



**Contact Names
at
A&L Canada
Laboratories, Inc.**

President:
Greg Patterson P.Ag. C.C.A.

**Marketing & Technology
Manager:**
Ross Stone C.C.A.

**Agronomy &
Director of Food Safety:**
Ian McLachlin P.Ag. C.C.A.

Laboratory Director:
Robert Deakin B.Sc. C. Chem

Systems Manager:
Jeff Toogood

Corporate Services Manager:
Don Castonguay

Customer Service Manager:
Julie Mollard

Quebec Representative:
Jacques Nault

Maritime Representative:
Emmerson McMillan

**Western Canada
Representatives:**

Darren Bryant, Alberta

Craig Davidson, Manitoba

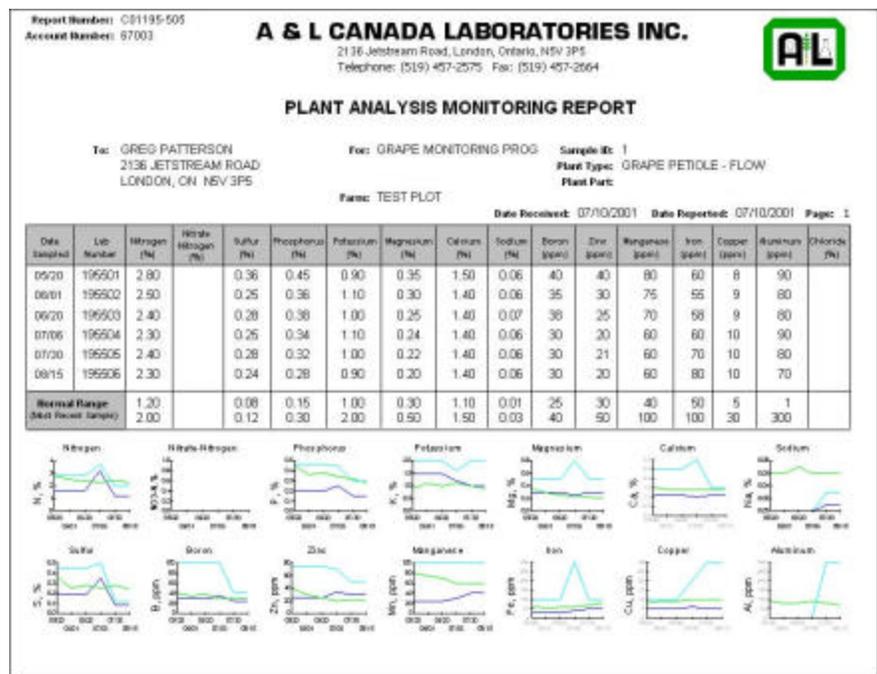
Mandy Huska, Saskatchewan

**A&L Canada
Laboratories, Inc.**
2136 Jetstream Rd.
London, ON
N5P 3P5
Phone: (519) 457-2575
Fax: (519) 457-2664
www.alcanada.com

Welcome to our Summer Newsletter. We hope you find the information timely and helpful. Please don't hesitate to contact us if you have any questions as the summer season approaches. As always, we appreciate your business and look forward to doing all we can for you in the coming months.

It's Tissue Season!

Your customers have invested a lot of time and expense getting their crop planted. Now that it's in the ground, it's time to turn ensure it doesn't "run out of fuel" before harvest. A plant tissue analysis will detect unseen hidden hungers and confirm visual deficiency symptoms. Though usually used as a diagnostic tool for future corrections of nutrient problems, a plant tissue analysis from young plants may allow for a corrective fertilizer application that same season. Over the past few years, our Plant Monitoring Program (PMP) has proven very popular among growers desiring to maximize quality and yield. With the PMP, periodic plant tissue submissions from specific areas are graphed so that trend-lines can be easily identified and enable pro-active action to avoid production limiting levels. PMP enrollment forms, sample bags and submission forms can be obtained by contacting our office at 519-457-2575 or aginfo@alcanada.com. A searchable plant sampling reference guide can be found at www.alcanada.com.





