A&L Canada Laboratories Inc.

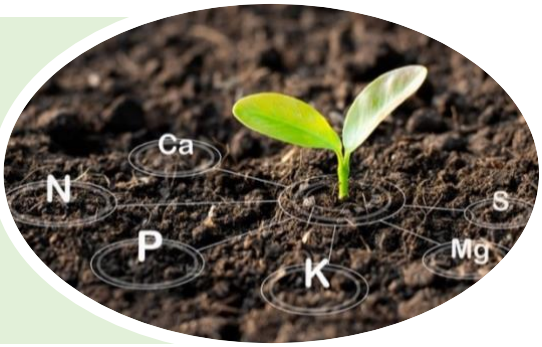
A STEP BEYOND
TRADITIONAL LAB ANALYSIS

APRIL 2021 NEWSLETTER

IN THIS ISSUE

READY, SET, GROW!

A&L is excited to see the arrival of Spring and clients have begun sending soil samples to determine fertilizer rates for the upcoming season. The laboratory has been busy preparing for the new growing season with lots of internal growth, along with adjusting their previous offerings to fit the current times.



READY, SET, GROW!

Spring Soil Sampling

Soil sampling was previously recommended once every four years. However, with weather fluctuations in recent years and the increased yields that farmers have been harvesting, more experts are recommending soil sampling every two years. For example, if you happen to sample during a dry year, your test may indicate you have a high concentration of nutrients in the soil. Using this number for the next three years may lead to underestimating what is needed for that period.

The outlook for 2021 looks positive with improved commodity prices and increased demand from domestic and international buyers. In times like these, it is critical to optimize yield and productivity. To ensure your fertility investment is used wisely, soil testing becomes an even more important management tool. The modest investment in soil analysis can be significant lever in determining the right fertility levels for your target yields.

Plant Nutrient Tissue Testing

Many producers are starting to incorporate plant tissue testing and A&L's Plant Monitoring Program "PMP" into their crop production practices. Tissue testing is a great way to demonstrate how nutrient release from the soil is occurring through the growing season. It is also a valuable tool to help identify potential deficiency areas in fields before they can be visually seen.

This allows growers to apply "timely" applications of foliar nutrient products to save yields and improve quality prior to the deficiency taking hold. It also allows growers to adjust their fertilizer plan for the following season. Reading a tissue report is not as intuitive as reading a soil report. It is necessary to understand local soil conditions, climate and crop physiological stages to gain valuable insight from a plant tissue analysis.

By geo-referencing both your soil and tissue sample locations, growers can also "track" over time how their fertilizer and application practices impact nutrient availability in the plant.

A&L WEBINAR "RE-PLAY"

Best practices for tissue sampling, collection and interpretation will all be reviewed in detail during this 1.5-hour "RE-PLAY" of A&L's Soil Fertility Workshop:

- Plant Tissue Nutrient Analysis and Interpretation
- April 2nd, 2021
- 3:00 PM EST

Register on Zoom

Plant Disease Diagnostics

A&L Canada Laboratories has the unparalleled capacity to perform thousands of tests in-house of a wide variety of crops.

We have developed best-in-class proprietary diagnostics tools that quickly and accurately identify over 400 pathogens to provide crucial insight into what's happening in you crops when you need it the most.

Learn more about A&L's Plant Disease Diagnostics (PDD) at pdd.alcanada.com.

Disease Diagnostics: Next Generation Sequencing

To further support the expansion of A&L Canada Laboratories diagnostic capabilities, the Disease Diagnostics Lab has acquired a Next-Generation Sequencer (NGS) instrument. This will assist in virus and viroid detection as well as many other genomic services clients might need. The new instrumentation will also improve A&L Canada Laboratories industry leading turnaround times in disease diagnostics. This service will be available to clients in the upcoming weeks.

"RE-PLAY" Soil Fertility Workshops Online

Join us during the week of March 29, 2021 for a "RE-PLAY" of A&L's Soil Fertility Workshops:

- Greg Patterson, CCA and Founder of A&L, will be leading the Workshops
- CEUs will be offered in Crop Management for Certified Crop Advisors
- Registration is required with a nominal $25 CAD fee for **each Soil Fertility Workshop Session**
- As each "RE-PLAY" Event will be a recording of the original live session, there will not be opportunity for a live Q&A session.
- If registrants are unable to attend but have paid for the session, they will still receive copy of the video for viewing for 3 days after the session broadcast.

