

Ontario Hazelnut Association - AGM



Tyler Whale
President, OAFT



Other Ag Initiatives to Watch/Emulate



CORNERSTONE
RENEWABLES



ONTARIO BIOMASS PRODUCERS CO-OPERATIVE INC.

for a cleaner tomorrow



Tavistock Hops Co.



What is Innovation??

**Invention = \$ to create
knowledge**

**Innovation = knowledge to
create ROI**

***“Invention is GLOBAL,
innovation is LOCAL”***

-- Gord Surgeoner

**It's not good enough to be great
at invention**

**Need \$, talent, improved
acceleration and adoption**

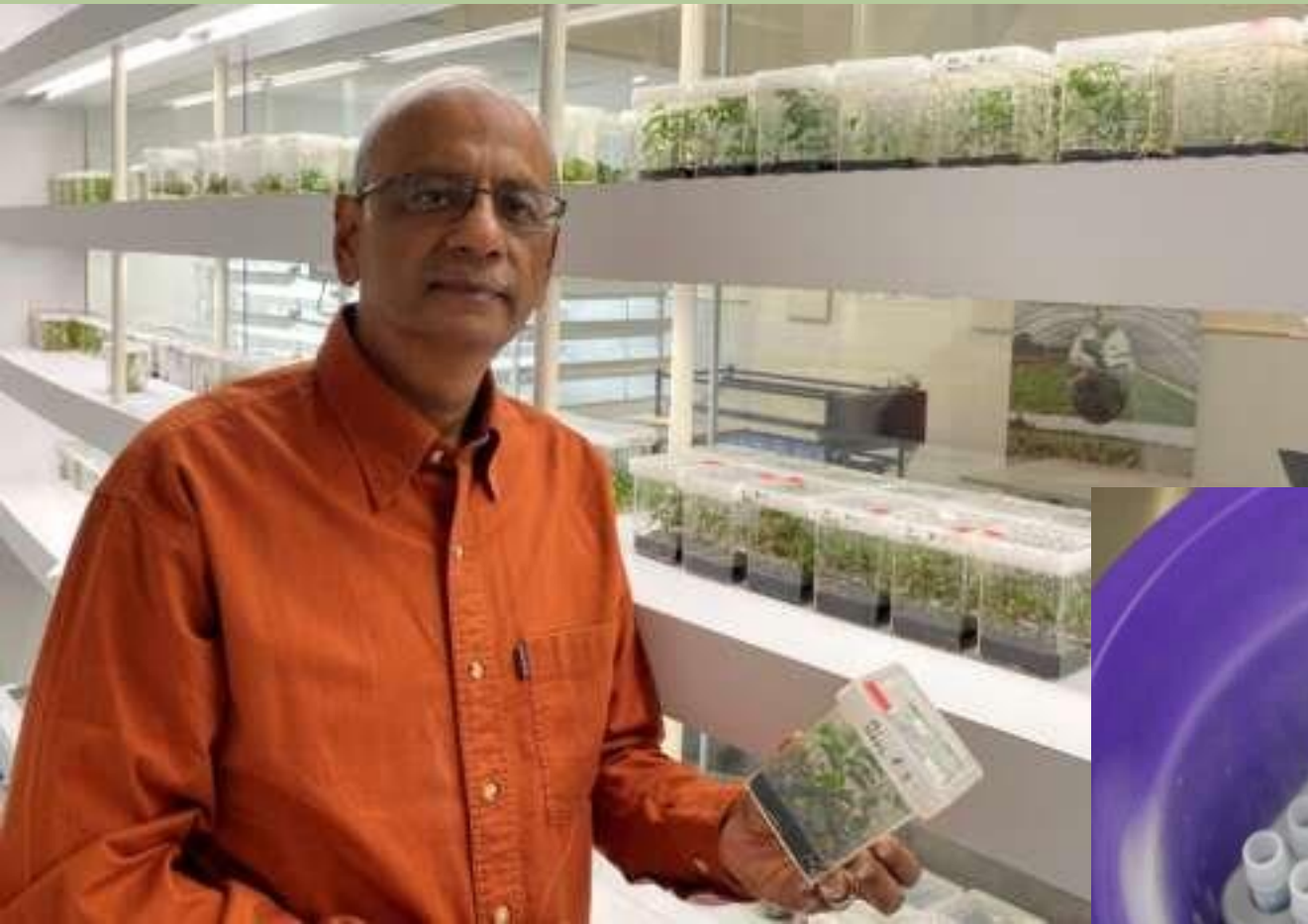
'5 Horsemen' of disruptive technology

- Genetics
- Robotics/Automation
- Artificial Intelligence
- Nanotech/small molecules
- Digitization/Computers

Achieving our Genetic Potential...and Beyond



GRIPP joins OHA - 2017



Genetic Manipulation

- 1. Need clear/consistent regulatory pathway**
- 2. Focus on CONSUMER benefit**
 - **Increased nutrition**
 - **Prolonged shelf-life**
 - **Better flavour**
 - **Environmental performance**
- 3. Stress tolerance (climate)**
- 4. Yield**
- 5. New products from the same crop (beyond nuts)**



