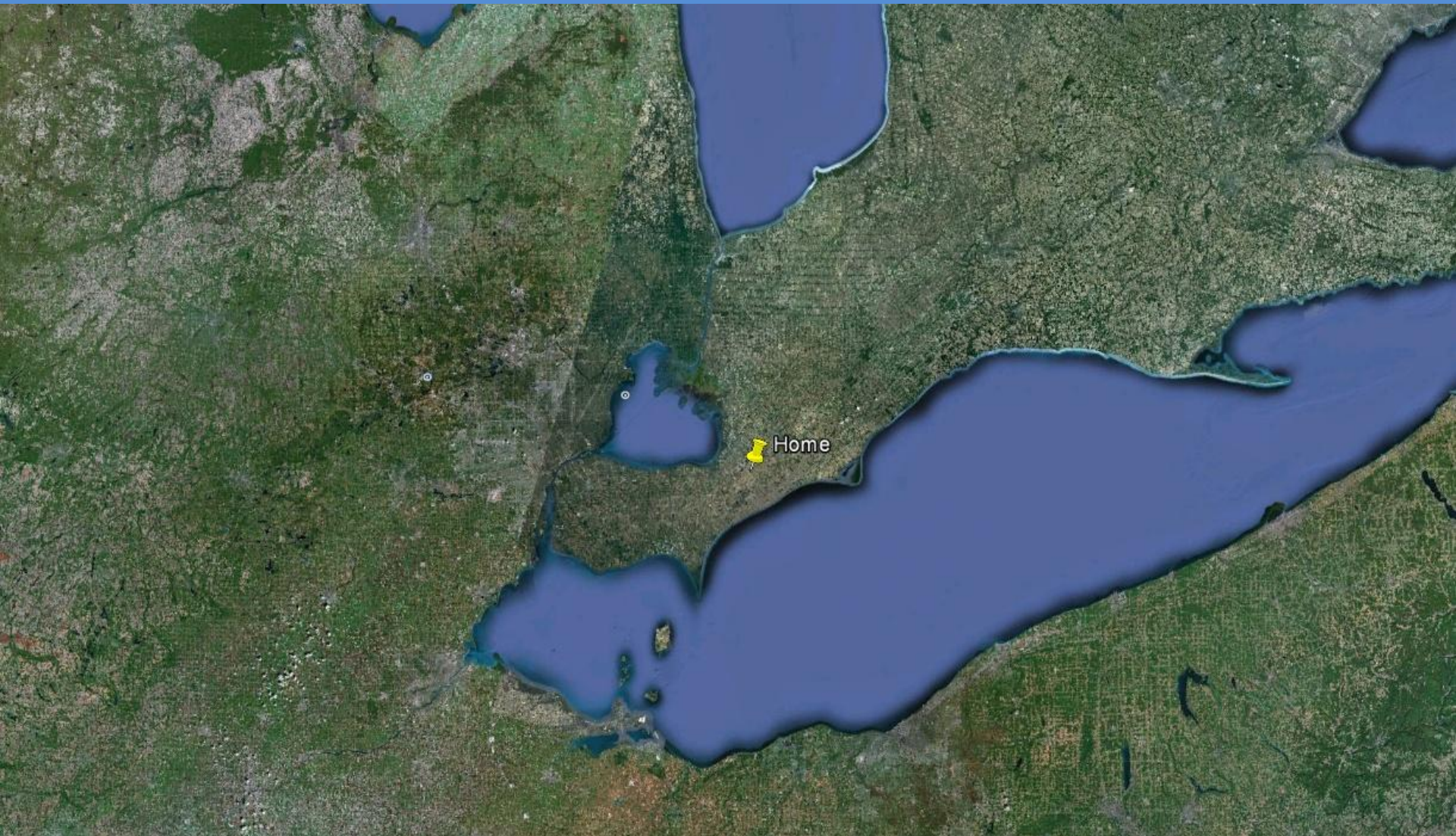




E. Blake Vince
Merlin, ON



Nestled between the Great Lakes



Conserving Farm Land with Cover Crops and the Importance of Bio Diversity

1300 acres

-Corn

-Soybeans

-Winter Wheat










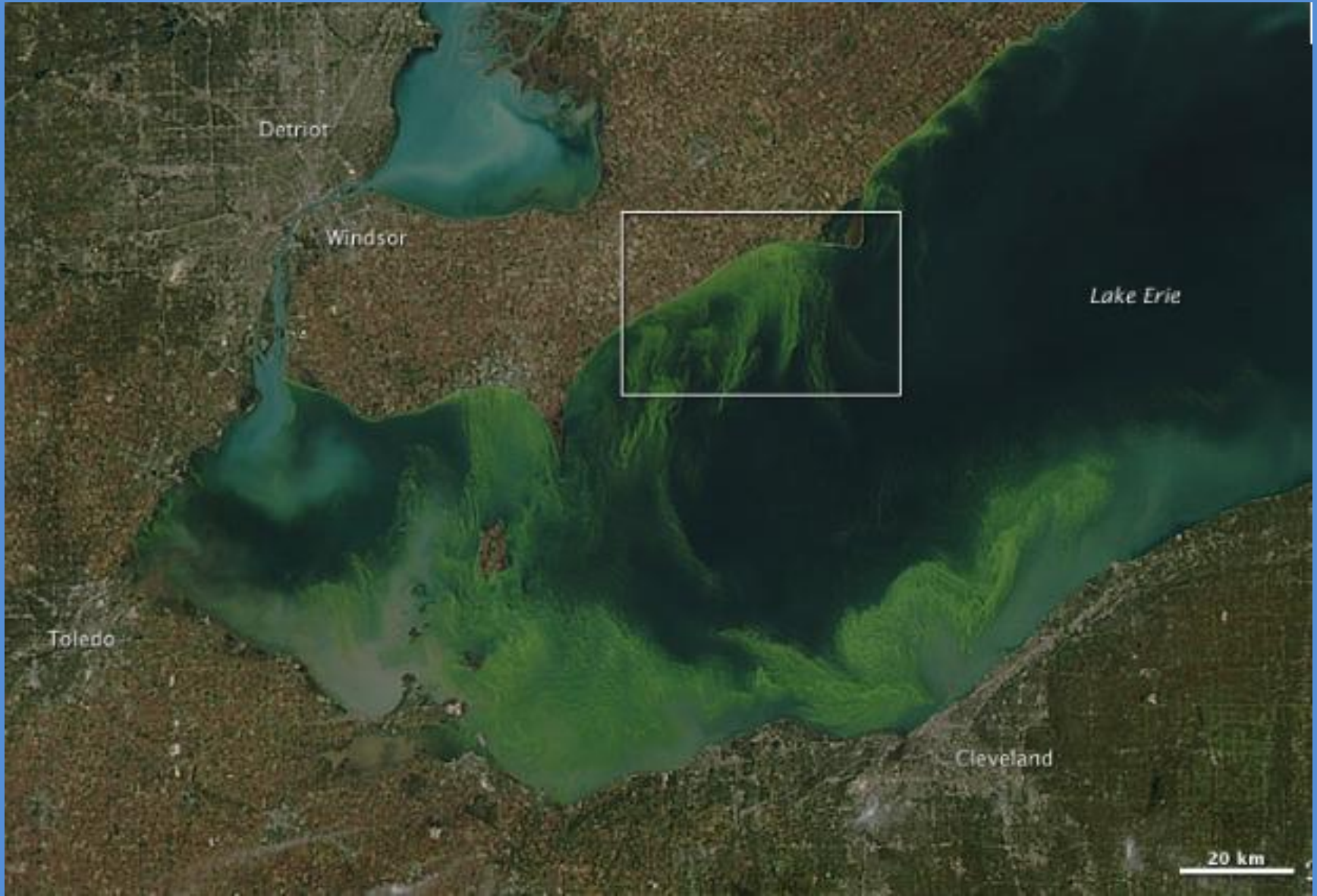
Dr. Christine Jones
– “The liquid
carbon pathway”

Living Roots
capturing
photosynthesis,
increasing soil
organic matter



Stimulating Soil Biology

My scholarship`s motivation



Point Pelee, Southernmost tip of Canada



The new
frontier...



Dr. Dwayne Beck

“What is your native vegetation?”



Thinking about how soils were originally covered.

The Year 2050:
How to feed
9 Billion people??

163.5 bu/acre



Dilemma:

Water: Human consumption versus crop production



Brazil Corn Production

2.7 crops per
year

The Decade of Bio-Diversity

- The UN declared 2011-2020 as the Decade of Bio-Diversity
- This effort is muted in North America because corn is king
- Today, in Canada, there are ~2 Million acres of commercial corn grown
- Monsanto and Dupont are looking at the potential for 1 Million acres of corn in Western Canada

2015: The Year of the Soil

- Technology such as the mold board plow is still being viewed as the icon for soil management.
- Edward Faulkner, author of “Plowman’s Folly” (July 5, 1943). “There is no scientific evidence to support the need for tillage.”
- In 2013, at the Royal Dutchy College in Cornwall, England, Plowing was still on the curriculum for Ag students.