#1: March 29, 1:00 PM EST **pH, CEC, Optimum Nutrient Levels by Soil Type and Variable Rate Applications** Description | Register on Zoom

#2: March 30, 1:00 PM EST **Phosphorous and %P Interpretation** | Register on Zoom

#3: March 31, 1:00 PM EST **Potassium and K/Mg Ratio** | Register on Zoom

#4: April 1, 1:00 PM EST **BORON** | Register on Zoom

#5: April 1, 3:00 PM EST **Sulfur and the Micronutrients** | Register on Zoom

#6: April 2, 1:00 PM EST **Soil Health and Seed Endophytes** | Register on Zoom

#7: April 2, 3:00 PM EST **Plant Tissue Nutrient Analysis & Interpretation** | Register on Zoom

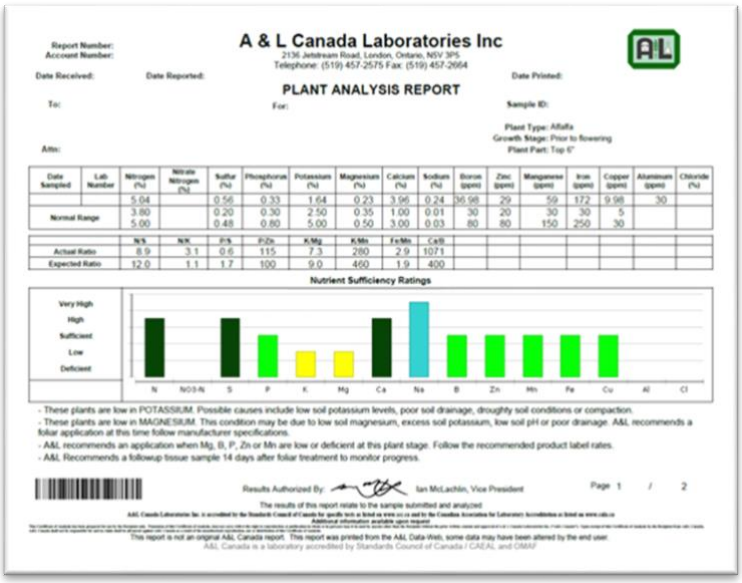
"RE-PLAY" of the Apple/Tree Fruit Webinar

March 31, 2021 at 5:00 pm EST

Clients can register to watch through this Zoom link, or by registering through the Workshops section of our website https://www.alcanada.com/workshops.

AGRONOMY CORNER: Alfalfa Expert Management with Chris Meier

Alfalfa has a relatively high demand for some nutrients compared to other commonly grown crops. Soil tests are the most reliable method for preventing nutrient deficiencies. Visual symptoms can be used to help assess nutrient requirements for future yield. However, by the time visual symptoms appear, the nutrient deficiency may be so severe that significant yield loss has already occurred. *(See below for some photos).*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PLANT ANALYSIS REPORT

Nutrient Sufficiency Ratings

Very High
High
Sufficient
Low
Deficient

N NO3-N S P K Mg Ca Na B Zn Mn Fe Cu Al Cl

- These plants are low in POTASSIUM. Possible causes include low soil potassium levels, poor soil drainage, droughty soil conditions or compaction.
- These plants are low in MAGNESIUM. This condition may be due to low soil magnesium, excess soil potassium, low soil pH or poor drainage. A&L recommends a foliar application at this time follow manufacturer specifications.
- A&L recommends an application when Mg, B, P, Zn or Mn are low or deficient at this plant stage. Follow the recommended product label rates.
- A&L Recommends a followup tissue sample 14 days after foliar treatment to monitor progress.

Results Authorized By: Ian McLachlin, Vice President

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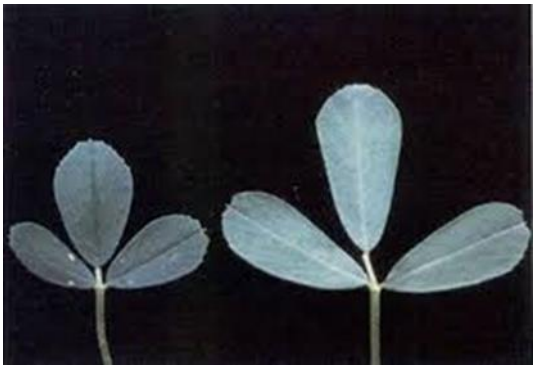
Visual symptoms can also reflect environmental conditions, restricted root growth, disease or, other issues not related to a soil nutrient deficiency.

Plant tissue analysis can determine the nutritional status of the crop before any visual symptoms appear. Combining tissue analysis with a soil test makes for a comprehensive nutrient management system. Tissue testing is useful for assessing levels of sulphur and micronutrients. It can detect nutrient imbalances that are not as easily detected with a soil test.

