



## A&L Canada Laboratories FEBRUARY 2020 NEWSLETTER

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### VitTellus SOIL HEALTH UPDATE



This past season, A&L Canada Laboratories saw a big upswing in clients using the VitTellus<sup>SM</sup> Soil Health Test. It is very encouraging to see the growing interest in Soil Health and setting benchmarks for future improvement!

### SOME KEY TRENDS WE SAW IN 2019:

- **94% of the soil biological quality tests fell within the “medium to high” soil microbial activity ranges as per the Solvita Soil Health Test.** This means that most of the soils tested at A&L for soil health in 2019 had sufficient populations of microorganisms.

# A&L LABS FEBRUARY 2020 NEWSLETTER

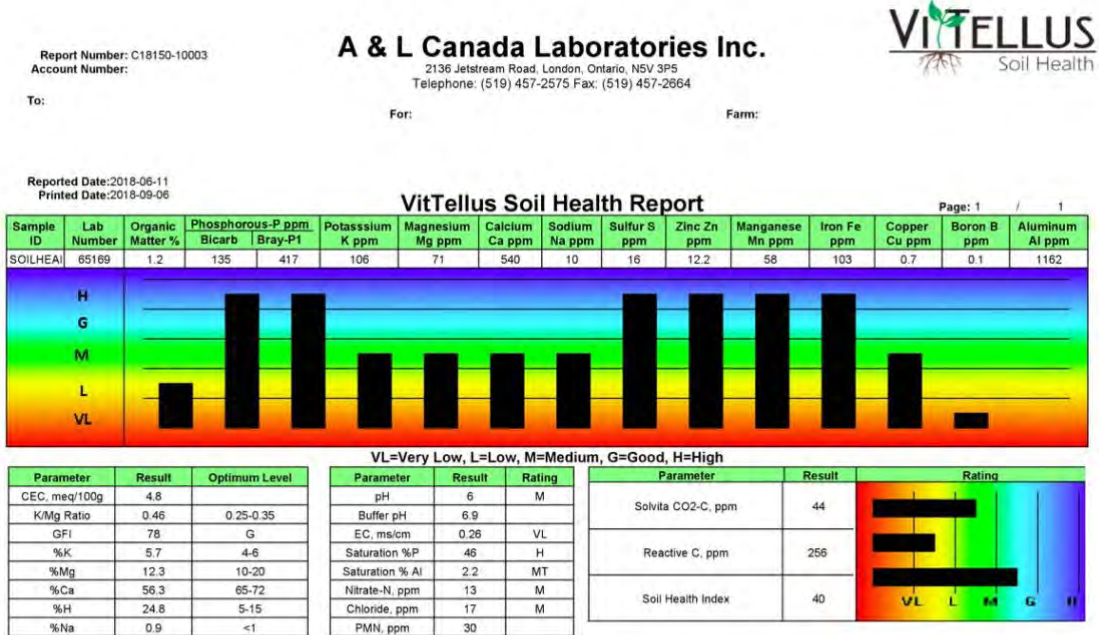


- **78% of the CO2-C (soil respiration) tests fell within the “moderate to high” soil respiration ranges as per the Solvita Soil Health Test.** This means that most of the soils tested at A&L for soil health in 2019 were approaching or at ideal levels and that the soils have active microorganisms interacting with plants.
- **90% of the soil health tests on active carbon were above 500 ppm.** This indicates a trend towards sufficient carbon sources for soil microbes to flourish.
- **73% of samples tested for soil health at A&L had a Soil Health Index of above 30.** The VitTellus<sup>SM</sup> Soil Health Index ranges from 0-60. This means that there is still some work to be done with respect to optimizing nutrient levels to support plant signaling and microbial development. However, A&L soil health clients are on the right track!



Interested in Soil Health? Read the Better Farming Magazine article “Digging into Our Knowledge of The Living Soil” article posted online... <https://www.betterfarming.com/digdeep/digging-into-our-knowledge-of-the-living-soil>, or visit [www.VitTellus.com](http://www.VitTellus.com).

