NEWS REPORT
A & L GREAT LAKES LABORATORIES, INC. FALL 2003

List of Contacts at A&L Great Lakes

Agronomy:
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Sharon Topp & Shawn Tinnel

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GPS Mapping:
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Randall Warden & Greg Neyman

Soil Trak:
Randall Warden, Greg Neyman & Dan Kite

Feed Testing:
Lois Parker & Randall Warden

Water Analysis:
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Pesticide Residues:
Keith Henley & Dan Kite

Fertilizer Analysis:
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Compost Analysis:
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Gardens & CCA Treated Lumber

Chromated copper arsenate (CCA) is a chemical preservative used to treat and preserve lumber intended for outdoor use such as playgrounds, decks, and landscape timbers. Unfortunately, there is concern that garden plants in close proximity to treated lumber could take up these trace metals, possibly with harmful effects.

Several studies have shown that arsenic, chromium, and copper leach from the CCA-treated lumber when it comes in contact with water, soil and/or compost. The amount leached depends on several factors:

- Surface area – Smaller pieces will lose a higher percentage of the CCA metals due to their greater surface area.
- pH – Lower pH of soil, compost or water will result in greater leaching.
- Organic matter – Compost and similar materials contain organic acids that can increase the loss of CCA metals. However, organic matter strongly binds metals, reducing their solubility.

There is little direct research on plant uptake of trace metals leached from treated wood. Plants vary in their uptake and movement of metals to stems, leaves and fruits. Most metals remain in the roots, with limited movement to edible portions above ground. Notable exceptions to this are leafy green vegetables (spinach, lettuce, etc.).

Although the plant and human health risks from garden uses of CCA-treated lumber appear to be small, the Environmental Protection Agency (EPA) recently announced a "voluntary" decision by the wood preserving industry to phase out wood preservatives that contain arsenic that are destined for consumer use. There will be a phase-out period and after January 2004, EPA will not allow CCA products to be used in residential situations.

Source: *Garden Use of Treated Lumber*, CAT UC173, Penn State University

Which Fields Need to be Sampled?

Our **Soil Sampling History Report** can help make the soil sampling process more efficient. It helps identify fields that were previously sampled, which 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.

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AGRONOMIC REVIEW

Phosphorus Availability and Flooded Soils

Phosphorus (P) deficiency is a frequent problem when soils have been flooded for an extended time. This was noted on a wide scale after the Mississippi River Valley floods of 1993. Research following those floods helped provide a better understanding of the problem and some management suggestions.

Floods can result in significant soil changes. Areas along streams can lose soil due to erosion, or have soil deposited. In either case, it is a "new" soil from a management standpoint.

Standing water results in significant soil chemical changes due to the lack of oxygen. Soil pH can rise, microbial populations can be greatly reduced, and soil P can be changed to less available forms.

The influence of flooding on beneficial soil microorganisms, such as vesicular arbuscular mycorrhizae (VAM) is of particular concern. These common fungi assist in nutrient uptake, especially P, by infecting and colonizing plant roots. In exchange for carbon, they help solubolize soil P and help bring P and other nutrients into the plant. They need living plants to survive and, when flooding conditions kill the hosts, their population greatly diminishes. The next crop grown may suffer from P and other nutrient deficiencies because of low VAM populations.

How should flooded soils be managed from a nutrient standpoint? Soil testing is an important first step, since many soil characteristics may have changed. Broadcast P at normal rates based on the soil test may not meet crop P requirements. It is suggested that an additional amount of P (40-60 lbs/A P_2O_5) be banded as a starter, especially on lower testing soils. The following year's fertilizer applications should not need the additional P application as VAM populations usually recover during the next growing season.

Meet Keith Henley

Keith Henley, Jr. has been the manager of our Environmental Division since 1992, and is one of our people who have received more than a career from A & L Great Lakes Laboratories.

Keith worked in the Fertilizer and Pesticide Labs while he was going to college. After graduating from Purdue with a degree in Agronomy, he joined the Organic Department analyzing pesticide residues. Fortunately he looked up from his projects long enough to realize that his future wife, Megan, was working next to him.

Keith recognized the growth opportunities available to him when he joined the Environmental group in 1990. He quickly learned about new instrumentation, and mastered specialized techniques while writing and developing new methods on the GCs and Mass Spectrometer. When the Organic and Environmental groups were merged in 1992, Keith was given the challenge of supervising the new department.

Keith and Megan have two children, Addie (10) and Kent (8) who occupy most of their time. Keith is coaching a soccer team and his family enjoys being active in their church. When Keith needs to get away from everything, he enjoys turkey hunting and fishing.

