



Tissue Sampling

Overview

Plant tissue analysis is second only to soil testing for helping to improve crop nutrition and yield. While soil testing identifies nutrients provided to the crop, tissue sampling identifies how well plants utilize the soil and applied nutrients. Plant tissue sampling helps identify problems and determine corrective action.

What you should know

- Nutrient deficiency symptoms aren't always caused by a lack of nutrients in the soil. Other factors include poor root development, unfavorable soil conditions or weather.
- Plant tissue sampling will detect unseen deficiencies and confirm visual deficiency symptoms in corn. Plant tissue analysis from young plants helps with corrective fertilizer applications.
- Tissue analysis can help you make decisions about nutrient applications such as nitrogen and micronutrients. If fertilizer is required to correct a deficiency, test information can help you adjust the fertility plan.

Action steps

1. **Where to sample:** Field condition determines sampling. Collect samples from similar areas of plants in the same growth stage. (See graphic.)
 - Uniform field (uniform stands or routine testing): Combine plant samples from at least 10 different areas of the field into a composite tissue sample.
 - Problem field (varying or abnormal growth and plant appearance): Take 10-20 individual tissue and soil samples from both affected and normal areas to show differences in plant and soil nutrients.
2. **Provide field history:** This important information provides background on your fields and a more meaningful interpretation of the results. File a separate form for each sample taken.
3. **Prepare and mail the sample:** Use a large, clean paper bag or clean plastic bucket to collect the sample(s). Remove dust or residue from leaf surfaces. Mail samples using envelopes supplied by the laboratory. If not shipping immediately, refrigerate the samples.

0-12 inches tall: Cut stalk off about ½ inch above ground level. Submit 20-25 whole plants.



> 12 inches but prior to tasseling: Submit first fully developed leaf from top (first leaf below whorl). Cut leaf at its base where it joins sheath. Sample 20-25 plants.



Tasseling to pollination: Submit leaf below and opposite ear. Cut leaf at its base where it joins sheath. Sample 20-25 plants.



30-Second Summary

- Tissue sampling can help improve plant nutrition and yield.
- It identifies how plants utilize soil and applied nutrients.
- It can help you plan nutrient applications and adjust your fertility plan.

NOTES:

For more information, contact:



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