Better yet - try a VitTellus Soil Health Test in Spring of 2020 to start benchmarking your fields.



The results of this report relate to the sample submitted and analyzed. No guarantee or warranty concerning crop performance is made by A & L. Results Authorized By: Ian McLachlin, Vice President  
A&L Canada Laboratories Inc. is accredited by the Standards Council of Canada for specific tests as listed on [www.scc.ca](http://www.scc.ca) and by the Canadian Association for Laboratory Accreditation as listed on [www.cala.ca](http://www.cala.ca)



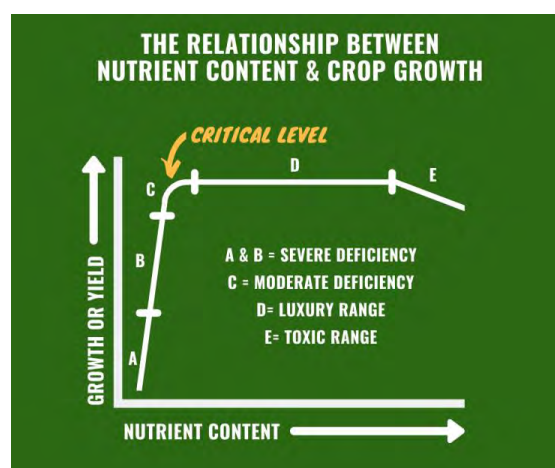
## IMPORTANCE OF USING A&L TISSUE SAMPLING

Modern agriculture production strives to achieve the highest potential yields, and qualities. Additionally, producers wish to control input costs, and increase profits from their yields. To satisfy these demands, plant analysis has become a valuable plant monitoring tool.

Top quality and profitable yields, unfortunately, don't just happen. Many factors need to be considered such as adequate moisture and fertility, proper plant populations, adapted varieties for disease resistance, insect control and the list goes on.

One of the more important factors affecting crop yields is the nutrient status of the plant or the flow of nutrients to plant tissues during the growing season. Nutrient status is an "unseen" factor in plant growth, except when deficiencies become so acute that visual deficiency symptoms appear on the plant.

Plant populations can be counted, and variety names or numbers can be read on the label. Rainfall can be measured with gauges. However, the determination of the nutrient status of these plants requires precision laboratory analysis of the representative plant tissue sample during the growing season.



## HOW CAN TISSUE ANALYSIS HELP?

A plant tissue analysis will measure the nutrient status of the crop during the growth stage and detect unseen "Hidden Hungers". Plant tissue analysis can also supply information to confirm visual deficiency symptoms.

Though usually used as a diagnostic tool for the affirmation of visible nutrient problems, an in-season plant tissue monitoring program from the onset of plant growth will allow for a corrective fertilizer application prior to visible nutrient deficiencies and minimize the loss of potential yield. The earlier the deficiency is detected in the season the greater the success of correcting the deficiency before it becomes yield and or quality limiting. **There is no tool that provides a grower with more information than a well-collected tissue sample!**

Combined with data from a soil analysis, a tissue analysis is an important tool in determining proper fertilizer applications and supplementations to balance the nutrient requirements of the crop.



A complete plant tissue analysis from A&L Canada Laboratories will identify the nutrient status of the following elements at strategic times during the growth stage of the plant: Nitrogen, Iron, Sulfur, Aluminum, Phosphorus, Manganese, Potassium, Boron, Magnesium, Copper, Calcium, Zinc and Sodium. Once received at the lab, Plant Tissue analysis reports can be returned to clients within **24 hours** allowing for immediate adjustments to foliar feeding programs.

## HOW ARE NUTRIENT RANGES DEVELOPED?

We are frequently asked by clients about how our different crop stage reference ranges are developed. Through A&L Canada in-house research and our extensive data base we are continuously updating and confirming the crops ranges that are supplied in our plant tissue reports. As a member of the Crop Science of America Society we can continuously update and review these crop ranges in our extensive data base. We also have staff regularly reading journal articles regarding nutrient sufficiency and we compare and adjust our ranges where necessary based on this research.