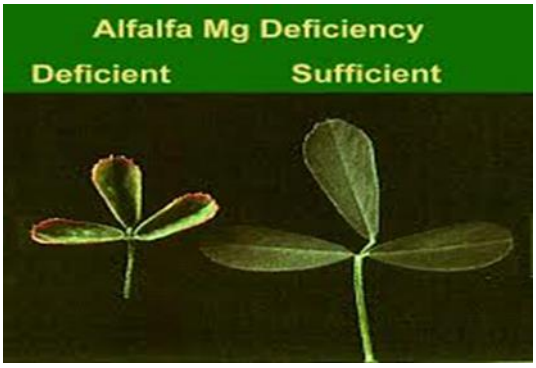
To collect an alfalfa plant tissue sample, gather the top six inches or 15 cm while in the bud to early flower stage. A&L recommends collecting samples from areas of the field that are free from disease, insect damage, drought stress etc. Tissue reports will provide a sufficiency range as to where the nutrients should be, compared to the sample taken.

Potassium Deficiency - Lower leaves of deficient plants are edged with white spots.

Nitrogen Deficiency – Small yellow plants mixed with tall green plants. Lower leaves yellow first.



Phosphorus Deficiency - Leaflets often fold together and the underside maybe red or purplish.



Magnesium Deficiency - Interveinal chlorosis of lower leaves, margins initially remain green.

Boron Deficiency - Yellow colouring turns reddish to purplish between the veins.

Sulphur Deficiency - Leaves turn light green. Symptoms are like nitrogen deficiency.

