

**TSXV: MGRO**  
**OTCQB: MGROF**  
**FRA: 0C0**



***Providing a Natural, Organic  
Biocontrol Technology for  
Sustainable Agriculture***

Corporate Presentation  
December 2022



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# Overview

- *The mustard plant has natural compounds within it that have pesticidal attributes to protect it from disease, pests and weeds.*

**→ It's the natural defense mechanism of the plant.**

- *MustGrow extracts and concentrates these natural compounds for use as a natural, organic biopesticide to replace synthetic chemistries for a safe sustainable food supply.*

**→ Completed over 150 trials confirming the efficacy and now on focused on obtaining commercialization.**



# MustGrow – Unique Technology and Investment

- Unique, sustainable IP (100% owned) that is natural, organic and effective with great potential to replace synthetic chemicals that have been or are being banned or deregistered.
- IP has multiple applications – preplant soil fumigation, postharvest food preservation, herbicide.
- Extract 2 actives → AITC (for disease & insect pests) and thiocyanate (for weeds).
- Positive soil health & ecological impact.
- With successful field trials, focus is quickly changing to commercialization:
  - actively seeking registrations in US, Canada and Mexico with potential revenue in next 12 months.
  - multiple options for commercialization.
- Currently defining initial production → potential for minimal CAPEX.




**Sumitomo Corporation**



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**Tight Capital Structure**



- 49.7 million basic shares (55.6 million FD)
- 20% insider and advisor ownership
- ~C\$173 million fully-diluted market cap
- ~C\$7.1 million cash



# Sustainable Agriculture is the Future

## How will we feed the world when some synthetic chemicals are being banned?

### Sprout inhibitor chlorpropham (CIPC) officially banned by European Union

The ban of CIPC in the EU has been in the works for months and was expected by the industry. It is not easy to find alternatives, though. The big problem is for existing potato storage sites.

-- Spudman; June 19, 2019

### Syngenta commits US\$2 Billion and sets new targets for innovation to tackle climate change

\$2 billion over five years to innovation specifically targeted at delivering a step change in agricultural sustainability.

-- Syngenta; October 22, 2019

### BASF commits to targets for boosting sustainable agriculture

BASF has committed to clear and measurable targets to boost sustainable agriculture by 2030.

-- BASF; November 16, 2020

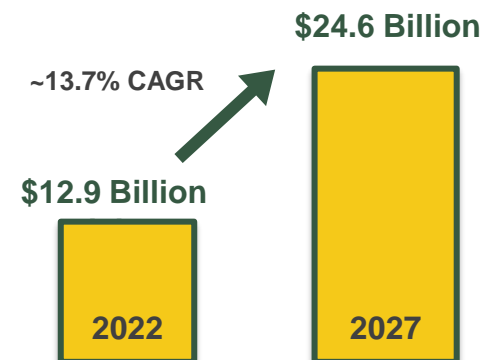
### EU Organic Action Plan – 25% Organic Acres by 2030

On March 25, 2021, the European Commission published the Farm to Fork Strategy Action Plan with a target of 30% of EU land under organic farming by 2030.

-- European Commission, March 25, 2021

- *The **global crop pesticide market is US\$65 billion** – not including organic acres, which are increasing, or postharvest food preservation.*

### Ag Biologicals: Global Market\*



\* ResearchAndMarkets [LINK](#)

## What is going to replace banned synthetic chemicals?

### KEY CHALLENGES:

Food security issues – rapid population growth and finite amount of arable land

Consumer demand for safe, healthy, sustainable food supply

Companies' growing interest in replacing synthetic chemicals

Increasing regulatory pressure on synthetic chemicals

Producers' need for effective alternatives to synthetic chemicals

### MustGrow's Technology is...



**Effective** – biological disease and pest control comparable to synthetic ag chemicals



**Organic** – eligible for use in organic production



**Flexible** – can be used in a variety of existing application systems and for numerous crops



**Efficient** – compared to cover cropping



**Safe** – non-hazardous, minimal worker safety, bystander or environmental concerns



**Economical** – potential to be priced competitively with conventional alternatives

*MustGrow is providing a natural, organic technology platform with the efficacy of synthetic chemicals and application in many markets: **Soil Biofumigants, Postharvest Food Preservation and Bioherbicides***