Soil Testing

It is a pleasure (and relief) to enjoy high commodity prices. However, at these levels, management of nutrient dollars is critical, as producers cannot afford to under-fertilize their crop for maximum economic yield. Likewise, with fertilizer prices at current levels and projected to go higher, growers cannot afford to over-apply fertilizer where it is not required. Proper allocation of nutrient dollars has never been more important and the only means of ensuring this is done correctly is by soil testing.

Growers have been well advised of and are aware of input cost increases. However, the magnitude of these increases may not be fully understood until the “sticker shock” many will experience upon receiving their June statements. Asking your customers if they are using soil analysis to manage this high cost environment is the first step towards taking control of the situation and developing a cropping program suited to their needs. Soil sampling provides the necessary information to develop a cost effective fertilizer program, ensuring that existing nutrient levels, previous crop credits and/ or manure applications are considered. The record wheat acreage presents an excellent opportunity to begin the process by testing after harvest.

Your efforts will be further re-enforced by the initiative OMAFRA is undertaking to increase awareness of soil testing. Please note the following:

“Test Before You Invest”

by Keith Reid, OMAFRA Soil Fertility Specialist

Soil testing is the basis for making sound economic and environmental decisions around fertilizer use, but the latest Census of Agriculture would suggest that less than half of the crop acres in Ontario are being sampled regularly. To improve this statistic, OMAFRA is embarking on a promotional program aimed at increasing the number of farmers who are soil sampling, and the number of acres sampled.

In the next few weeks, promotional packages will be distributed to retail outlets, including a counter-top display with a pocket for postcards, a supply of the cards, and wall posters. Please display these prominently where your customers can see them, and ensure you have a supply of soil test mailers available for customers who want them.

We have printed extra postcards, which would be suitable to include as statement stuffers. If you would like a supply of these to include with the June or July statements, please contact Keith Reid.

* re-printed from June 6/08 issue of OABA Agri-Business E- Weekly

A&L Canada Laboratories
2136 Jetstream Rd
London, ON N5V3P5
Tel: (519) 457-2575
Fax: (519) 457-2664
E-mail: aginfo@alcanada.com
Web: www.alcanada.com



Test Before You Invest

Soil Sampling is Key to getting the best returns from your fertilizer dollars!

- Prevent “hidden hunger” that hurts crop yields
- Save money by putting fertilizer only where you need it
- Make better use of manure and legumes
- Be confident your nutrient program is on target



There is no better return on investment than soil sampling.

Turn Over for “How To” Tips

**Agricultural Information Contact Centre:
1-877-424-1300**

E-mail: ag.info.omafra@ontario.ca

**Northern Ontario Regional Office:
1-800-461-6132**

www.ontario.ca/crops

Ministry of Agriculture,
Food and Rural Affairs



A&L Canada Laboratories
2136 Jetstream Rd
London, ON N5V3P5
Tel: (519) 457-2575
Fax: (519) 457-2664
E-mail: aginfo@alcanada.com
Web: www.alcanada.com



Meet the Staff!

Maritime Representative: Emmerson McMillan

With over twenty year's experience in the Ag Industry, Emmerson brings a wealth of experience to his position as A&L Canada's Maritime Representative. Emmerson is responsible for technical & administrative support for our Maritime clientele as well as business development. He can be contacted at 902-856-1110.



A&L Canada Laboratories
2136 Jetstream Rd
London, ON N5V3P5
Tel: (519) 457-2575
Fax: (519) 457-2664
E-mail: aginfo@alcanada.com
Web: www.alcanada.com



*What is the Value of Straw?

At what price is straw better left in the field? The sale of straw should at least recover the fertilizer replacement value, but there are other factors to consider. Some reasons for removing straw may include:

Potential yield reductions caused from difficulties no-tilling into straw residue

Existing fertility levels are high and/ or manure and red clover are returned to the field on a regular basis

Additional field operations are required to uniformly spread or incorporate straw and chaff

High potential return from sale due to low supply and high demand

If selling the straw is the best option, the values of straw types estimated in the following table are based on average nutrient removal. These values do not include organic matter value or micro nutrients.

