Nothing wasted.
Everything to gain.

Lystek - Moving Toward a Circular Economy with Technology and Innovation

Mike Dougherty – Director, Product Management

Who is Lystek?

- Founded in 2000 at the University of Waterloo, Ontario
- Purchases by Tomlinson in 2010 (large Ottawa based construction company that is diversifying into the Environmental field
- Locations in USA & Canada
  - 7 operating
  - 3 in construction phase
  - 1 contract recently won
- Converting organic materials into products with a range of uses including:
  - Anaerobic Digester (AD) optimization – LysteMize
  - Carbon source for BNR systems - LysteCarb
  - Biofertilizer – LysteGro (CFIA fertilizer in Canada; Class A EQ Biosolids in US)

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The Lystek System

Process reactor & high speed shearing blade

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Biofertilizer Product - LysteGro™

- Homogeneous liquid/ high solid (14-17%) product
- Viscosity <5,000 cP
- Fully pumpable using conventional equipment
- Enhanced treatment = pathogen-free/Class A EQ
- Nutrient rich (NPK 4:3:2)
- Long-term storage stability
- No pathogen regrowth

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Best Management Practices

- Agronomic rates **NOT** maximum loading rates
- Soil sampling
- Sub-surface injection
- Set backs – based on Nutrient Management Act
- Watching the weather

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Best Management Practices

LysteGro – Application and Setback Guidelines.

Application Method

LysteGro must be **injected**

Application – Ground Condition

LysteGro cannot be applied to Frozen or Snow-covered soil (as defined by the Nutrient Management Act).

Depth to Groundwater

There must be at least 30 cm of unsaturated soil at the surface of the land at the time of application.

Depth to Bedrock

There must be at least 50 cm separation distance from ground surface to bedrock.

Set-backs

Setbacks for application of nutrients to agricultural land in Ontario are regulated based on the following criteria:

- **100 m** from municipal wells for all applied nutrients
  - (O. Reg. 338/09, s. 43)
  - 30 m from any other well (O. Reg. 338/09, s. 43)
- No application is permitted within **25 m** of a dwelling. (O. Reg. 338/09, s. 43.)
- No application is permitted within **50 m** of a residential area or