Robotics and Automation

DOT



Korechi Innovations





Intelligent telematics for farm equipment management



1

Install
logger

2

Receive
analytics

3

Save time
& money

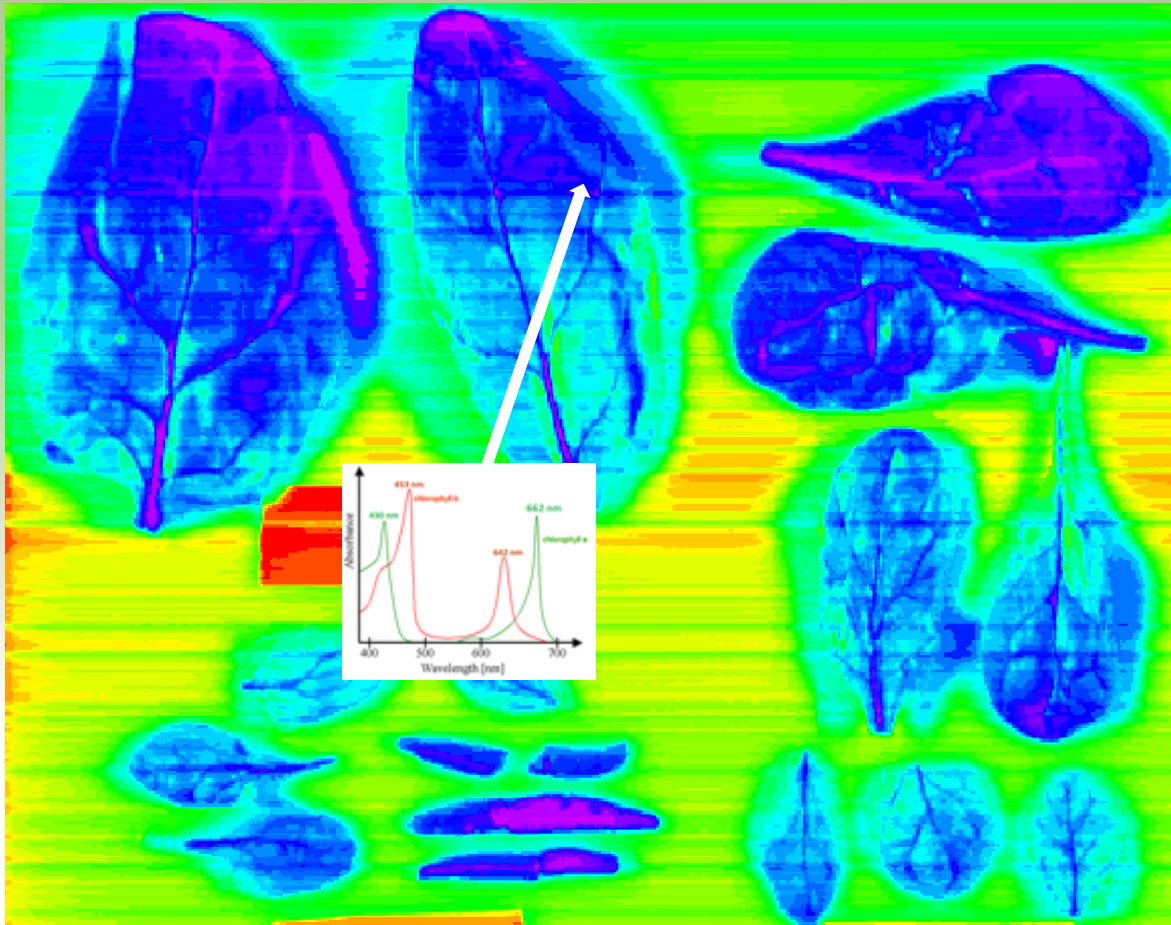
Waste Problem in Produce

- Current sorting technology is inefficient
 - Evaluates leaves based on size, shape, colour only
 - Waste stream – over 80% is good spinach
- Volume! 3,300 pounds of spinach per hour
- Current level of waste has an accepted standard which isn't acceptable!
- In a highly-competitive market:
 - Increase capacity
 - Cut costs
 - Address inefficiencies

What comes first?



PPO Chemical Imaging



See chemical
makeup:

- Moisture, degradants, impurities, chemical reactions, leaf health

As well as:

- Size, colour, shape

Artificial Intelligence and Digitization





FUTURE FARMS

small and smart

SURVEY DRONES

Aerial drones survey the fields, mapping weeds, yield and soil variation. This enables precise application of inputs, mapping spread of pernicious weed blackgrass could increasing Wheat yields by 2-5%.

FLEET OF AGRIBOTS

A herd of specialised agribots tend to crops, weeding, fertilising and harvesting. Robots capable of microdot application of fertiliser reduce fertiliser cost by 99.9%.