# Global Collaborations Validate MustGrow's Potential

**NexusBioAg**

**UnivarSolutions**

Field trials conducted in canola and pulse crops

Region: **Canada**

Exclusive Canadian marketing and distribution agreement for canola and pulse crops



**Sumitomo Corporation**

Sumitomo Corporation to fund and drive development work for commercialization

Region: **Americas**

Exclusive field trials in preplant soil fumigation, and postharvest food preservation for potatoes and bananas, and bioherbicide



**Bayer** to fund and drive development work for commercialization

Region: **Europe, Asia Pacific, the Middle East and Africa**

Exclusive field trials in preplant soil fumigation, postharvest food preservation of potatoes and bioherbicide applications

**JANSSEN PMP**  
PRESERVATION AND MATERIAL PROTECTION  
a division of Janssen Pharmaceutica NV

janssen | PHARMACEUTICAL COMPANIES OF Johnson & Johnson

**Janssen PMP** (division of Johnson & Johnson) to fund and drive all testing and development work

Region: **Global**

Exclusive testing for postharvest storage preservation of fruits and vegetables, excluding grains, potatoes, bananas and shipping container fumigation

# Platform Technology with Application in Multiple Markets

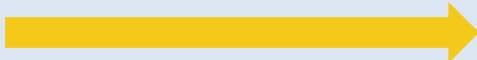

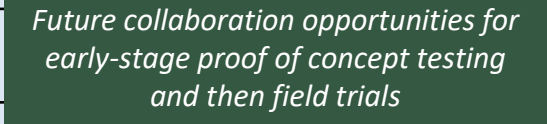


APPLICATIONS	TARGET	ESTIMATED MARKET SIZE / LOSS	PROOF OF CONCEPT	EARLY DEVELOPMENT	ADVANCED DEVELOPMENT	REGISTRATION	
			Laboratory	Greenhouse	Field Trials	Pre-Launch	
Preplant Soil Biofumigant	Soil-borne diseases and pests (AITC)			AITC			
★ All Crops – Fruits & Veg, Potatoes, Broad Acre, Turf & Ornamental, etc.	Fusarium, Botrytis, Verticillium, Rhizoctonia, Pythium, Phytophthora, Sclerotinia, Nematodes, etc.	US\$1.3 Billion Estimated Global Market Size in Fruit & Vegetable	→				TerraMG Registration work ongoing in multiple countries
Bananas	Fusarium wilt TR4 and other diseases, nematodes	US\$18 Billion Estimated Global Loss	→				
Canola	Clubroot ( <i>Plasmodiophora brassicae</i> )	C\$500 Million Estimated Economic Loss in Canada	→				
Pulse Crops: Peas, Lentils, Legumes, etc.	Aphanomyces	C\$100 Million Estimated Economic Loss in Canada	→				
Postharvest Food Preservation	Storage biocontrol and food preservation (AITC)			AITC			
Storage: Potato, Fruit & Vegetable	Sprouting, diseases and pests	US\$250 Million Estimated Global Market	→				
Storage: Bulk Grain*	Mycotoxins and pests	US\$15 Billion Estimated Global Loss	→				
Storage: Shipping Containers*	Diseases and pests	US\$2 Billion Estimated Global Market Size	→				
Food-Borne Pathogens*	E.coli, Salmonella, Listeria, Staphylococcus	US\$15 Billion Estimated Global Market Size	→				
Bioherbicide	Weeds (thiocyanate)	US\$35 Billion Estimated Global Market Size	→		Thiocyanate		

➤ Potential commercialization in next 12 months

Source: Globenewire, 3<sup>rd</sup> Party Ag Market Researcher, MustGrow estimates.



