



NEWS REPORT

A & L GREAT LAKES LABORATORIES, INC. FALL 2004

List of Contacts at A&L Great Lakes

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GPS Mapping:

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Telecommunications:

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Soil Trak:

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Feed Testing:

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Water Analysis:

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Fertilizer Analysis:

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Compost Analysis:

Lois Parker

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SoilTrak[®] 4.0

Since its release this past spring, SoilTrak[®] 4.0 has received accolades from our customers. SoilTrak[®] 4.0 is the latest release of our software that streamlines the soil sampling and soil test data management process. It has saved A & L customers time and money in managing their soil data.

- Print Bag Labels and Bar-Coded Submittal Forms
- Manage Soil Analysis Data
- Make Fertility Recommendations
- Perform Summaries and Print Reports
- Track Nutrient Requirement Trends

Many registered users of SoilTrak[®] 3.0 have upgraded to 4.0. If you currently own SoilTrak[®] and are unsure what version you have, launch SoilTrak[®] and go to the "Help" menu item and choose "About SoilTrak[®]..." If your version is 2.0 or 3.0, you should consider the benefits of upgrading.

If you are considering SoilTrak[®], but would like to see a demonstration before deciding, contact the laboratory and we will have an associate visit you for a live demonstration. See for yourself the benefits many of our SoilTrak[®] users already enjoy.

Sampling Drinking Water

Homeowners who use a well as their drinking water source should periodically test their water. Our *Drinking Suitability* water test package includes tests for coliform bacteria, nitrate, hardness and other parameters to evaluate drinking water quality and safety.

Proper sampling technique is essential when sampling drinking water. First, obtain proper sample containers. We provide a 16-ounce container for general analyses and a 4-ounce sterile container for coliform or other bacterial tests.

Sample near the water source (well, etc.), before a water softener or other water treatment device. Turn on the water and allow it to run long enough to flush the system, usually 3-5 minutes. If coliform bacteria will be analyzed, turn off the water and pass a flame back and forth over the outlet to sterilize. Then turn on the water at a moderate flow rate. Carefully fill the sterile bottle to the fill line and reattach the lid. Be careful not to touch the inside of the container or underside of the lid with your fingers. Fill the second container from the running faucet and seal that lid also.

Water samples should be refrigerated immediately after collection and received by the lab within 24 hours of sampling. Samples are accepted Monday through Thursday (8:00 am – 3:30 pm).

The *Drinking Suitability* water test package costs \$50 and takes 5 working days to complete.

Courier Services & Sampling Available

A & L offers a wide array of on-site industrial/municipal water sampling services including POTW and NPDES discharge wastewater collection. If you prefer to do the sampling, have us pick up the samples at your facility, according to *your* schedule. Our prompt, courteous and reliable courier service also includes sample containers and 5-day sample turnaround time, all at a very competitive price. Give us a call today to discuss placing your facility on our courier and sample pick up schedule.

Soil Sampling History Report

Our **Soil Sampling History Report** makes the soil sampling process more efficient. It helps identify when fields were previously sampled, and now need to be re-sampled.

This report is organized alphabetically by grower name, farm name, and field name. It shows the date we received the samples and the number of samples in a field (report number).

Contact us if you are interested in receiving a custom **Soil Sampling History Report** to help your soil sampling program. We will ask a few questions and then quickly get a report sent to you.

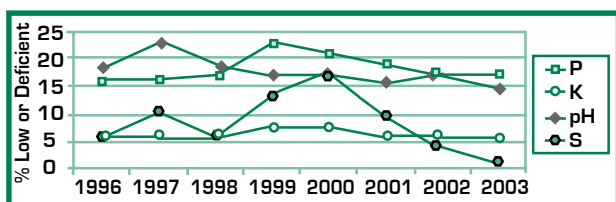


AGRONOMIC REVIEW

Importance of Historical Soil Test Data

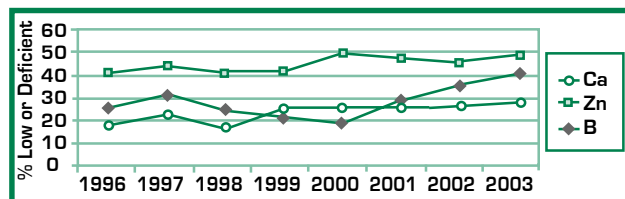
Analyzing a soil's fertility provides information on the nutrient status of a field at a moment in time. Although this is important information and is used to adjust fertilizer recommendations for the field, it should not be the only input used to manage the field's productivity. Evaluating soil test data on a historical basis can provide insight into trends of nutrient levels over time. This can prevent hair trigger reactions to a particular soil test result. As one of the largest soil testing labs in the Great Lakes region, we have the opportunity to evaluate a large amount of information regarding the health of the region's soils. Recently we took a close look at the trends of nutrients showing low or deficient levels over the past eight years. Summaries of this evaluation can be found on our website.