FARMING DATA

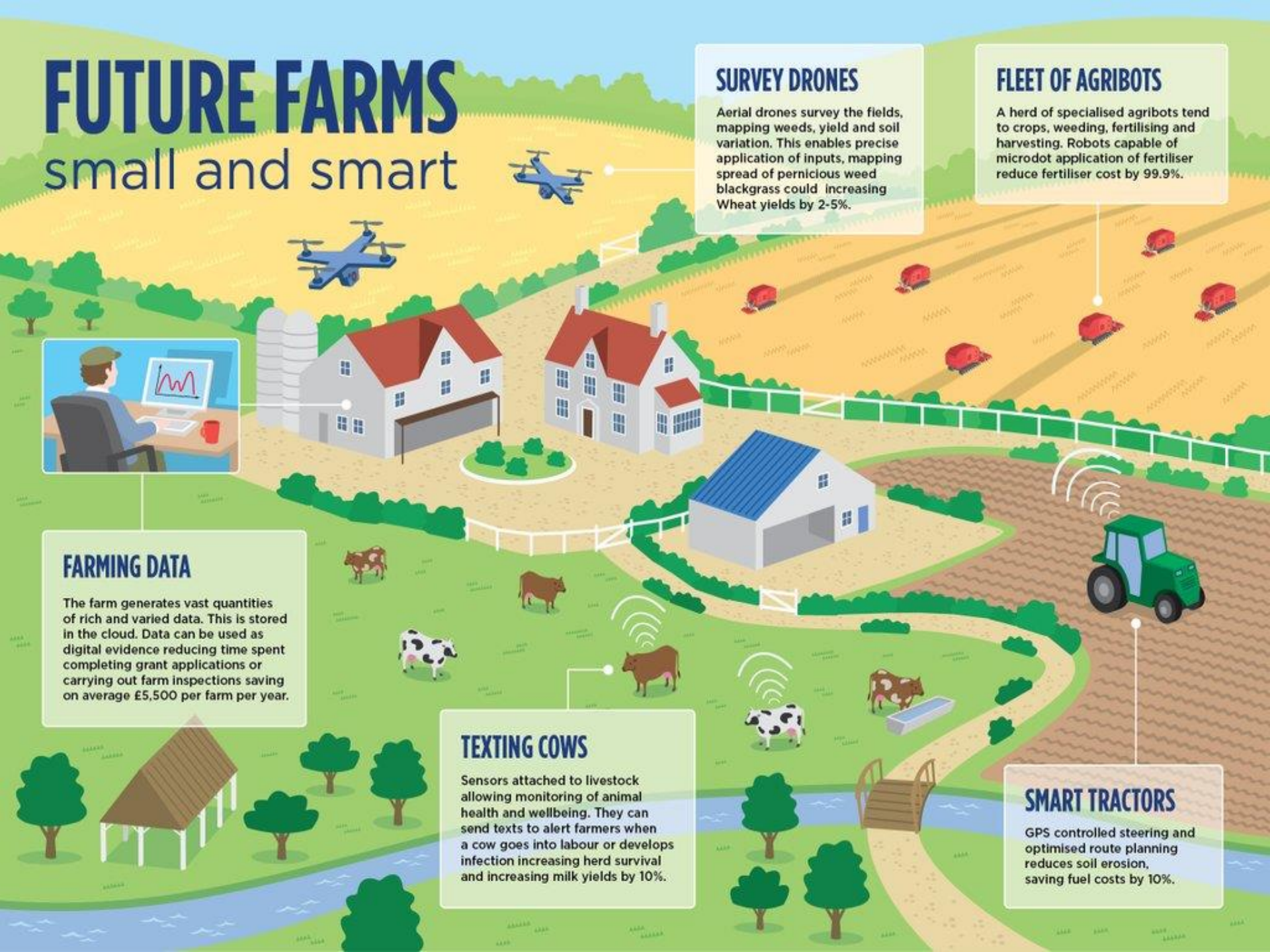
The farm generates vast quantities of rich and varied data. This is stored in the cloud. Data can be used as digital evidence reducing time spent completing grant applications or carrying out farm inspections saving on average £5,500 per farm per year.