Straw Type	Grain Yield	Straw N-P-K Removal(lbs/ac)	Straw Value/ac P&K only ⁴	Straw Value P&K only ²	Straw Value/ac N,P&K ¹	Straw Value N,P&K ²
Wheat	75 bu/ac	60-10-95	69.50	2.3¢/lb	123.50	4.1¢/lb
Barley	75 bu/ac	30-10-70	54.50	1.8¢/lb	81.50	2.7¢/lb
Oats	75 bu/ac	25-10-85	63.50	2.1¢/lb	86.00	2.9¢/lb
Rye	50 bu/ac	25-15-70	60.75	2.0¢/lb	83.25	2.8¢/lb
Corn Stover	150 bu/ac	80-33-143	127.00	4.3¢/lb	199.00	5.0¢/lb

Source: Potash and Phosphorus Institute

¹ Commercial Fertilizer Value: N=\$0.90 P₂O₅=\$1.25 K₂O=\$0.60

² Value based on 3000 lbs/ac straw yield; 4000 lbs corn stover

Should Nitrogen Value be Considered in Straw Value?

The nitrogen contained in straw is not returned to the soil the year following the wheat crop. Straw has a high carbon to nitrogen ratio which means that soil nitrogen may actually decrease while the straw is broken down. The nitrogen in the straw is utilized by microbial populations in the soil and becomes an important part of the soil organic matter. However, this process occurs over the longer term. This means that the nitrogen in straw will be more valuable from a soil quality perspective in a field that does not receive regular manure applications or does not have forages or red clover on the rotation.

*reprinted from June 07 Issue of Crop Talk

A&L Canada Laboratories
2136 Jetstream Rd
London, ON N5V3P5
Tel: (519) 457-2575
Fax: (519) 457-2664
E-mail: aginfo@alcanada.com
Web: www.alcanada.com



What's New at A&L?

In the near future you will see the following:

Interactive Viewer – Maps of grower fields and farms derived from shapefiles obtained by the Soil Stewardship Group or provided by yourself will be anchored to corresponding soil data and available online with road over-lays. Also available will be distance and area measurement tools for identification of management zones for downloading onto PDA's.

Revised Manure Report – Available Nitrogen calculation values depending upon season and timing of incorporation will be automatically generated and displayed on manure reports.

Feed Packages – The recent addition of state of the art NIR equipment will expand and enhance our feed analysis package offering. Stay tuned - We intend to introduce our new feed program during the month of July!

We are anticipating a continued increase in testing for the coming season. The Soil Stewardship Group is ready to respond to any soil sampling requests you may have and we don't mind returning to the same farm two or possibly three times to ensure we sample the required soy, corn and other crop acreages, as harvested, prior to fall tillage.

In Closing,

We hope you found this newsletter informative and worthwhile. Please distribute to anyone you feel might be interested in the content. Comments or suggestions you might have for future issues are always welcome. We wish you a very safe and prosperous summer season and, as always, we look forward to doing all we can for you in the coming months.

A&L Canada Laboratories Inc.

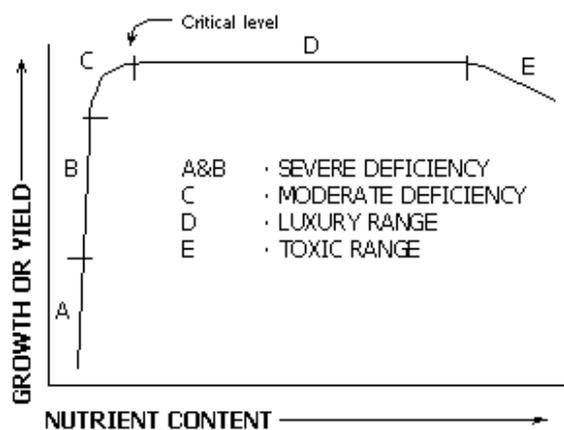
2136 Jetstream Road · London, Ontario · N5V 3P5 · (519) 457-2575



Interpreting Plant Analysis

Plant analysis measures the concentration of nutrients in a plant tissue. The analysis is based on the concept that the nutrient level present is a result of all factors affecting the plant's growth. The relationship between nutrient content and crop growth is indicated in the graph below.