# Postharvest Application in Multiple Markets

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- Licenced patent from University of Idaho
- Potentially “low hanging fruit” due to:
  - Fewer variables in a controlled environment.
  - Significant need to replace banned chemical CIPC in EU27.
  - No product on the market that does both sprout suppression and disease control.

# Postharvest Results

## TerraMG™: Potato Sprout Suppression and Disease Prevention

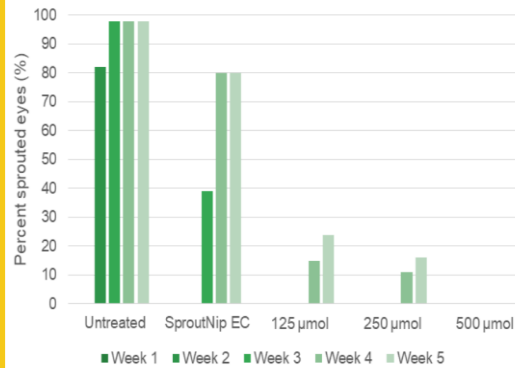
### Sprout Suppression

After 5 weeks of storage



- Tested at three rates vs CIPC
- All three rates outperformed the chemical in length of control
- 500 µmol rate still had no sprouts at 11 weeks

% of Potatoes with Sprout



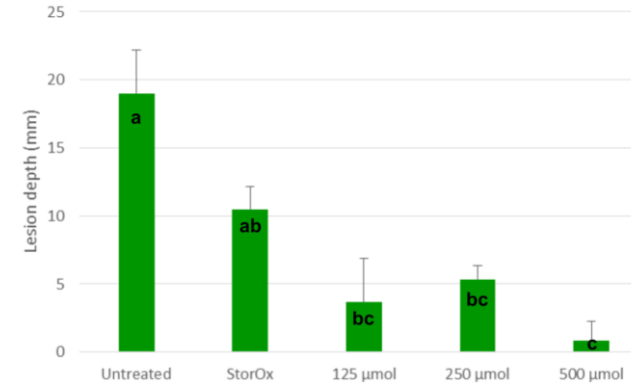
### Disease Control – Dry Rot

After 5 weeks at 10°C in the dark



- Tested at three rates vs StorOX
- All three rates outperformed the chemical in length of control
- Great control at all rates but 500 µmol was totally clean

Average Fusarium Dry Rot Lesion Depth



At the 500 µmol, MustGrow's treatment **outperformed the positive chemical controls for both sprouting and dry rot**


# Soil Applications in Multiple Markets

APPLICATIONS	TARGET	ESTIMATED MARKET SIZE / LOSS	PROOF OF CONCEPT	EARLY DEVELOPMENT	ADVANCED DEVELOPMENT	REGISTRATION
			Laboratory	Greenhouse	Field Trials	Pre-Launch
Preplant Soil Biofumigant	Soil-borne diseases and pests (AITC)		Successful field trials with collaborators is quickly shifting focus toward commercialization			
★ All Crops – Fruits & Veg, Potatoes, Broad Acre, Turf & Ornamental, etc.	Fusarium, Botrytis, Verticillium, Rhizoctonia, Pythium, Phytophthora, Sclerotinia, Nematodes, etc.	US\$1.3 Billion Estimated Global Market Size in Fruit & Vegetable	→			TerraMG Registration work ongoing in multiple countries ←
Bananas	Fusarium wilt TR4 and other diseases, nematodes	US\$18 Billion Estimated Global Loss	→			} Field Trials
Canola	Clubroot ( <i>Plasmodiophora brassicae</i> )	C\$500 Million Estimated Economic Loss in Canada	→			
Pulse Crops: Peas, Lentils, Legumes, etc.	Aphanomyces	C\$100 Million Estimated Economic Loss in Canada	→			
Bioherbicide	Weeds (thiocyanate)	US\$35 Billion Estimated Global Market Size	→			Extract and formulation optimization

- Results of 80 field and greenhouse trials completed from 2008-2020 with:
  - 82% of the time, treatments showed statistically significant positive results for at least one target compared to untreated checks.
  - In 83% of the trials where an industry standard was used, MustGrow technology was numerically over 80% as efficacious as the standard for at least one target.
- Have been working on registrations in US and Canada, and with successful field trials in Mexico, focus is now on registrations in Mexico with Peru and Chile to follow.
- Quickest path to commercialization may be Mexico as Metam Sodium is under pressure due to it being banned in the EU (US\$28 million in annual grower level sales).

