



# **Environmental Stress Benefits**

	Support abiotic stress tolerance by degrading
BL	ACC, a precursor to ethylene formation

	Secretes acetoin which triggers induced
BS	systemic resistance (ISR), mediating stress

Auxin	Critical for cell division, plant growth and
BL	enhance plant's tolerance to abiotic stress

Catalase	An antioxidant enzyme that protects plant
BL	cells from abiotic stress damage

	Secretes EPS which forms a biofilm layer on
BS, BL	roots mitigating damage from abiotic stres

**⊌**MeltDown™

CANGROW

	Secretes IAA, a common auxin that enables
RP	cell division and movement of photosynthates

PAL	Secretes PAL, a key enzyme that supports	
BS	systemic resistance against abiotic stress	

Microbial Species	Abbreviation	Microbial Species	Abbreviation
Bacillus licheniformis	BL	Cellulomonas cellasea	СС
Bacillus subtilis	BS	Rhodopseudomonas palustris	RP

# **Plant Nutrition Benefits**

	Phosphorus		Able to solubilize and make plant available	
/	BS, RP		insoluble forms of phosphate	
Nitrogen Cap			pable of fixing atmospheric nitrogen (N <sub>2</sub> ) into	
RP		biologically useable and available ammonia		

	Able to convert (oxidize) insoluble sulfur into
BS	plant available sulfates

	Able to convert insoluble forms of iron into
BS	iron-chelating siderophore compounds

# **Biodegradation Benefits**

7		Secretes amylase, an enzyme that hydrolyzes
	BS. BL	starch and breaks it down into smaller suga

٦		Secretes cellulase, an enzyme that breaks down
	BS, CC	cellulose into its monosaccharide units

	Secretes chitinase, an enzyme that biodegrades
BS	the cell walls of fungi that is rich in chitin

		Secretes glucanase, an enzyme that breaks
1	BS	down large polysaccharides like glucans

	An enzyme that biodegrades lignin and can
BS	oxidize and degrade aromatic pollutants

P	Secretes lipase to help support the break down
BS. RP	of fats, oils, and lipids

\		Secretes protease, an enzymes that break
	BS, BL	down proteins down into amino acids
The same		

,	Secretes xylanase, an enzyme that breaks down
BS	hemicellulose in plant cell walls

#### Location:

CanGrow Crop Solutions 3971 Old Walnut Rd. Alvinston, ON, NON1A0

## Contact Us:

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# MeltDown<sup>™</sup> - Biological Residue Manager & Recycler

#### **Reclaim Investment Dollars**

MeltDown<sup>™</sup> boosts the natural process of breaking down and recycling nutrients from residue and stubble back into the soil. MeltDown<sup>™</sup> is easy to use, and can be added with fertilizers, herbicides or fungicides.

MeltDown™ provides beneficial bacteria that improve the return of micro and macro nutrients from reside to the soil. The beneficial microorganisms will degrade complex polymers such as cellulose, lignin, chitin, and related compounds.

# These microbes support:

- Production of environmental stress reducing factors such as EPS and PAL
- Production of biodegradable enzymes such as cellulase, laccase, urease, and xylanase
- Production and consumption of CO<sub>2</sub> through photosynthesis, decomposition of complex organic molecules, and soil carbon storage



Sunderland, Ontario 2022

# Control Waxy outside, solid piths, root balls intact, difficult to break



**Leamington, Ontario 2022** 

#### **Application Rates**

Broadcast Application: 1 L (34 oz) per acre MeltDown™ can be added to fall or spring burndown and/or added to your nitrogen program. Fall applications support improved spring planting conditions.

# Benefits of Applying MeltDown™

- Helps drive CO<sub>2</sub> cycling, promoting higher yields and healthier soils
- Simplifies ground prep, potentially eliminating a tillage pass
- Reduces hair pinning and improves seed to soil contact
- Reduces equipment issues and potential tire damage from tough stalks

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