Best Management Practices

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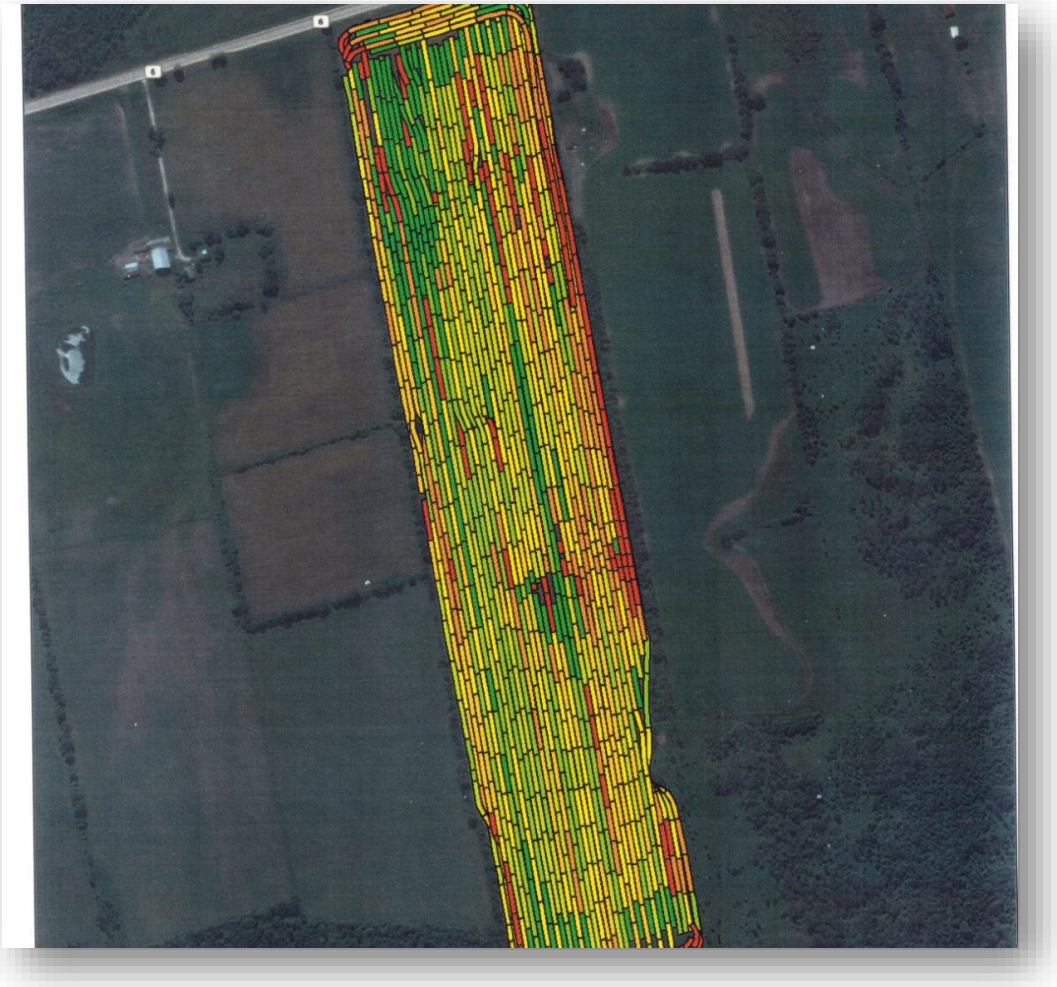
Utilizing Agricultural Technology

- Focus on producing a quality product and providing a quality service to the customer
- GPS
- Flow meters



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Third Party Field Trials/Studies

- Georgian Central Soil and Crop Improvement Association + OMAFRA
  - 2015 - 2017
  - 12 sites (farms)
  - 3 treatments, replicated 3 times at each site
  - 2 rates of LysteGro, 1 rate of commercial fertilizer

- OMAFRA 4R Research with LysteGro and Digestate
  - Side-dress for corn
  - 2016 - 2017

