



# NEWS REPORT

A & L GREAT LAKES LABORATORIES, INC. FALL 2005

## List of Contacts at A&L Great Lakes

### Agronomy:

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Gary Elliott  
& Myron Warner

### Billing & Accounting:

Sharon Topp  
& Shawn Tinnel

### Land Application:

Keith Henley

### Quality Assurance:

Greg Neyman

### GPS Mapping:

Dan Kite

### Telecommunications:

Randall Warden  
& Greg Neyman

### Soil Trak:

Randall Warden,  
Greg Neyman  
& Dan Kite

### Feed Testing:

Lois Parker  
& Randall Warden

### Water Analysis:

Keith Henley

### Pesticide Residues:

Keith Henley  
& Dan Kite

### Fertilizer Analysis:

Jo Ann Nichols

### Compost Analysis:

Lois Parker

### Area Agronomists:

Gary Elliott  
& Myron Warner

## Don't Rush to Refine Fertilizer Rates

Crop stresses this summer (drought, insects, etc.) could lead to reduced yields and lower net income for some producers. This may stimulate interest in reducing fertilizer application rates.

Remember that good soil fertility levels help crops resist stress and maintain yield. Wait until harvest to make sure that yields are not as greatly reduced as might be anticipated.

Don't pre-judge where changes might need to be made. Should there be a real need to reduce or re-allocate fertilizer applications, do it based on agronomic and economic principles: soil test levels, yield potential, market price, land costs, etc.

This is the approach that should be taken each year, but can be forgotten in the "heat" of the summer when crops are under stress. For best results, make fertilizer application rate decisions using all of the available information, and not based on emotion.

## Website Update Coming

Within the next couple of months our website will have a new "look and feel." It will be easier to navigate, order supplies, and find information. Stay tuned!

## Evaluating Nitrogen Management

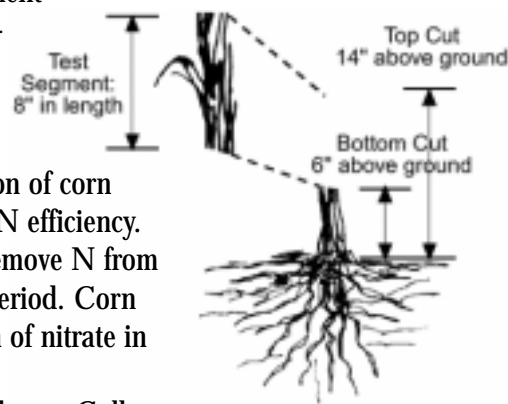
It has been a very challenging growing season. Between the threat of rust from the south, the drought from the west, and the aphids enjoying the north, one can only wonder what stalks in the east. But the real question is what's in your (corn) stalks?

A way to check on corn N fertilizer management program for the entire growing season is the **end-of-season cornstalk test**. It helps distinguish between over fertilization (zone of luxury uptake) and fertilizing to maximize profits.

The level of nitrate present in the lower section of corn stalks at grain maturity can provide a measure of N efficiency. Corn plants with inadequate available nitrogen remove N from lower cornstalks and leaves during the grain fill period. Corn plants grown with excess N have an accumulation of nitrate in their lower stalks at the end of the season.

Timing is key with the end-of season cornstalk test. Collect fifteen cornstalk samples 1-3 weeks after black layer has formed on 80% of the kernels of most ears. Obtain these by removing an 8 inch segment of stalk found between 6 and 14 inches above the soil. Collect 15 stalks randomly in ten acre areas and submit them as one composite sample. Place these in a paper bag (not plastic) and submit to the lab for nitrate testing. Our report will show the cornstalk nitrate level and provide interpretations.

For more information on the end-of-season stalk test, download Fact Sheet #19 from our website or contact the laboratory for a copy.





## DROUGHT-DAMAGED CORN FOR FEED

As the summer of 2005 winds down, there are portions of the Great Lakes States where drought has caused a major crop loss. Some corn growers in the region have already determined that they will be chopping their crop instead of harvesting grain.

Drought-stressed corn can have elevated nitrate levels. Nitrate will accumulate in the lower portions of the stalk, and the grower can reduce the nitrate in the silage by cutting the silage a little higher, leaving the lower portions of the stalk in the field. Ensiling the corn will also result in a reduction in the nitrate levels – up to 50% reduction.

When making decisions on corn silage, the grower can hand harvest and chop a small section of the field, and submit 2-3 cups of the green chop to A & L Great Lakes Laboratories for analysis, requesting the FNO3P test package. The laboratory will report the moisture and nitrate levels of the green chop the next business day following receipt. Interpretations of nitrate toxicity in animal feeds can be found on A&L Fact Sheet 4, which is available at [www.greatlakes.com](http://www.greatlakes.com).

## Soil Fertility Workshop Locations

Following are projected dates and locations of our 2005-2006 Soil Fertility Workshops. Registration forms with complete information will be mailed later in the year.