John Landers, OBE Brazilian No-Till Pioneer



The
Compaction
Zone
and
the Fear of
Change

Carlos Crovetto, No-Till Aficionado, Concepcion, Chile



“Friend, it’s all
about *Carvon*”

Carbon – food for the
soil

My Dalai Lama



Incredible
Soil
Aggregates
and valuable
soil armour



The Chilean Landscape

Frederic Thomas, France

Delivering his message from his soil pulpit



Increasing Soil Carbon with Cover Crops and Compost – the fence line comparison



Carbon holds **7**x its weight in water
drought proofing soil

The Confidence of Nuffield







New Holland TG210







- Less Nitrogen
- Zero Tillage
- Zero Erosion, wind, water, solar
- Increased Biological Activity
- Capturing Solar Energy **12** months of the year
- Increased Water Infiltration
- Increased Water Holding Capacity
- Increased “Financial Yield”

Report Number: C14258-50001
Account Number: 05358

A & L Canada Laboratories Inc

2136 Jetstream Road, London, Ontario, N5V 3P5
Telephone: (519) 457-2575 Fax: (519) 457-2664



Date Received: 2014-09-15 Date Reported: 2014-09-16

Date Printed: 2014-09-16

PLANT ANALYSIS REPORT

To: SW. AG PARTNERS-VERITAS
PO. BOX 276
PARKHILL, ON N0M 2K0

For: BLAKE VINCE
FLETCHER, ON
Field: COVER CROP TRIAL
Farm: HOME

Sample ID: 11 WAY

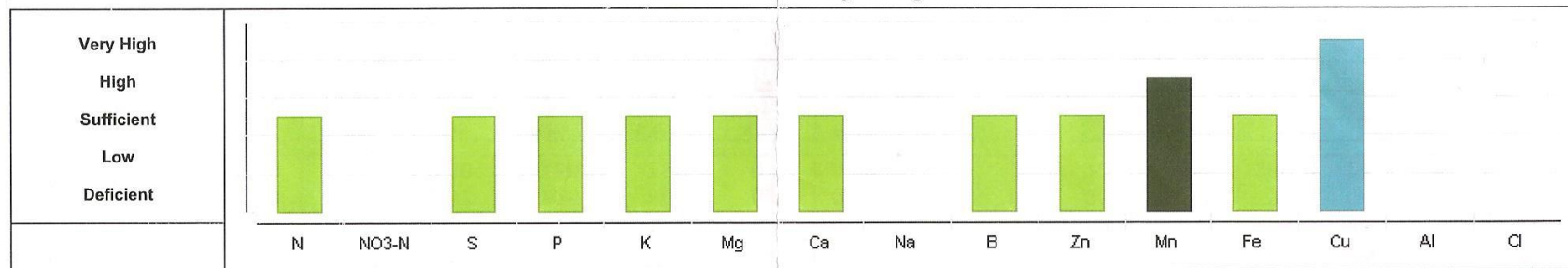
Plant Type: Corn Leaf (Fruit)
Growth Stage: silking
Plant Part: Leaf

Attn: VERITAS

Date Sampled	Lab Number	Nitrogen (%)	Nitrate Nitrogen (%)	Sulfur (%)	Phosphorus (%)	Potassium (%)	Magnesium (%)	Calcium (%)	Sodium (%)	Boron (ppm)	Zinc (ppm)	Manganese (ppm)	Iron (ppm)	Copper (ppm)	Aluminum (ppm)	Chloride (%)
2014-09-12	2580007	2.86		0.26	0.48	1.79	0.26	0.92	0.03	6	52	17	140	22	11	
Normal Range		2.79 3.50		0.17 0.30	0.25 0.50	1.69 2.50	0.19 0.80	0.19 1.20		4 25	20 70	19 150	30 250	4 20		

	N/S	N/K	P/S	P/Zn	K/Mg	K/Mn	Fe/Mn	Ca/B								
Actual Ratio	11.1	1.6	1.8	92	6.9	1055	8.3	1523								
Expected Ratio	12.8	1.4	1.2	60	4.4	275	1.9	533								

Nutrient Sufficiency Ratings



- The very high level of COPPER in this sample may be from contamination with a spray or dust.
- A&L recommends a foliar 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.