## IS SAP TESTING AN OPTION?

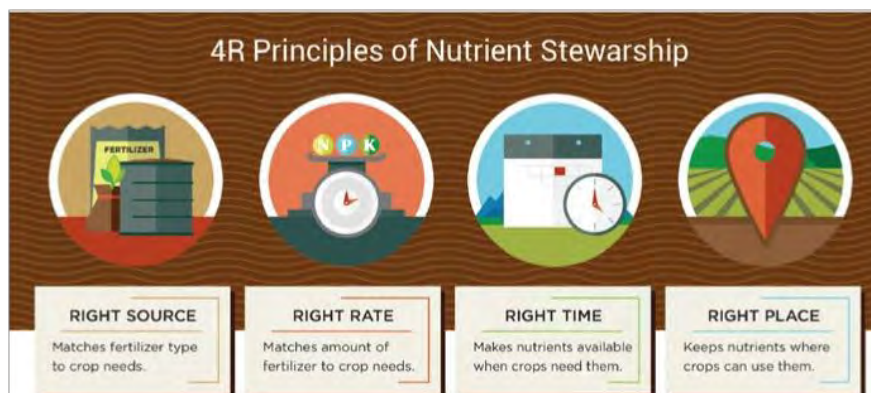
To analyze sap, one would collect the same samples as in tissue analysis but remove the leaflets, chop up the petioles, mix them thoroughly, then squeeze out several drops of sap using a very heavy press. This testing is possible with succulent plants that have high levels of moisture in their leaves, however for finer plant material such as those from traditional cash crops, very little SAP can be collected making an accurate analysis very difficult.

A&L Canada Laboratories Research has shown that SAP testing results can be quite variable and not as consistent a technique as our North American Proficiency Testing (NAPT) validated Tissue Analysis. Variable results combined with turnaround times of 3-5 days or longer make SAP testing not as viable an option.

## PLAN NOW FOR YOUR NEXT CROP!

To optimize productivity of your next crop, plan now to make plant tissue analysis part of your fertility monitoring procedure and enhance your nutrient program. This tissue monitoring data combined with your soil test or media test data will ensure you set your crop up for success.

Contact your input supplier or A&L Canada Laboratories to learn more about our Plant Tissue analysis and plan for success this year! The learn more about interpreting Plant Tissue reports, please refer to our technical bulletin at <https://www.alcanada.com/pdf/InterpPlantAnalysis.pdf>





## SAMPLING SERVICES FROM DEVERON



A&L's partner Deveron UAS is geared up to support you this spring with staff and agents established across Canada and the U.S. Midwest. They are ready to work with you to collect soil samples and in-season tissue samples.

### DEVERON SERVICES:

#### TISSUE SAMPLING:

- Service available across Southern Ontario
- 24-hour guarantee from collection to lab
- Shipments in temperature-controlled environments
- A&L Certified collection specialists

#### SOIL COLLECTION:

- Service available across Canada and U.S. Midwest
- Rapid turnaround times from collection to analysis
- Shipping provided from collection locations directly to A&L
- A&L Certified collection specialists

#### DRONE DATA COLLECTION:

- Service available across Canada
- Multispectral, Thermal, RGB capabilities
- 48-hour turnaround time from capture to data delivery



#### TO ORDER

1. Contact your local Ag Retailer
2. Visit A&L online at [www.alcanada.com](http://www.alcanada.com)
3. Use the A&L Smart Submit App
4. Contact the A&L Canada Laboratories Office: call us toll free 1-855-837-8347; email [ALCanadaLabs@ALCanada.com](mailto:ALCanadaLabs@ALCanada.com)



## A&L HEMP SERVICES

### A&L Expands Scope of Services to Include Hemp

A&L Canada Laboratories Inc. is pleased to announce they have expanded their scope of analytical services for production of Hemp. A&L is fully equipped and staffed for complete analytical testing of Hemp including heavy metals, pesticide testing, cannabinoid profile as well as traditional testing for soil and plant tissue nutrient levels with agronomic guidelines.

