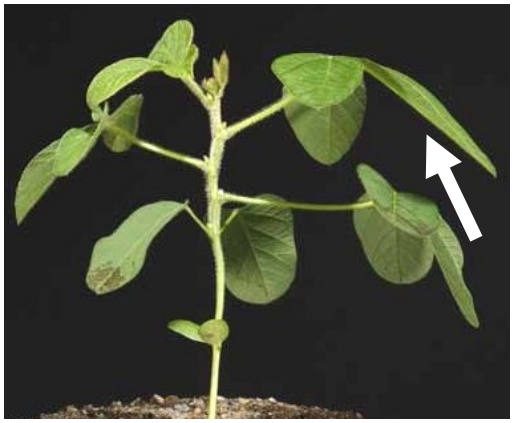
The most recent mature leaflet is the same size and color as those in the lower plant, caution, it maybe the 3 to 5 nodes down from the top of the plant. Do not include the petiole.

What does the "most recently mature leaflet" on a soybean look like?

The top four nodes of a R2 soybean are shown, note the larger size and color of the fourth node leaflet (largest pictured), this is the correct leaflet to sample.



V2 - Second Node



V4 - Fourth Node

R2 - Full Bloom

SAMPLING GUIDELINES FOR WHEAT

Depending on growth stage, the plant part collected differs.
- *Please identify Feekes growth stage on submittal form*.

- Prior to joint: Cut and sample whole plant 1/2" above soil surface. Collect 25 plants.
- Joint to head: Sample the most recently fully developed leaf with a collar. Collect 50 leaves.
- Heading to mature: Sample the most recently fully developed leaf with a collar also known as the flag leaf. Collect 50 leaves.

prior to joint

joint to head

heading to mature