Site-Specific Soil Sampling and Variable Rate Prescriptions

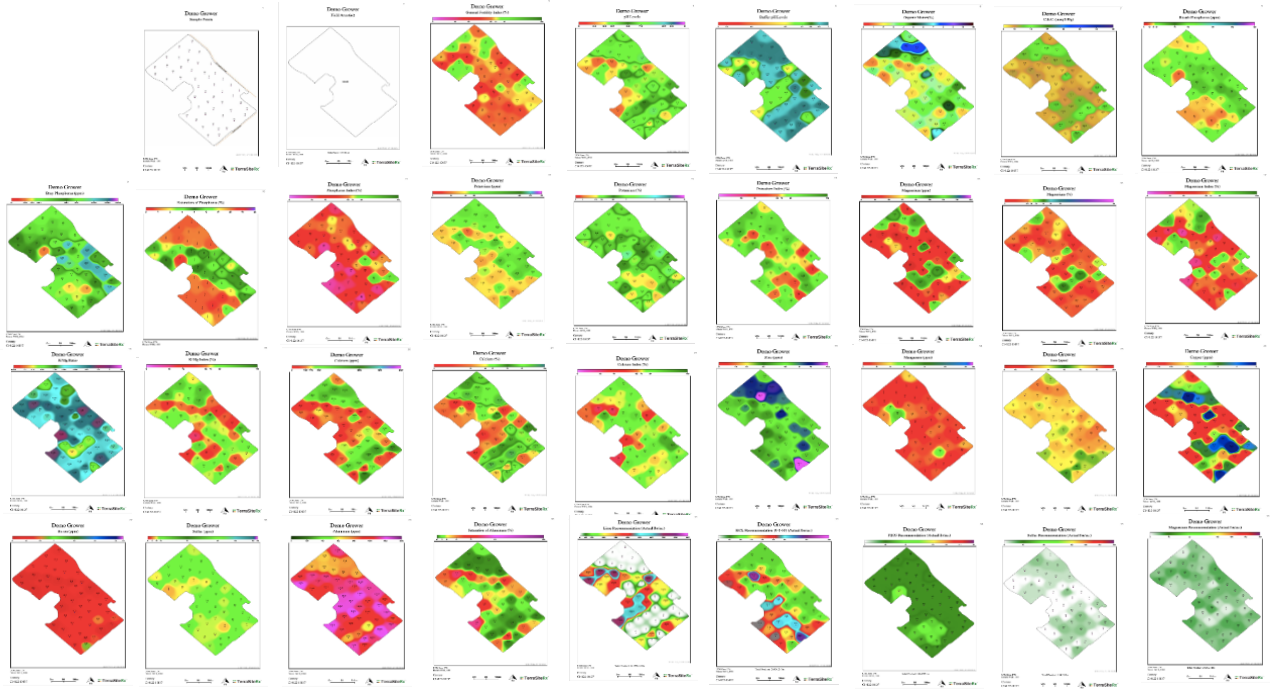
TerraSiteRx™

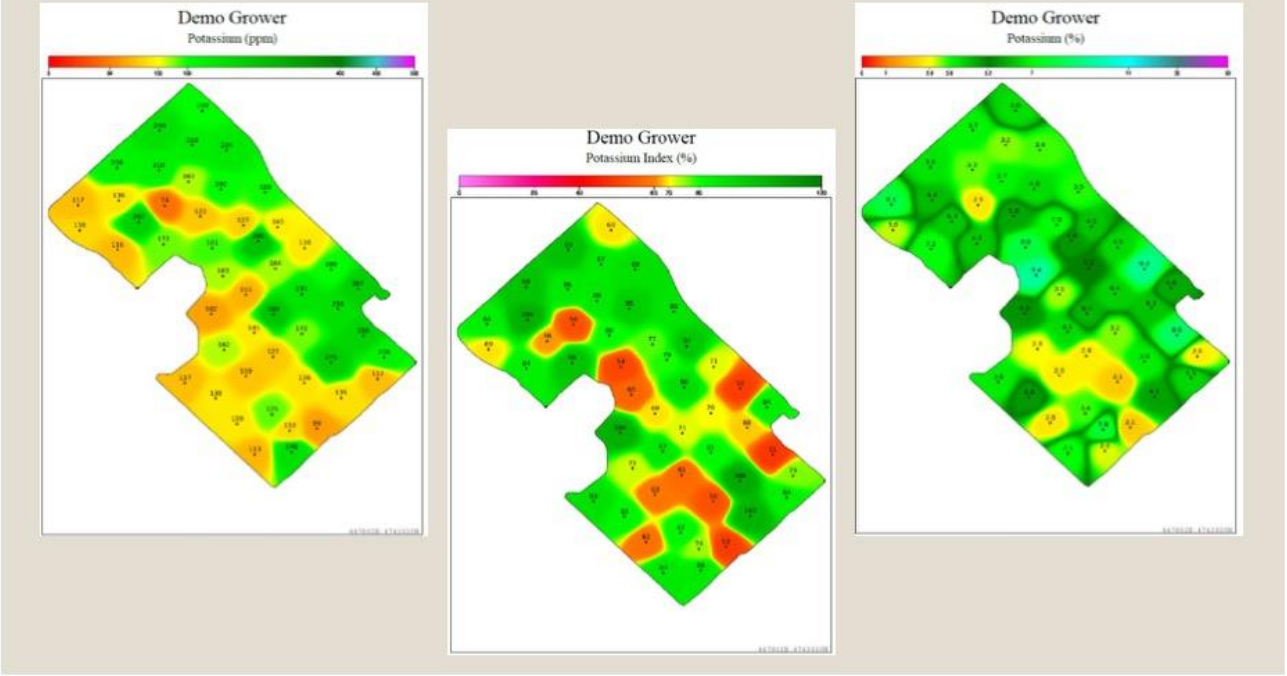
A&L Canada Laboratories has been offering leading edge precision agriculture and technical services to growers and dealerships across Canada for over 15 years. With the latest mapping software our staff can provide a visual representation of your field that is easy to understand and can help identify problem areas. Precision ag, incorporated into your management strategy, has proven to help growers save money and improve crop performance and consistency.

To meet the increasing demand for precision ag services, A&L Canada maintains a full-service GIS/geo-processing centre. Utilizing state of the art mapping software, A&L Canada possesses the ability to generate geo-referenced field boundaries, sampling points and nutrient maps. Yield monitor harvest data, remote sensing data and bare soil imagery, can all be processed, and management zones determined. These management zones or information obtained from site-specific sampling procedures, enable variable rate prescriptions to be written for the precise application of lime and other nutrients.

A&L Canada Laboratories has a wide variety of mapping packages to suit your needs. A&L's Site-Specific Mapping packages produce over 30 nutrient analysis layers allowing retailers and growers to easily act on their precision application plans. Whether you need a general idea of field conditions, or a comprehensive analysis of your entire field with a variable rate fertilizer prescription, we have a service for you.