A&L has developed a suite of hemp analysis and agronomic services to support existing and new producers grow a high value crop:

- Analytical Testing of Hemp for CBD production
- Disease Diagnostics
- Heavy Metal and Pesticide residues
- Soil Testing
- Plant Tissue Monitoring Program
- Hemp Fertilizer Guidelines

A leading Health Canada licensed cannabis testing laboratory for over three years, A&L has been providing analytical services – Health Canada release testing, terpenes, and disease diagnostics - for cannabis to clients across Canada.

“A&L’s capabilities and experience in both cannabis and agriculture, naturally extends into Hemp production,” said Greg Patterson, CEO and Founder of A&L Canada Laboratories. “A&L has become a leading service partner to the Cannabis industry which allows Hemp producers to have full confidence in our extensive services and capabilities in support of producing a high yielding, profitable crop”.



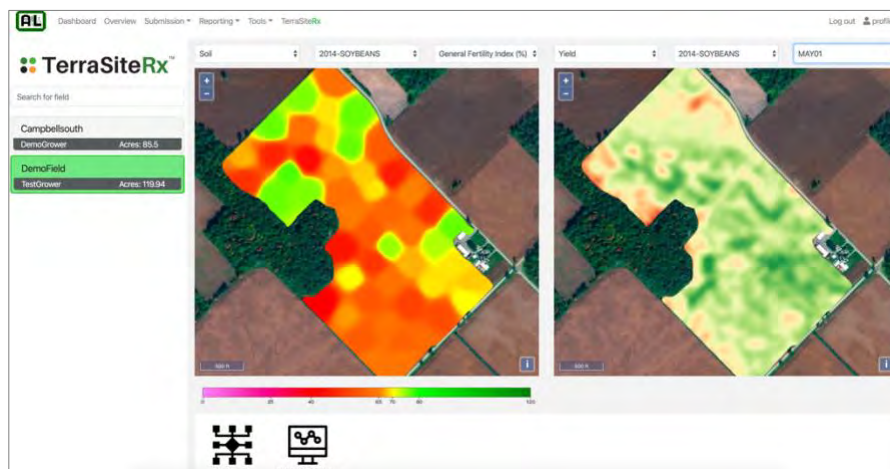
As more producers across the country explore opportunities with Hemp production, A&L Canada is prepared and ready to support their production needs. For more information, please go to [www.alcanada.com/hemp-analysis](http://www.alcanada.com/hemp-analysis).



## PRECISION AG UPDATE

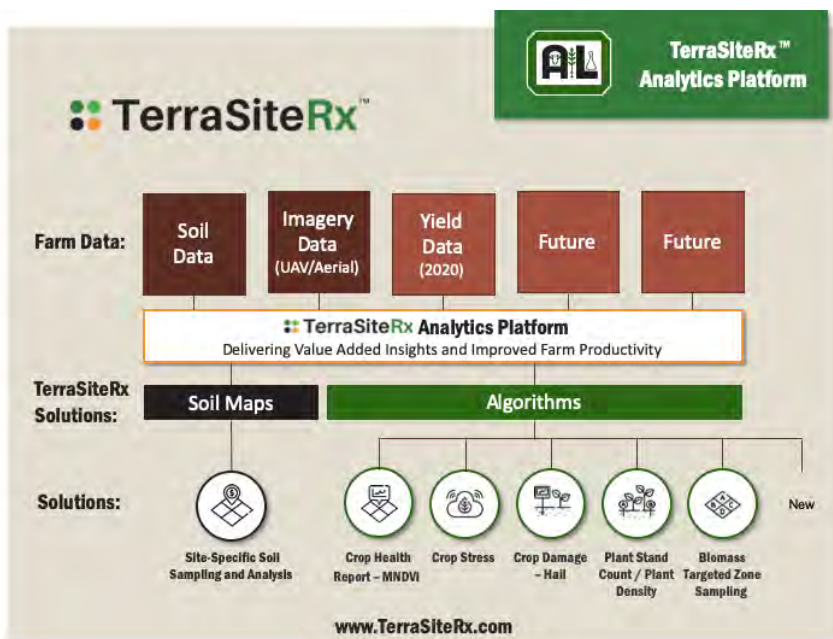
Brandon Yott, Strategy & Business Development Manager, Precision Ag Technologies, A&L Canada Laboratories [byott@alcanada.com](mailto:byott@alcanada.com)