TEXTING COWS

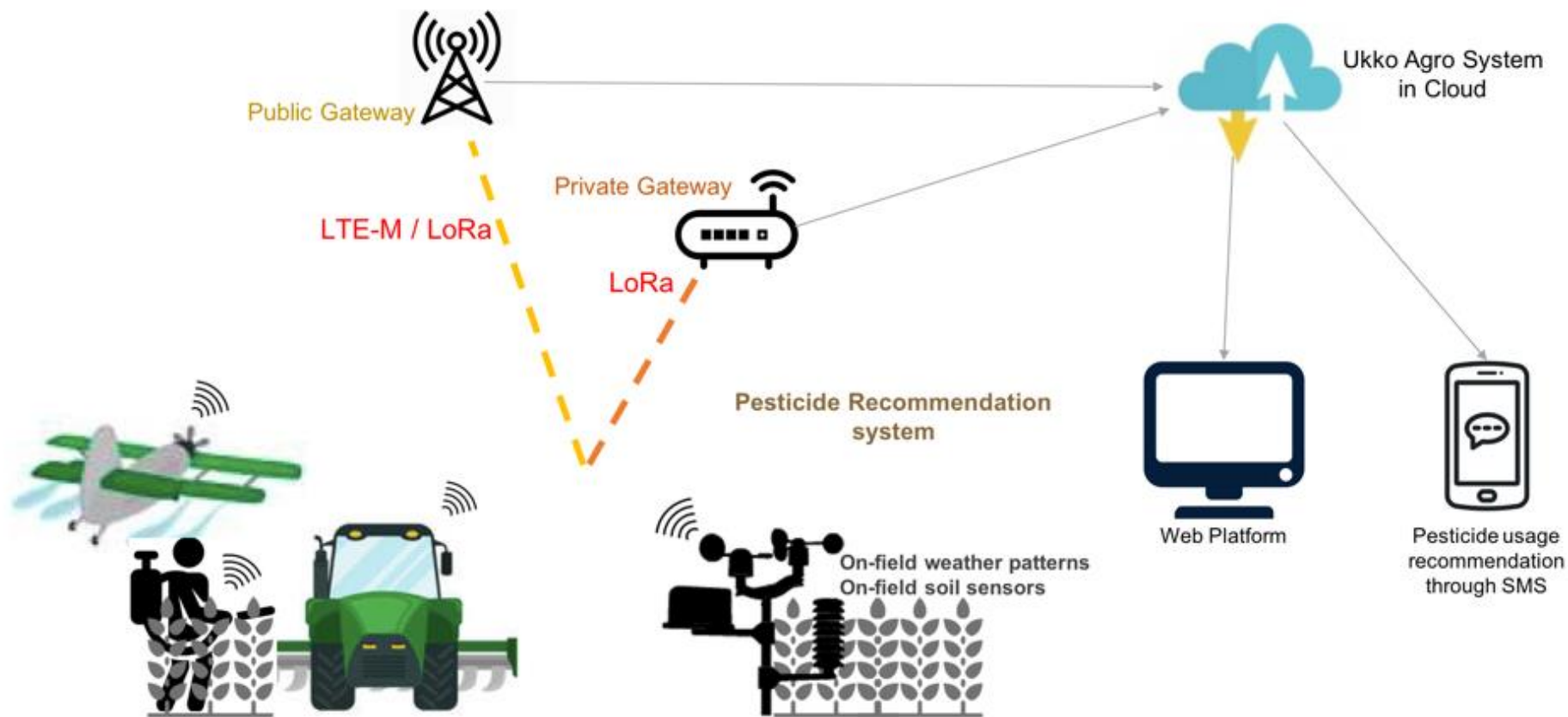
Sensors attached to livestock allowing monitoring of animal health and wellbeing. They can send texts to alert farmers when a cow goes into labour or develops infection increasing herd survival and increasing milk yields by 10%.

SMART TRACTORS

GPS controlled steering and optimised route planning reduces soil erosion, saving fuel costs by 10%.



UKKO AGRO



SPORNAD



Digital Transformation

- 1. Who owns your data and what is being done with it?**
- 2. How easy is a technology to implement?**
- 3. How much ROI do I get?**
- 4. Can I 'divorce' my digital provider?**

This is STILL a business based on TRUST!