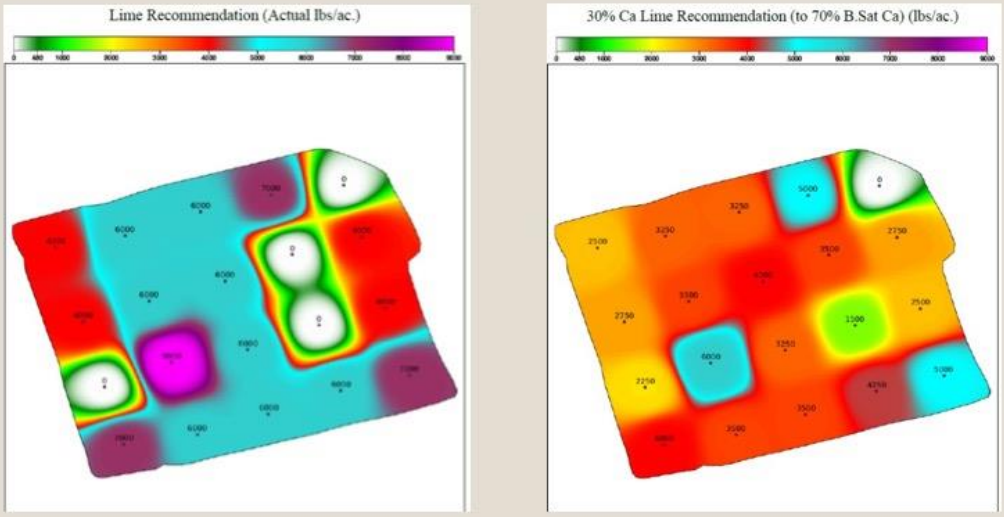
- **30 soil layers to use for analysis**
- **Track nutrient changes over time**
- **Ideal, cost effective way to identify variability across a field**
- **Optimize Nutrient Use and Input Cost for improved farm profitability**
- **Executed Through VR Application Units**





Lime recommendation

Lime recommendations based on buffer pH or % Saturation of Calcium



TerraSiteRx™

To learn more about Site-Specific Soil Sampling, visit www.terrasiterx.com

A&L Canada Laboratories is pleased to have resources available coast to coast to answer your questions and support your 2021 growing needs!

Welcome Ken!

Ken Galloway
Business Development Representative
B.C. & Central Alberta
A&L Canada Laboratories

Ken Galloway Joins A&L Canada Laboratories as Business Development Representative for BC and Alberta

A&L Canada is pleased to announce Ken Galloway will represent the company as Business Development Representative for British Columbia and central Alberta effective March 15, 2021. Ken succeeds Norm Dueck who will shift his focus to development of his own agronomy business. A&L thanks Norm for his many contributions both to the company and its valued clients.

Mr. Galloway is a graduate of the University of Tasmania with a bachelor's degree in Agricultural Science. Ken brings great experience from past roles with multinational companies in the seed, farm supply and horticultural production industries. Ken's agronomy background and passion for the industry makes him well suited to support the clients of A&L Canada Laboratories. Ken is located in Kelowna, BC providing in-field service to clients.

"A&L Canada is launching several new products to support growth and sustainability of the agricultural industry. I look forward to having Ken support our team to bring this next wave of novel services and technologies to our customers," said Nevin McDougall, President & Chief Commercial Officer of A&L Canada Laboratories.

SOIL SAMPLING AND PLANT TISSUE SERVICES WITH DEVERON

Deveron's data collection team will continue to provide tissue testing and soil sampling services for the 2021 season.

This service provides a reliable, turn-key solution for clients who lack time or staff availability to collect samples.

Analysis and Reports are provided through A&L – lab analysis and soil testing with accurate and fast results!

TO ORDER

1. Contact your local Ag Retailer, or
2. Use the A&L Smart Submit App, or
3. Contact the A&L Canada Laboratories Office: call us toll free 1-855-837-8347 or email alcanadalabs@alcanada.com

LATEST NEWS

A&L Canada Labs launches Verified Lawn and Landscape residential division

Participating southwestern Ontario retailers will be carrying A&L's Verified Soil Test Kit for homeowners to obtain their customized 'Your Nutrition Program' Report for a beautiful, eco-friendly lawn. Learn more: www.alcanada.com/news

HEALTHY SOIL HAPPY PLANTS

A&L Biologicals State-of-the-Art Laboratory Expansion

A&L Canada Laboratories has expanded once again! To increase lab capacity and serve clients' growing demands, additional state-of-the-art laboratory space has been acquired for the research division of A&L Biological Inc. This will allow for expansion of A&L commercial services, and dedicated laboratory space for the research activities of the company which is focused on bringing practical bio-based solutions to the agricultural industry. Areas of research and product development include plant health and nutrient uptake, soil health, soil and environmental remediation, molecular diagnostic tools, and plant protection.

Learn more, visit www.albiologicals.com/news

UPCOMING EVENTS

- **Canadian Dairy XPO** **dairyxpo.ca** **April 7-8, 2-21**

Check out the A&L ONLINE "Virtual" website - resources on the topics of SOIL, TISSUE, DISEASE and more! www.alonline.alcanada.com.

Here's to a successful & safe upcoming planting season!

WE ARE HERE TO HELP!

A&L Canada Laboratories Inc.

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