December 13	Ann Arbor, MI
December 15	Grand Rapids, MI
January 31	Rochelle, IL
February 2	Goshen, IN
February 7	Bowling Green, OH
February 9	Sidney, OH
February 21	Anderson, IN
February 23	Lafayette, IN
February 28	Franklin, IN
March 2	Fort Wayne, IN

## Lime Quality Essential

Fall is traditionally the time of year that lime is applied to fields needing a pH adjustment. Fields are relatively clear of vegetation, liming materials can be incorporated into the soil profile with tillage, and there is an adequate amount of time in the fall and spring for the material to enter into the soil solution and neutralize the acidity of the soil. Even with all these advantages to liming in the fall, there could be a false sense of security in successfully correcting soil pH problems if two major factors aren't considered; lime purity and particle size distribution.

A lime recommendation from our laboratory assumes that the quality of a liming material meets a state's minimum standard. Since this may not be the case, our lime recommendations need to be adjusted for the quality of the lime that will to be applied.

We have developed a spreadsheet which quickly calculates the amount of lime needed based on the purity and particle size distribution of a lime source. By inputting the CCE and particle size distribution of the material, the corrected amount of lime to spread based on soil test results can be determined. Equations for eleven states (Iowa, Illinois, Indiana, Kentucky, Michigan, Minnesota, Missouri, Ohio, Oklahoma, Pennsylvania, and Wisconsin) are incorporated into this spreadsheet. It is available free by contacting the laboratory or attending one of our soil fertility workshops.



## SoilTrak Reports

SoilTrak 4.0 has several reports that can be of great help as the Fall season approaches:

- The **Soil Sampling History** report lists the fields that were sampled in a particular year that would be ready for sampling again. Just set the year range to a single year (2001 to 2001) and the report will list all the fields that were sampled.
- **Field Trend** reports show soil fertility changes in fields that have been sampled multiple times. This report can be used to evaluate soil fertility changes and assure that the soil fertility program is meeting its goals.
- **Field Variation** reports can help evaluate soil nutrient variability within a field. All tested elements are summarized and statistical measures of variability are calculated.

Contact us for more information on these and other SoilTrak 4.0 features.

## Phosphorus and Land Application of Biosolids

Application of biosolids to agricultural soils to meet the nitrogen (N) needs of agronomic crops often provides phosphorus (P) in excess of crop needs. This P over-application can result in buildup of soil P above levels needed for optimum crop yields, and may also increase the risk of P loss to surface and ground waters.

Because of concerns regarding the influence of P on water quality, many state agencies now recommend or require P-based nutrient management plans for animal manure and biosolids application.

Nationally, agronomic application of biosolids represents a secondary, but significant, input of P to soils when compared with manures and inorganic P fertilizers. However, studies have found that lower risks exist for P loss when biosolids are applied.

Biosolids add a significant amount of organic matter to the soil which tends to improve infiltration and reduce erosion, thereby reducing runoff volume. Research has shown that tillage methods can have

an effect on soil physical properties and P losses in runoff. These studies indicated that the application of biosolids reduced sediment yield in both no-till and conventional tillage fields. Other studies have found lower risks for P loss when biosolids are applied due to the use of chemical amendments such as aluminum or iron salts used at municipal water treatment plants. As a result, P solubility in biosolids may be less of a risk to water quality than P in manures and inorganic fertilizers because of the wastewater treatment plant processes.

With proper management, biosolids can become a valuable resource to the agronomic community, while limiting the risk of P loss to the environment.

Testing of biosolids and soil for P (and other nutrients) is critical for developing an effective biosolids land application management plan. Contact A & L today to see how we can assist with your biosolids and soil testing requirements.

# Tradeshow and Meeting Calendar

## 2005

- September 14 Indiana Water Environment Pre-treatment Conference, Indianapolis, IN
- November 14-16 Indiana Water Environment Association Annual Conference, Indianapolis, IN
- December 5 Ohio Water Environment Association Residuals Workshop, Columbus, OH
- December 6-8 Great Lakes Fruit, Vegetable & Farm Market Expo, Grand Rapids, MI

## 2006

- January 9-11 Michigan Agri-Business Association Winter Conference, Lansing, MI
- January 17-19 Fort Wayne Farm Show, Fort Wayne, IN
- January 17-19 Wisconsin Fertilizer and Chemical Association Annual Meeting, Madison, WI
- January 23-25 Illinois Fertilizer and Chemical Association Annual Conference, Peoria, IL
- February 7-8 Mid-America Ag Show, Indianapolis, IN
- February 14-15 Wisconsin Potato and Vegetable Growers Association Industry Show, Stevens Point, WI
- February 22 Indiana Water Environment Association Residuals Seminar, Greenwood, IN

[www.algreatlakes.com](http://www.algreatlakes.com)



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