Nutrients with a trend of increasing soil test levels imply that past deficiencies are being corrected. Some of the nutrients that show this in the region are phosphorus, potassium, soil pH, and sulfur. Sulfur had a significant drop (over 15% since the turn of the century) which may be related to the Clean Air Act of 1990. Sulfate levels in soils have dropped significantly since 1990 resulting in sulfur deficiencies. Good management of this effect is apparent over the last four years as this deficiency is being addressed.



Nutrients with a decreasing trend imply that these nutrients are being mined from soils, and are not being replenished fast enough. Some of these

nutrients are calcium, zinc, and boron. Additional testing for these nutrients seems justified, particularly in fields that have not been tested for boron or zinc. Alternatively, adding zinc and boron to starter fertilizers could have a positive influence on yield.



Although these trends exist in soils in the Great Lakes region, they may not be indicative of your fields or those managed by your growers. More localized data needs to be evaluated in a similar manner. This same type of data evaluation can be accomplished on a field level using database software. Our latest version of SoilTrak[®] comes with several new report forms that help to graphically display trend lines of nutrients over time.

Another report available in SoilTrak[®] displays the variability of nutrients in a field, which can be used to relate yield levels with nutrient status. Once again, though, a single soil test only represents the nutrient status of a field at the time the sample was collected. It's important to follow up at regular intervals with additional soil tests in order to establish dependable trends. Supplementing this regular schedule with diagnostic samples of both soil and plant tissue to pinpoint problem areas in fields will fill in voids of knowledge for a field.

Plant tissue monitoring can also link the nutrient levels of the crop to other growing conditions. All of these tools are critical in assuring healthy, fertile soils and maximum crop production.

Meet Vicki Piebenga

Along with our regular staff of 8 lab technicians, the Agricultural Department also has several employees who only work on a temporary basis during our busy seasons. Coming from a variety of backgrounds, and with assorted reasons for working part-time, they return, year after year, and step back into position for another season. Vicki Piebenga worked her first Fall season in 2001, and has been back each Spring and Fall ever since.

A student for the last two years, Vicki hopes to get her Certification as a Medical Assistant in another 10 months. However, she is also a freelance artist and a graduate of the Ringling School of Art. Pictured here with the mural she painted for our reception area, she says she has drawn since she was old enough to hold a pencil and will continue to paint even after she reaches her goal of working in a clinic.

When asked what she likes to do in her spare time, she replied, "I think that's when I sleep." Then she added that she paints for herself, and loves the outdoors, even if it's just mowing the lawn. She also loves to spend time with her "kids", three Dachshunds, Rosie, Sadie Mae, and Gabe, who sing to her in the morning.



Soil Probes – Tools of the Trade

A good soil probe is an essential tool in the soil sampling process. With the fall soil sampling season looming, it is time to make sure that your soil probes are ready for action. Make sure they are clean and free of rust, which could cause sample contamination. Repair or replace damaged probe tips.

If you need a new soil probe, there are several probe styles available. We stock Oakfield probes, but there are several other suppliers (see below) that may better fit your needs. Please let us know of other sampling equipment sources so we can add them to this list.

Hand Probes

AMS

800-635-7330
www.ams-samplers.com

Clements Associates (JMC)

641-792-8285
www.jmcsoil.com

Halltech Environmental (Nematode Sampler)

519-766-4568
www.htex.com

JBK Manufacturing (Hoffer Tube)

937-426-8100
www.soilsampler.com

M&M Supply Company (KHS)

641-357-4243
showcase.netins.net/web/soilprobe

Oakfield Apparatus

920-583-4114
www.soilsamplers.com

Powered

Concord Environmental Equipment

218-937-5100
www.ceesoilsample.com

Giddings Machine Company

800-611-0404
www.soilsample.com

Linco Equipment Company

800-322-7156
www.linco.com

Ten Essentials of Sample Submission

Samples submitted to us represent a significant time and labor investment on your part. Below is a list of important considerations when sending samples to us. Following these will help assure your samples arrive in good condition and that we can efficiently process them.