***“If you don’t like change,
you’re going to like
irrelevance a lot less.”***

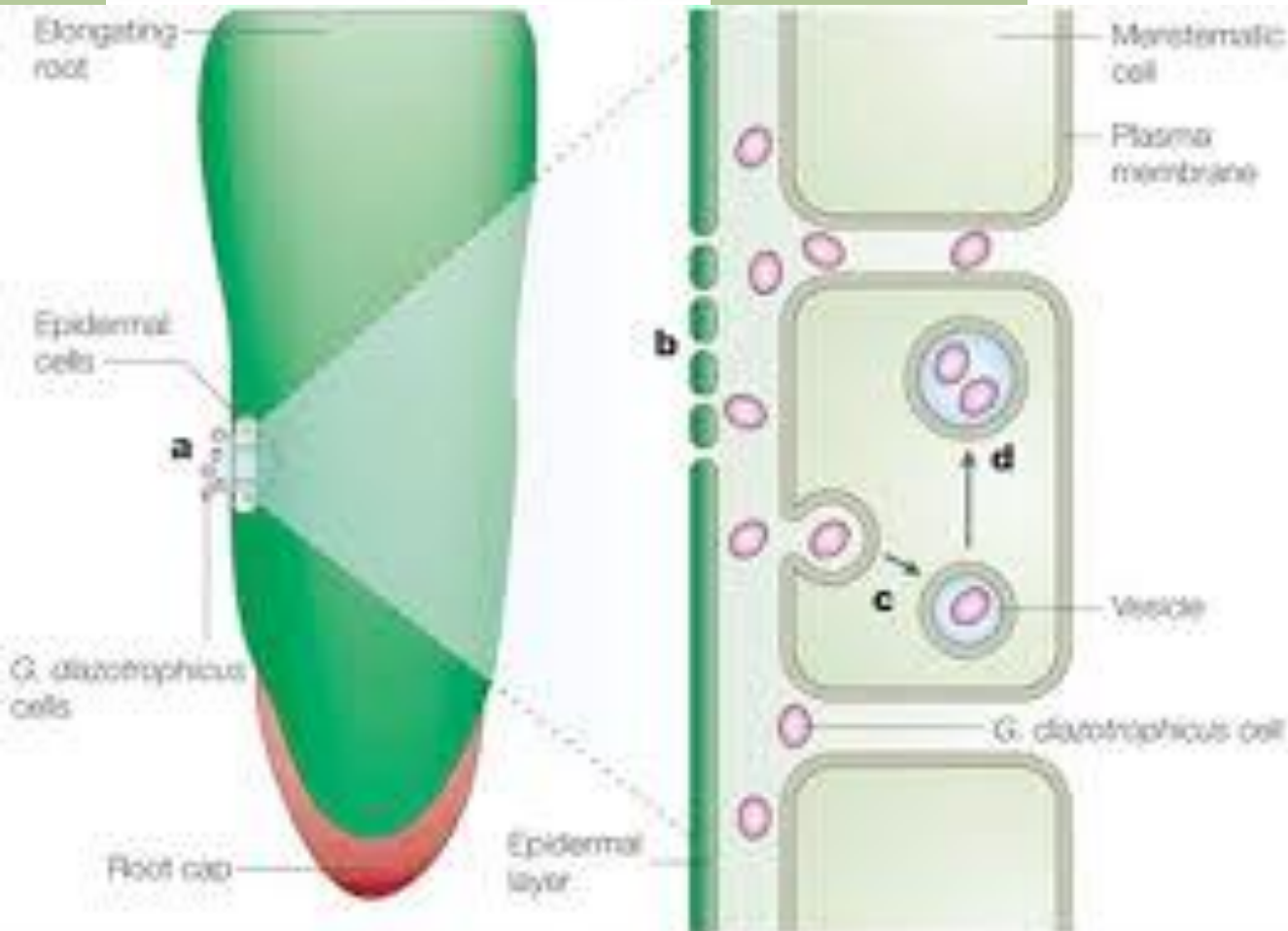
-- General Eric K. Shinseki,
Retired Chief of Staff, US Army

