

Environmental Stress Benefits

ACC BL	Support abiotic stress tolerance by degrading ACC, a precursor to ethylene formation
Acetoin BS	Secretes acetoin which triggers induced systemic resistance (ISR), mediating stress
Auxin BL	Critical for cell division, plant growth and enhance plant's tolerance to abiotic stress
Catalase BL	An antioxidant enzyme that protects plant cells from abiotic stress damage
Exopolysaccharides BS, BL	Secretes EPS which forms a biofilm layer on roots mitigating damage from abiotic stress
IAA RP	Secretes IAA, a common auxin that enables cell division and movement of photosynthates
PAL BS	Secretes PAL, a key enzyme that supports systemic resistance against abiotic stress

Microbial Species	Abbreviation	Microbial Species	Abbreviation
Bacillus licheniformis	BL	Cellulomonas cellasea	CC
Bacillus subtilis	BS	Rhodospseudomonas palustris	RP



Plant Nutrition Benefits

Phosphorus BS, RP	Able to solubilize and make plant available insoluble forms of phosphate
Nitrogen RP	Capable of fixing atmospheric nitrogen (N ₂) into biologically useable and available ammonia
Sulfur BS	Able to convert (oxidize) insoluble sulfur into plant available sulfates
Iron BS	Able to convert insoluble forms of iron into iron-chelating siderophore compounds

Biodegradation Benefits

Amylase BS, BL	Secretes amylase, an enzyme that hydrolyzes starch and breaks it down into smaller sugars
Cellulase BS, CC	Secretes cellulase, an enzyme that breaks down cellulose into its monosaccharide units
Chitinase BS	Secretes chitinase, an enzyme that biodegrades the cell walls of fungi that is rich in chitin
Glucanase BS	Secretes glucanase, an enzyme that breaks down large polysaccharides like glucans
Laccase BS	An enzyme that biodegrades lignin and can oxidize and degrade aromatic pollutants
Lipase BS, RP	Secretes lipase to help support the break down of fats, oils, and lipids
Protease BS, BL	Secretes protease, an enzymes that break down proteins down into amino acids
Xylanase BS	Secretes xylanase, an enzyme that breaks down hemicellulose in plant cell walls

Location:
CanGrow Crop Solutions
3971 Old Walnut Rd.
Alvinston, ON, N0N1A0

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MeltDown™ O - Organic Biological Residue Manager & Recycler

Reclaim Investment Dollars

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

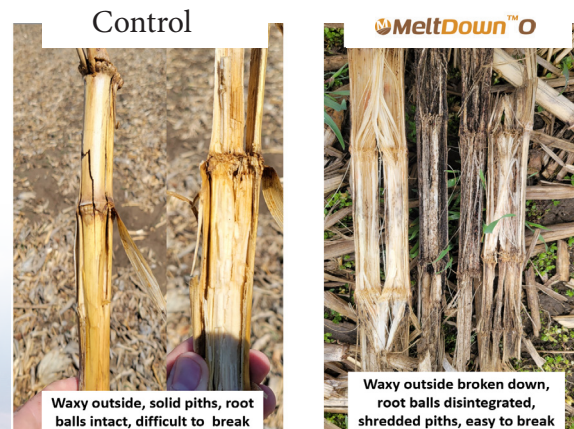
MeltDown™ O provides beneficial bacteria that improve the return of micro and macro nutrients from residue to the soil. The beneficial microorganisms will degrade complex polymers such as cellulose, lignin, chitin, and related compounds.

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 CO₂ through photosynthesis, decomposition of complex organic molecules, and soil carbon storage



Sunderland, Ontario 2022



Leamington, Ontario 2022

Application Rates

Broadcast Application: 1 L (34 oz) per acre
MeltDown™ O 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™ O

- Helps drive CO₂ 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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