TerraSiteRx™ is A&L's farm data platform to help clients proactively manage their crops and make better-informed decisions to drive business profitability. The TerraSiteRx™ Analytics platform uses field research driven algorithms, including Crop Health (MNDVI), Plant Count, Stress Map, Crop Injury, Biomass Estimation and Targeted Soil Sampling, to derive various field and crop biophysical conditions.



A new feature, available for this season allows growers to connect to their MyJohnDeere Operations Center, so that they can easily export their yield data into the TerraSiteRx™ platform directly from their MyJohnDeere account.

**NOTE: TerraSiteRx™ algorithms will still be available on a free trial basis for this season**



Future plans - the precision agriculture research and software team are actively developing new tools, functionality and an enhanced user interface that we hope to launch in the near future – we will keep you posted!

To learn more about A&L's TerraSiteRx™ visit [www.TerraSiteRx.com](http://www.TerraSiteRx.com).



## 2020 SOIL FERTILITY WORKSHOPS UPDATE

The February Level 1 and Level 2 Soil Fertility Workshops in London, Ontario were presented to a packed house of ag retailers, crop consultants and producers. The A&L Soil Fertility Workshops are a great resource helping clients understand the principles of soil fertility to achieve efficiency and maximize crop production.



## UPCOMING SOIL FERTILITY WORKSHOPS

### London, Ontario

- LEVEL 3: March 11, 2020 - Four Points Sheraton

### Regina & Saskatoon, Saskatchewan

- LEVEL 2: March 18 & 19, 2020 - Courtyard by Marriott, Saskatoon

Visit [ALCanada.com](http://ALCanada.com) to register [www.alcanada.com/content/seminars/seminars-overview](http://www.alcanada.com/content/seminars/seminars-overview)

Spaces are limited – Registration for each event includes handout/publication and lunch







## UPCOMING EVENTS AND CONFERENCES

MAR 4-6	London Farm Show	<a href="http://www.londonfarmshow.com">www.londonfarmshow.com</a>	London, ON
MAR 11	A&L Soil Fertility Workshop: LEVEL 3 - LONDON	<a href="http://www.alcanada.com/content/seminars/seminars-overview">www.alcanada.com/content/seminars/seminars-overview</a>	London, ON
MAR 17-19	Ottawa Valley Farm Show	<a href="http://www.ottawafarmshow.com">www.ottawafarmshow.com</a>	Ottawa, ON
MAR 18-19	A&L Soil Fertility Workshop: LEVEL 2 - SASKATOON	<a href="http://www.alcanada.com/content/seminars/seminars-overview">www.alcanada.com/content/seminars/seminars-overview</a>	Saskatoon, SK
APR 1-2	Canadian Dairy Expo	<a href="http://www.dairyxpo.ca">www.dairyxpo.ca</a>	Stratford, ON

A&L Canada appreciates the opportunity to speak with stakeholders in the industry about the crop production challenges they face and how A&L can help





## A&L CANADA LABORATORIES CONTACT INFORMATION

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### A&L Canada Labs Social Media

Twitter @ALCanadaLabs <https://www.twitter.com/alcanadalabs>

Instagram @ALCanadaLabs <https://www.instagram.com/alcanadalabs>

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YouTube <https://www.youtube.com/user/ALcanadalabs>