Keith enjoys talking with Environmental clients, and helping them with their analytical needs. If you have any questions about the Environmental Division testing capabilities, please feel free to contact Keith.

Warden Named to Soil and Plant Analysis Council Board

The Soil and Plant Analysis Council, Inc. (SPAC) is an international organization of educators, scientists and industrialists who are committed to advancing nutrient analysis of soil, plant, water, and manure. The SPAC focuses on methods and technologies for laboratory analysis that play a vital role in profitable and environmentally friendly management of plant nutrients and soil amendments. The SPAC was instrumental in helping establish the North American Proficiency Testing Program (NAPT), the leading laboratory proficiency testing for agricultural analyses.

A & L Great Lakes Laboratories is an active participant in SPAC activities and programs. Randall Warden, Director of Client Services, was recently appointed to the SPAC Board to represent commercial laboratories.

Soil Fertility Workshops Growing

The number of Soil Fertility Workshops offered this year has been increased due to growing interest. Our commitment is to make the workshops a good educational experience by continuing to update the materials and presentations.

Certified Crop Advisors (CCA's) can earn continuing education units (CEU's) for their participation.

Following are the dates and locations of our 2003-2004 Soil Fertility Workshops. Registration forms with further information will be mailed later in the year. Please contact us if you have any questions.

December 9	**Ottawa, OH**
December 11	**Englewood, OH**
January 6	**Birch Run, MI**
January 8	**Grand Rapids, MI**
February 3	**Plover, WI**
February 5	**Rockford, IL**
February 17	**Vincennes, IN**
February 19	**Normal, IL**
February 24	**Lansing, MI**
February 26	**Fort Wayne, IN**

Compost Seal of Testing Assurance Program

A & L Great Lakes Laboratories is one of four labs in the US participating in the 2003 United States Composting Council's (USCC) Seal of Testing Assurance Program (STA).

Composters wanting to participate must join the USCC and then sign up for the STA program. Compost samples are submitted to an STA laboratory, which analyzes the compost for specific parameters using the Test Methods for the Examination of Composting and Compost. If the compost passes the health and safety standards the compost is issued a Seal of Testing Assurance certificate which can be used as a marketing tool by the composter.

Benefits of joining the STA Program include:

- Improves image and value of the compost
- Improves end user's field results
- Promotes customer-oriented composters
- Improves customer satisfaction
- Provides a competitive advantage over non-STA compost products
- Becomes an internal quality control program for composters
- Standardizes laboratory test methods used to evaluate compost products

Check the US Composting Council's website for additional information on the USCC and STA Programs at www.compostingcouncil.org or contact Lois at A & L Great Lakes Laboratories.

SoilTrak© 4

SoilTrak© 4 Coming Soon!

SoilTrak© 4, a new version of our soil sampling and soil test data management software, will be released in the next few months. There have been many improvements to the program, but it continues to do what it does best – help make you more efficient.

More details will be available when it is released, but here are some of the significant new features in SoilTrak© 4**:**

- Ability to handle both ppm and lb/A soil test data
- Soil test summary reports – search for trends in data and graphically view and print reports
- Soil testing history report - determine last time fields were sampled
- Multi-user version – can be installed on network

Look for complete information on SoilTrak© 4 in the near future. Please contact us if you have any questions.

2003-2004 Tradeshows & Meetings

We will be exhibiting at several upcoming tradeshows and meetings. Hope to see you there!

2003

Oct 14-16	Central States Annual Forest Soils Workshop, Scottsburg, IN
Nov 17-19	Indiana Water Environment Association Annual Conference, Indianapolis, IN
Dec 2-3	Great Lakes By-Products Management Assoc. Annual Conference, East Lansing, MI
Dec 9-11	Great Lakes Fruit, Vegetable & Farm Market Expo, Grand Rapids, MI

2004

Jan 12-14	Michigan Agri-Business Association Winter Conference, Lansing, MI
Jan 13-15	Fort Wayne Farm Show, Fort Wayne, IN
Jan 20-21	Mid-America Ag Show, Fort Wayne, IN
Jan 20-22	Wisconsin Fertilizer and Chemical Association Annual Meeting, Madison, WI
Jan 26-28	Illinois Fertilizer and Chemical Association Annual Conference, Peoria, IL
Jan 27-28	Wisconsin Potato and Vegetable Growers Association Industry Show, Stevens Point, WI
Mar 4	MWEA Annual Biosolids Seminar, Claire, MI

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