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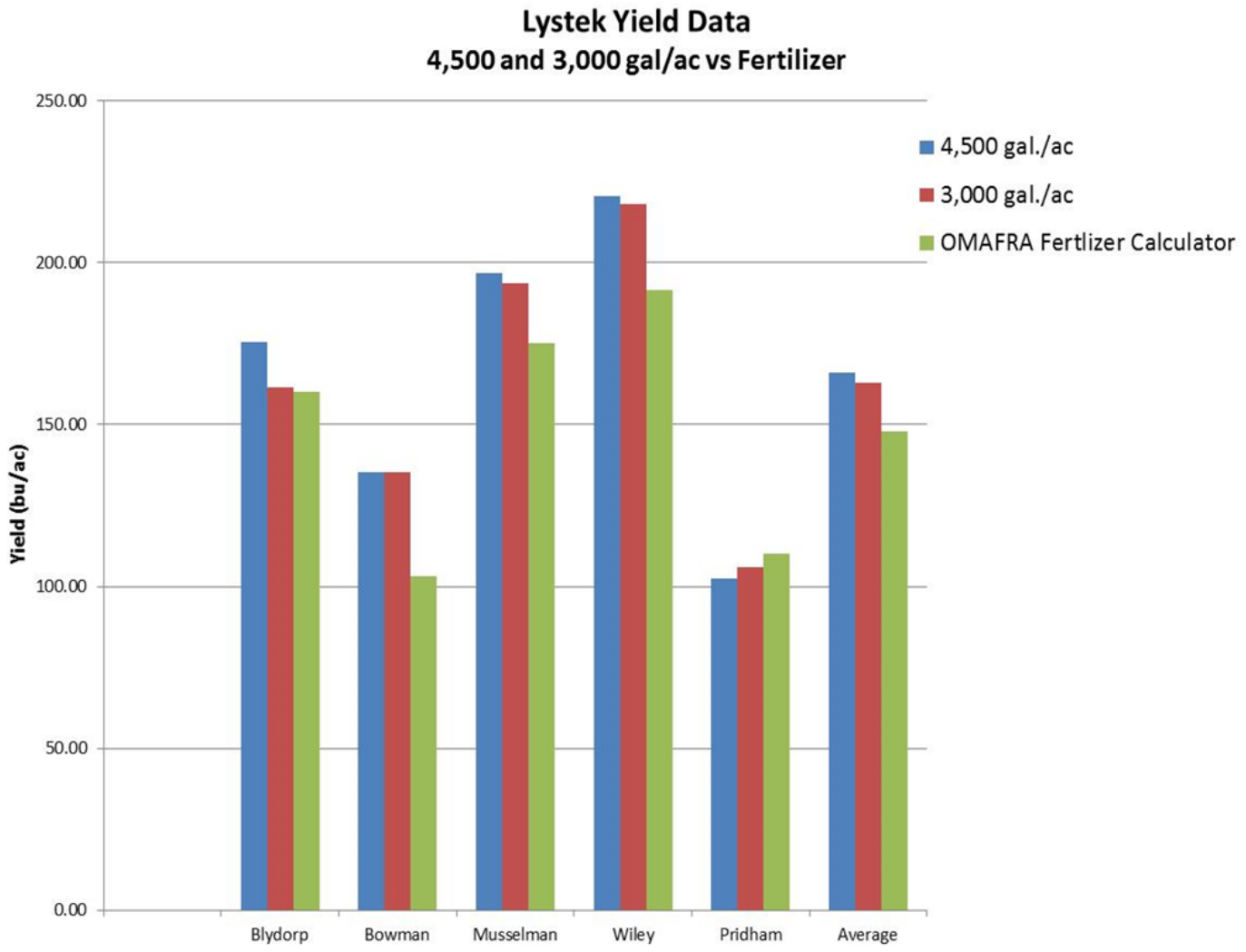
Third Party Field Trials/Studies



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Sold Out!!

- Demand far outweighs supply
- Significant price increases year over year
- Customer lists growing throughout Ontario and California

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Fertilizer Sales

- 2014: **$300,005**
- 2015: **$521,721**
- 2016: **$775,000**
- 2017: **~$1,000,000**

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Alternative Products

- Products for golf and turf
  - UofG
- Products to the horticultural and container industries
  - Ontario, BC and California studies in 2017

NutrientSmart 2.0:

Optimizing the Use & Value of Organic Amendments

Brought to you by FarmSmart, in partnership with Golden Horseshoe Soil & Crop Improvement Association, Heartland Soil & Crop Improvement Association, Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the Ontario Professional Agri Contractors Association (OPACA).

Date: **Friday March 23, 2018**

Time: **8:30am registration; 9am – 4pm program**

Place: **RIM Park, Manulife Financial Sportsplex, 2001 University Ave East, Waterloo**

Join us for an informative day of technical information and discussion about making best use of manure and organic amendments in the farm operation. Picking up where NutrientSmart left off, we will delve into the details of nutrient analysis and availability in manure and organic amendments, incorporating their use into a cropping system, with and without inorganic fertilizer, and in field crop and livestock operations. Benefits of organic amendments beyond the fertilizer value will be discussed and evaluated, particularly relating to soil health. Equipment logistics and considerations, costs to manage materials, and impacts of compaction will be explored.

OSCIA/OPACA Members $90

Non-members $125

Registration closes March 19, 2018

REGISTER NOW!

www.farmsmartconference.com 1-877-424-1300 @FarmSmart18

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Thank You!

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t: 519.731.5702
e: mdougherty@lystek.com
w: www.lystek.com

s:

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