

## HOW TO SAMPLE PLANT TISSUE FOR ANALYSIS

(taken from the 2006 Fertility Handbook)

1. Select plant tissue so it represents the field as much as possible.
2. Take the composite sample by sampling the number of plants shown below:

**Table Guide to plant sampling for tissue analysis.**

Crop	Plant part to sample	Stage of growth	# of plants
Corn or Grain Sorghum	All above-ground	Seedling stage (less than 12')	20-30
Corn or Grain Sorghum	Top fully developed leaf	Prior to tasseling	15-25
Corn	Leaf at ear node	Tasseling to early silk*	15-25
Grain sorghum	Second leaf from top	At heading	15-25
Soybeans	All above-ground	Seedling stage (less than 12")	20-30
Soybeans	Top fully developed trifoliolate leaves	Prior to or during initial flowering*	20-30
Small grain	All above-ground	Seedling stage (prior to tillering)	50-100
Small grain	All above-ground	As head emerges from boot*	15-25
Peanuts	All above-ground	Seedling stage	20-30
Peanuts	Upper stems and leaves	Early pegging*	15-25
Alfalfa	All above-ground	Prior to bloom	30-40
Alfalfa	Top 1/3 of plant	At bloom*	15-25
Bermudagrass	Whole plant top	4 to 5 weeks after clipping*	15-25
Cotton	Whole plants	Early growth	20-30
Cotton	Petioles of youngest fully expanded leaves	During bloom*	20-30

\*Recommended sampling period for fertilizer evaluation.

3. Allow samples to partially dry before mailing. Send samples in forage bags, paper bags or envelopes, **not in plastic bags**.

Damp or wet plant tissue will deteriorate if mailed in plastic or airtight containers. Do not send soil or roots in the same container. Soil contaminates the plant tissue and makes it difficult to clean at the laboratory.

It is a good idea to take a soil sample in the same vicinity as the plant sample. Soil tests may help interpret the plant analysis results. Plant tissue sufficiency levels for several crops are presented in Table 4.12. Whenever nutrient levels in the plants fall below the sufficiency range, a deficiency is expected. The lower the concentration is below the sufficiency range, the greater the nutrient deficiency.

Remember to use plant analysis along with other data, including soil tests. Interpretation must be logical. Be suspicious of far-fetched diagnosis. Growers have frequently been disappointed by applying some otherwise illogical nutrient to their soil and obtaining no benefit. The OSU Soil, Water and Forage Analytical Laboratory conducts plant analysis on request but does not offer interpretations.