‘Small’ and Other Technology





© Can Stock Photo



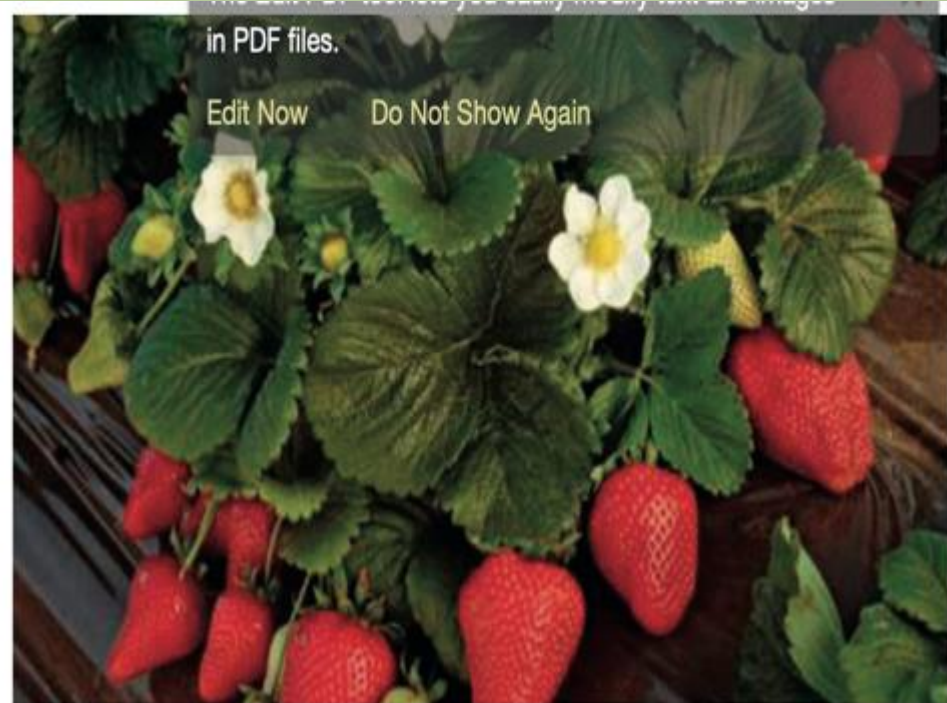
- 50-90% reduction in Fertilizer??
- Productivity GAINS!!



Metagenom Bio

Agriculture

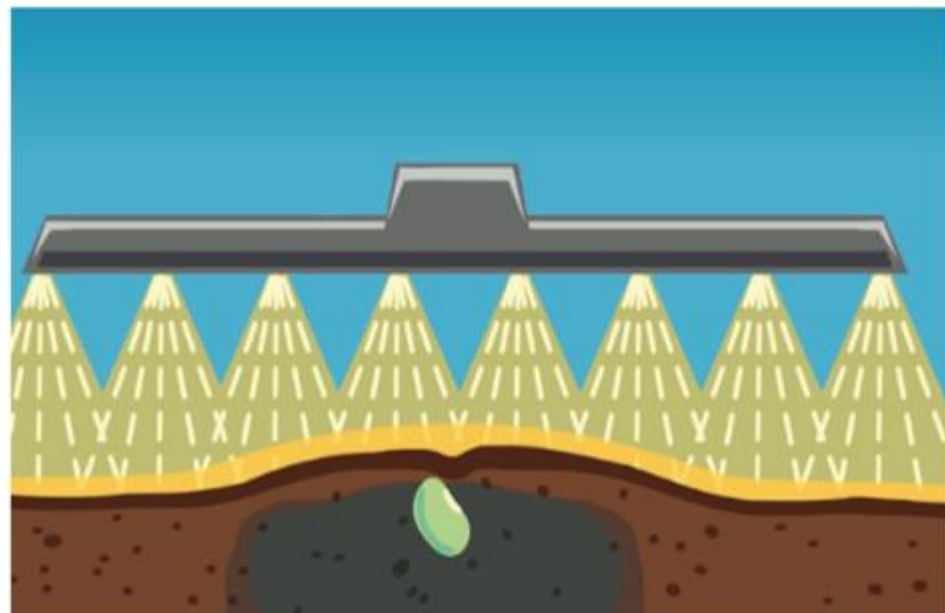




BioFusion^{LP}

SOILARMOR[®]

*Liquid bio-mulch replacing
~50m acres of field plastic*



CO2 GRO Inc.



co2gro.ca



INCREASING THE GROWTH OF
ALL VALUE PLANTS USING OUR PATENTED
ADVANCED CO2 TECHNOLOGIES



MAPA *agri*



Call to Action...

- 1. Evolve – compete or die**
- 2. Think Global – Canada can be more of a powerhouse in Food/Systems**
- 3. Invest – in your operation, in innovation (ROI), coordinate/cooperate, ADD VALUE**
- 4. Communicate – tell friends, family and politicians about our incredible food system**

Thank you!

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