1. Use appropriate sample containers. Soil samples in paper envelopes and liquid samples in ziplock bags may open and be lost in shipment. We can provide you with the correct bags, bottles and boxes.
2. Send a sample that is representative of the material you are testing. Very small and extremely large volumes of samples may affect the analysis results.
3. Clearly mark all sample containers with the sampled identification. Make sure all sample containers are closed and securely fastened. If a sample can spill... it will.
4. Include a sample submittal form that lists all of the sample information, reference information, tests requested, special information and your account number. Submittal forms can be found at www.algreatlakes.com, or you can contact the laboratory.
5. Pack your box carefully. Using the sample submittal form as your packing order can help you identify when a sample is missing before you ship the box. Be sure to include the sample submittal form before sealing the box.
6. Use a shipping box that's the right size. Small samples packed in large boxes can bounce around and be damaged in shipment. Pack open spaces with crumpled newspaper.
7. Use a shipping box that's rated for the weight that you're shipping. We receive boxes which have broken apart from the weight of the samples.
8. Avoid shipping overweight sample boxes. Protect your back – and ours.
9. Make sure your return address is on the shipping box – even if it's inside one of the box flaps. This can help determine who to contact in case of a problem.
10. If you are shipping samples in multiple boxes, mark the boxes 1 of 3, 2 of 3, 3 of 3... this helps our technicians sort out your boxes, and will help us determine if a box is missing in shipment.



Soil Fertility Workshops

Following are dates and locations of our 2004-2005 Soil Fertility Workshops. Registration forms with further information will be mailed later in the year. Please contact us if you have any questions.

November 30	DeKalb, IL	January 4	Marysville, OH	February 8	Dayton, OH
December 2	Champaign, IL	January 6	Kokomo, IN	February 10	Columbus, IN
December 7	Plymouth, IN	February 1	Flint, MI	February 15	Fort Wayne, IN
December 9	Tiffin, OH	February 2	Kalamazoo, MI	February 16	Fort Wayne, IN

2004-2005

Tradeshows & Meetings

We will be exhibiting at several upcoming tradeshows and meetings. Please attend and visit with us.

2004

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| Sep 16-17 | N-VIRO Operators' Workshop, Auburn, IN |
| Oct 12 | Ohio Water Environment Association
Biosolids Conference, Columbus, OH |
| Nov 15-17 | Indiana Water Environment Association
Annual Conference, Indianapolis, IN |
| Dec 2-3 | Great Lakes By-Products Management
Association Annual Conference, Chicago, IL |
| Dec 7-9 | Great Lakes Fruit, Vegetable & Farm
Market Expo, Grand Rapids, MI |

Report Styles

Is your report format meeting your needs? We have several "standard" report styles and can also create customized reports. Contact us for more information.

2005

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| Jan 10-12 | Michigan Agri-Business Association
Winter Conference, Lansing, MI |
| Jan 18-19 | Mid-America Ag Show, Indianapolis, IN |
| Jan 18-20 | Fort Wayne Farm Show, Fort Wayne, IN |
| Jan 18-20 | Wisconsin Fertilizer and Chemical
Association Annual Meeting, Madison, WI |
| Jan 24-26 | Illinois Fertilizer and Chemical
Association Annual Conference, Peoria, IL |
| Jan 24-26 | U.S. Composting Council, 13th Annual
Conference and Trade Show
San Antonio, TX |
| Feb 15-16 | Wisconsin Potato and Vegetable Growers
Association Industry Show,
Stevens Point, WI |
| Feb 23 | Indiana Water Environment Association
Annual Biosolids Conference,
Indianapolis, IN |
| Mar 4 | Michigan Water Environment Association
Annual Biosolids Seminar, Claire, MI |
| Mar 15-17 | Illinois Water Environment Association
Annual Conference, Rockford, IL |
| April 17-20 | Water Environment Federation Residuals
and Biosolids Annual Conference,
Nashville, TN |

www.algreatlakes.com



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