

9/14/2009 University of Missouri Extension Agronomy Update
Corn Stalk Nitrate Test Challenge
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Fertilizer is a significant cost of corn production. The days of applying a little extra nitrogen “just in case” is now an expensive venture. The question that each producer should be asking is, “did I apply the right amount of nitrogen?”

The University of Missouri is encouraging producers to analyze their 2009 nitrogen management with the Missouri Corn Stalk Nitrate Test Challenge. This is a powerful tool to assess the fertilizer nitrogen decisions in your corn field. Research from Iowa and other states has calibrated nitrate concentrations in the corn stalk with the nitrogen status of the harvested corn crop. Nitrate concentrations above 2000 parts per million indicate excess nitrogen, nitrate concentrations below 700 parts per million are indicative of a marginal nitrogen supply, and nitrate levels below 700 parts per million were clearly nitrogen deficient.

Dr. John Lory has created the “Missouri Corn Stalk Nitrate Test Challenge” with the MU soil testing lab. With this challenge, the lab will analyze up to 10 samples from any Missouri farm at no cost, if the samples are submitted with the requested information. Normally the cost of the analysis is \$12 per sample.

There is a window of opportunity for collecting the samples that is now. The samples need to be collected from the ¼ milk stage to up to 3 weeks after black layer formation. Remove an 8-inch segment of the corn stalk – the top cut should be 14 inches above the ground while the bottom cut should be 6 inches above the ground. Get a stalk segment from at least 15 randomly selected plants from the field or subfield you are sampling. Place the samples in a paper bag for shipping to the lab for analysis. Do not freeze the samples. Samples held more than 24 hours before shipping should be refrigerated. Samples should be shipped early in the week so they do not set in the post office over the weekend.

The samples need to be shipped to:
Attention: Stalk Nitrate Test Challenge
23 Mumford Hall
University of Missouri Soil Testing Lab
Columbia, MO 65211

For more information on the Missouri Corn Stalk Nitrate Test Challenge, see
<http://ppp.Missouri.edu/newsletters/ipcm/archives/v19n18/a5.pdf>

You can also contact your local extension office for more information.