

CROP SERVICES

PLANT TISSUE AND SOIL SAMPLING GUIDE

WHY COLLECT PLANT TISSUE SAMPLES?

Adequate crop nutrition is one factor determining crop yield that you have control over. Once you have selected the best variety for your field and applied fertilizer based on previous soil testing, you may still have pockets within your field that are lacking a nutrient. That limiting nutrient is reducing your yield and Return On Investment.

Yellowing of leaves is a common sign of deficiency for several nutrients. By collecting plant tissue samples early during the growing season, additional nutrients can be applied before yield is set for the crop. Combining a soil sample from the same location as the plant tissue sampling will help answer the question of which nutrient(s) is/are deficient.

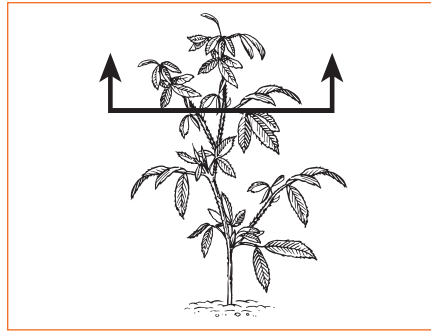
COLLECTION AND PREPARATION OF PLANT TISSUE SAMPLES

When gathering samples always use a clean paper bag or clean plastic pail. DO NOT use a metal container to collect the samples as this may contaminate the sample.

Once the sample has been collected and air dried, place it in a clean paper bag (a paper grocery bag is an excellent choice). NEVER USE A PLASTIC BAG!

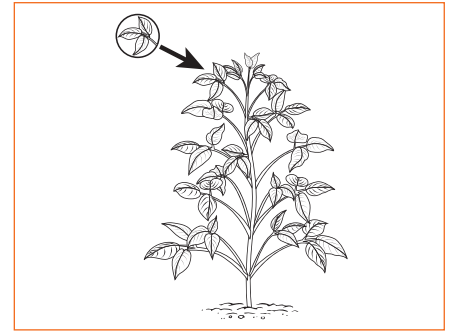
Sample frequency should be one sample for every 15-20 acres, or select a "bad" sample plus a "good" sample for comparison. Use the table on page 2 as a guide for when, where and how many plants to sample.

DESIRED SAMPLE LOCATIONS FOR COMMON CROPS



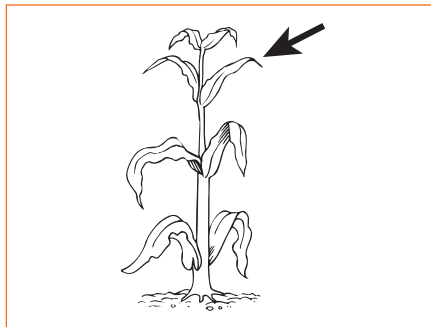
ALFALFA

Collect mature leaf blades and petioles about one-third of the way down the stem at one-tenth bloom stage or before.



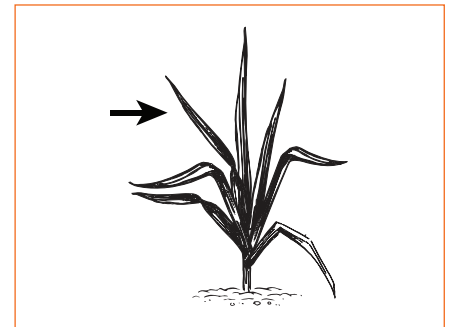
SOYBEANS

Collect the youngest mature trifoliate leaves from the top of at least 20 plants prior to or during flowering. If it is in the seedling stage, collect all of the above ground portion.



CORN – BEFORE TASSELING

Collect the first fully developed leaf from the top of at least 12 plants. When the plant is less than 12 inches tall, collect all of the above ground portion.



WHEAT, OATS, AND GRASS

Collect the uppermost leaf blades from the top of at least 35 plants. If in the seedling stage, collect all of the above ground portion. Sample should contain two cups.



CORN – FROM TASSELING

Collect the leaf below and opposite the ear from at least 12 plants.

COLLECTION OF SOIL SAMPLES

The reliability of a soil sample depends, to a large degree, on how accurately the sample is taken. Unless the sample accurately represents the field conditions, the most detailed laboratory procedures will have little value. For this reason, soil samples should be taken with precision and accuracy.

Collect a representative soil sample from the area that the plant tissue sample was collected. Use a soil probe or a spade to collect the top 6 inches of soil. If using a spade, take a one inch thick sample that is 6 inches deep. Fill the soil sample bag at least half full. Label the soil sample bag in a way which can be identified back to the plant tissue sample. If you do not have a soil sample bag from SGS, place the soil sample in a clean plastic bag that closes.

PLANT	STAGE OF GROWTH	PLANT PART TO SAMPLE	QUANTITY OF PLANTS TO SAMPLE
Corn	< 12" tall	Whole plant	10
	12" to pre-tassel	Uppermost fully developed leaf	12
	Tasseling to silking	Leaf below and opposite ear leaf	12
Small Grain	Seedling Stage	Whole plant	35
	Prior to Heading	4 upper most blades	35
Forage Grasses	Early Heading	Whole plant	35
Alfalfa	1/10 bloom	Top 6 inches of plant	30
Clover	Prior to Bloom	Mature leaf blades $\frac{1}{3}$ way down	50
Soybeans	Seedling Stage	Whole plant	20
	Initial flowering to pod set	Uppermost fully developed trifoliolate	20
Sunflowers	Prior to or at early flowering	Uppermost fully developed leaf	12
Grain Sorghum	Prior to head emergence	Second fully developed leaf	12

SGS DOES NOT ACCEPT RESPONSIBILITY FOR ANY DAMAGE OF THE SAMPLE BEFORE IT ARRIVES IN OUR LABORATORY.

REMEMBER: No matter what type of sample you are sending, be sure to place it in a sturdy container, pack it well for shipping and label it properly. Enclose your name, address and telephone number.

Should you require one of our sampling specialists to perform sampling for you please contact us:

SGS

241 34th Avenue
Brookings South Dakota 57006 USA

Phone: (877) 692-7611 ext. 5

Fax: 605-692-5908

Email: soils.brookings@sgs.com

Website: www.sgs.com/SeedAndCrop

WHEN YOU NEED TO BE SURE

SGS