

Delaware Nutrient Management
Program
DELAWARE CONSERVATION
PRACTICE STANDARD
TISSUE SAMPLING AND
ANALYSIS
(Reported by No.)

DEFINITION

Test that shows the nutrient status of plants at the time of sampling

PURPOSES

This practice may be applied for one or more of the following purposes:

1. Detect unseen nutrient deficiencies.
2. Confirm visual deficiency symptoms.
3. Detect toxic nutrient levels.
4. Enable correction of nutrient problems.
5. Monitor adequacy of fertilization practices.

**CONDITIONS WHERE PRACTICE
APPLIES**

This practice applies when:

1. A farmer wants to determine if a crop is adequately nourished during the growing season.
2. A farmer wants to allow a corrective fertilizer application on young plants.
3. Pinpointing nutritional causes of abnormalities in plant appearance.

CONSIDERATIONS

It is important to follow the specific guidelines for collection of plant samples from different types of plants and for different purposes.

CRITERIA

Materials. A clean container should be used for gathering the tissue sample in the field. A plastic pail or paper bag works best, but a metal container should not be used because it may contaminate the sample.

A dry brush should be used to clean residue off of samples. If a dry wash proves to be ineffective, the samples should be wiped with a damp cloth or washed with distilled or deionized water. In this case, do not prolong the washing because it can leach nutrients out of the tissue.

Samples should be air dried in a shady location out of direct sun light.

Protection. Dried samples should be placed into clean paper bags or envelopes for mailing to the laboratory to prevent contamination.

REFERENCES

Procedures for collection and analysis of plant tissue samples can be viewed at:
http://aces.nmsu.edu/pubs/_a/a-123.html