# Targeted Crop Acres for Preplant Soil Fumigation in Americas

## Targeted Acres and Fumigation Data in the Key Countries in the Americas (2018 - USD)

	Total Acres	Average Price per Acre**	Grower Level Fumigation Sales
<b>Conventional</b>	16,287,394	\$489/ac	\$720 million
<b>Organic</b>	241,600	n/a	 <b>Open Opportunity</b>

\* Buffer Zones are 5-20% of total fumigated acres.

\*\* Average price per acre is US\$450-600 per acre for product in US.

- High value crops at such as fruit & veggie, potato, tree, nut & vine, etc.
- Grower level pricing in US in 2018
- Synthetical chemical registration under pressure or banned:
  - 1,3-Dichloroproene registrations have been banned in Canada & EU
  - Chloropicrin has been banned in EU
  - Metam sodium is still registered in most countries but is under significant pressure
  - Methyl bromide has been banned and is nearly gone globally with some sales in exempted crops



# Options for Commercialization and Production

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## Options for Commercialization

- M&A
  - Licencing (monetary upfront and royalty thereafter)
  - Buy & Supply
  - Partnership / Distribution
- 

## Options for Production

- Mass balances, equipment and plant layout completed
- Prefeasibility engineering on "Standalone, Greenfield Development" completed, unlikely required as equipment readily exists:
  - Tanks, centrifuges, pumps, dryers
  - Investment in CAPEX may not be required
- We have produced product from contract manufacturers
  - Identifying more contract manufacturers for initial production
  - Assessing strategic partnerships for production

# Capital Structure

**TSXV:MGRO / OTCQB:MGROF / FRA:0C0**



<b>Basic Shares Outstanding</b>	<b>49,659,237</b>
<b>Options/RSU's/DSU's</b>	<b>4,405,736</b>
<b>Warrants</b>	<b>1,490,304</b>
<b>Fully-Diluted Shares Outstanding</b>	<b>55,555,277</b>
<b>Market Cap (CAD)</b>	<b>\$172,814,145</b>
<b>Insider &amp; Advisor Ownership (~20%)</b>	<b>10,024,904</b>
<b>Average Volume (3 month)</b>	<b>80,260</b>
<b>Previous Capital Spent (CAD)</b>	<b>\$15,000,000</b>
<b>Cash Position (CAD)</b>	<b>\$7,100,000</b>
<b>Debt (CAD)</b>	<b>\$800,000</b>

\* Since TSXV listing debut on November 11, 2022.

\*\*Debt has no maturity; no interest payable; no scheduled principal payments. Due upon change of control of MustGrow and/or certain revenue milestones.

# Experienced Leadership Team

Lean executive team has the vision, energy and experience to execute



**80+**  
Years

Combined  
Industry  
Experience



**Corey Giasson, MBA**  
*CEO & Director*



**Colin Bletsy**  
*COO & Director*



**Todd Lahti, CFA, CPA, CA**  
*CFO*

**4**

**20+**

Years with Company

Years Experience

**4**

**25+**

Years with Company

Years Experience

**10**

**35+**

Year with Company

Years Experience



# Board of Directors & Advisors



**Brad Munro**  
Chairman



**Laura Westby, JD**  
Director



**Matt Kowalski**  
Director



**David Borecky CPA, CA**  
Director



**Brian Quigley**  
Director



**Tom Flow**  
Director



**Serial Entrepreneur Since Age of 19**



**Dr. David Maenz**  
Production Advisor



**Dr. Matthew J. Morra**  
Scientific Advisor



**Jamieson Bondarenko**  
Capital Markets Advisor



World-class team of agriculture and business professionals

**200+** | Combined  
Years | Industry Experience