C14258-50001

Results Authorized By:

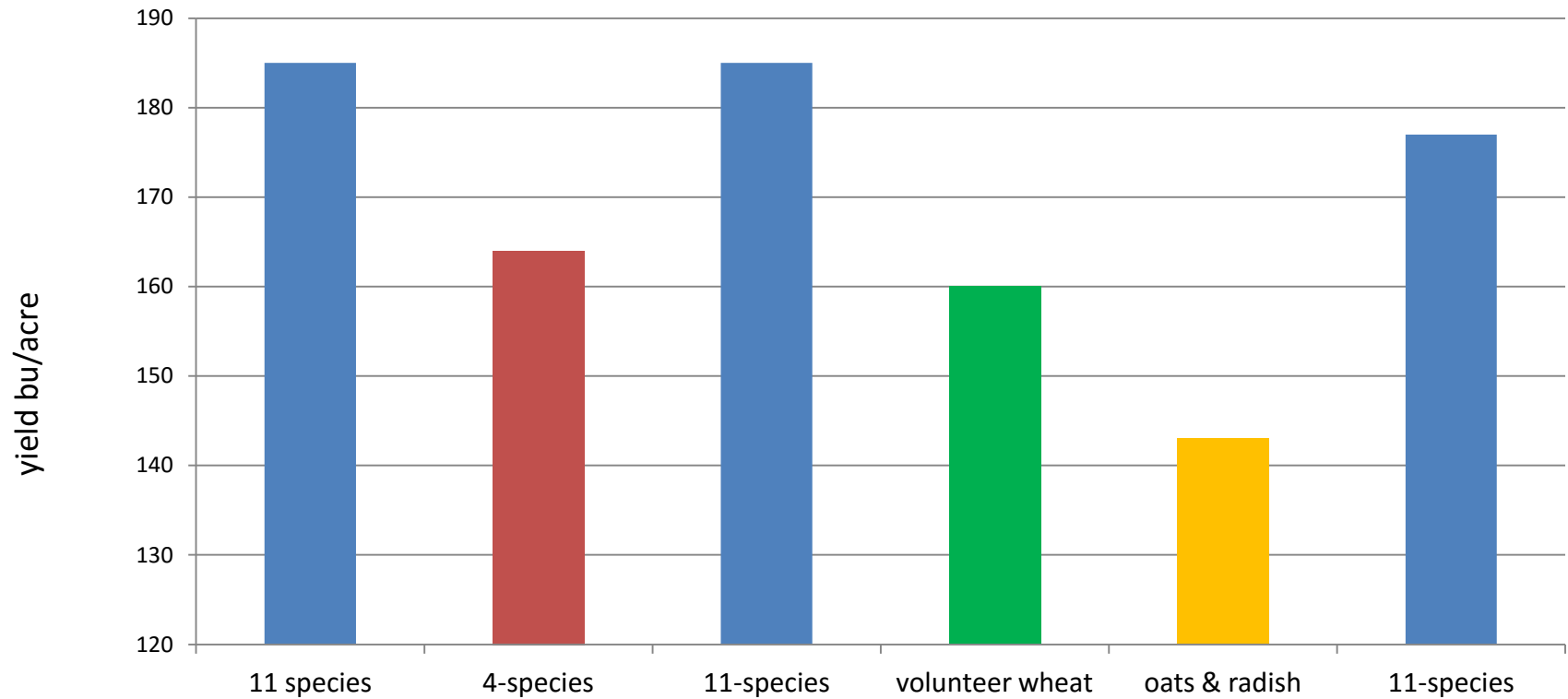
Ian McLachlin, Vice President

Page 2

The results of this report relate to the sample submitted and analyzed

A&L Canada Laboratories Inc. is accredited by the Standards Council of Canada for specific tests as listed on www.scc.ca and by the Canadian Association for Laboratory Accreditation as listed on www.cala.ca

Corn Test Plot Following Cover Crops (2013-14)



If you seed it, they will come.



#soilyourundies



Summary

- Cover Crops around the world are being explored for their tremendous opportunity for soil health
- Where soil health has remained the primary focus around the world, non-biased advocates/extension/support groups have been key to success at the farm level
- The species used need to be appropriate for the geographical region
- Biology, specifically soil biology, is still very much a mystery

#rootsnotiron

THANK YOU!!!