As nutrients are added, growth increases to an optimum level. Nutrients that have been added beyond the critical level will continue to accumulate in the plant tissue without any further yield increase. Continued concentration of nutrients in the plant tissue may eventually cause toxicity.



A&L Canada uses the critical level approach in interpreting plant analyses. The point below which yields decrease or deficiency symptoms appear is the critical level. This approach requires that the plant tissue being analyzed be compared with critical levels that have been predetermined for a particular plant part and stage of growth.

It is very important that soil analysis data and field observations are used in conjunction with a plant analysis report. The more information available, the easier it is to understand the data.

Field Observations

Crop diagnosis requires knowledge of the plant's environmental conditions. Factors that influence crop growth also affect nutrient uptake and concentration in the plant's tissue.

Plant appearance Does the plant appear to be healthy or under stress? Is there stunting or discoloration? Stunted or discoloured plants are often low in one or more nutrients. Nutrient levels usually appear abnormally low or high in severely stunted, nearly dead, or dead plants.

Root Growth Anything that restricts root growth can reduce nutrient uptake. Shallow, compacted, wet, or poorly drained soils result in shallow root systems and therefore poor nutrient uptake. With shallow root systems, deficiency symptoms often occur even though the soil contains adequate nutrients. Insects, diseases, fertilizer burn, and herbicide damage may cause root injury and contribute to reduced nutrient uptake.

Soil Moisture Plants have difficulty absorbing nutrients in dry soil. Therefore, tissue concentrations may be lower than normal. Potassium and other nutrient deficiencies commonly occur in crops during dry years even though the soil test shows adequate amounts.

Air and Soil Temperature Plant growth is slow, root systems are small, and nutrient uptake is low in cold soil. Low temperatures may cause deficiency symptoms to appear early in the spring that the plant "grows out of" as the season progresses.

Tillage and Fertilizer Placement Tillage practices will influence soil temperature, moisture, aeration, and will therefore affect nutrient uptake. Fertilizer placement may influence nutrient availability and may, depending upon conditions, either enhance or reduce nutrient uptake.

Hybrid or Variety Root systems may vary among varieties. Those with inefficient or weak roots may show low nutrient uptake under stressful conditions. Uptake and utilization of nutrients may also be influenced by the plant's genetic makeup.

Soil Test Data

Although soil tests estimate the available supply of nutrients in the soil, there is no assurance that the plant can take up these nutrients. Nutrient deficiencies commonly occur because the soil is infertile, but it must be recognized that there are other factors that affect uptake and cause deficiency symptoms to appear.

Soil Test Levels Soil test values do not always agree with nutrient levels in the plant tissue. If root growth is being restricted, it is likely that deficiencies will appear in the plant even though the soil test shows adequate amounts.

The reverse can also occur whereby the soil test shows nutrient deficiencies and the plant tissue shows adequate amounts. Soil tests often indicate low or deficient amounts of sulfur or micronutrients when the plant tissue sample indicates sufficiency. In this case, the plant tissue is a better indicator of nutrient availability than is the soil test.

Nutrient deficiencies are often related to soil pH. Some nutrients decrease in solubility in high pH soils to the point that deficiencies may appear. Manganese and aluminium, on the other hand, become soluble in very acid soils. This may create toxic conditions along with increased concentrations of these elements in the plant tissue.

Interactions High concentration of one element may induce a deficiency of another element. For example, a high amount of phosphorus may cause a zinc deficiency. A high level of potassium may induce a magnesium deficiency. High rates of ammonia nitrogen may reduce concentrations of potassium in the plant.

Sampling Procedure and Condition of Sample

Correct interpretation cannot be made unless proper sampling procedures are followed. The sample must also be in good condition when the laboratory receives it.

Stage of Growth The nutrient concentration that is considered adequate will change as the plant grows and matures. Young actively growing leaves usually contain higher concentrations of nutrients than older leaves.

Plant Part Different parts of plants contain and accumulate varying amounts of nutrients. Generally, upper, recently matured leaves are sampled. It is advisable, however, that sampling instructions be followed for each crop.