

Environmental Stress Benefits

Acetoin BS, BA	Secretes acetoin which triggers induced systemic resistance (ISR), mediating stress
Cytokinin AB	Secretes cytokinin, a biochemical messenger supporting plants under stress
Exopolysaccharides BS	Secretes EPS which forms a biofilm layer on roots mitigating damage from abiotic stress
Gibberellic Acid AB	Secretes GA which plays a central role in the plant's response to abiotic stress
IAA PP, AB	Secretes IAA, a common auxin that enables cell division and movement of photosynthates
PAL BS, BA	Secretes PAL, a key enzyme that supports systemic resistance against abiotic stress

Microbial Species	Abbreviation	Microbial Species	Abbreviation
Azospirillum brasilense	AB	Cellulomonas cellasea	CC
Bacillus amyloliquefaciens	BA	Pseudomonas fluorescens	PF
Bacillus subtilis	BS	Pseudomonas patida	PP



Plant Nutrition Benefits

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

Biodegradation Benefits

Amylase BS, BA	Secretes amylase, an enzyme that hydrolyzes starch and breaks it down into smaller sugars
Cellulase BS, BA, CC	Secretes cellulase, an enzyme that breaks down cellulose into its monosaccharide units
Glucanase BS, BA	Secretes glucanase, an enzyme that breaks down large polysaccharides like glucans
Laccase BS, BA	An enzyme that biodegrades lignin and can oxidize and degrade aromatic pollutants
Lipase BS	Secretes lipase to help support the break down of fats, oils, and lipids
Protease BS, BA	Secretes protease, an enzymes that break down proteins down into amino acids
Urease BA	Secretes urease, enzyme capable of breaking down urea into ammonia and CO ₂
Xylanase BS, BA	Secretes xylanase, an enzyme that breaks down hemicellulose in plant cell walls

CanGrow ReStore® - Biological Seed Treatment

A Strong Start for Strong Plants

CanGrow ReStore® offers many benefits to help provide a quick germination process and quality stand rate. As the seedlings grow, CanGrow ReStore® continues to embrace the fundamental relationship between the plants and soil. The microbes feed off of the sugars that are given off by the young seedlings which helps promote a healthy and vigorous plant.

The addition of CanGrow ReStore® can result in up to a 30% reduction of commercial P needed. Several strains can also reduce surface tension to free up more organic and inorganic nutrients to make them available to the entire microbial population.



These microbes support:

- Nitrogen fixing
- Phosphorus solubilization
- Potassium, Iron and other nutrient increased availability
- Production of environmental stress reducing factors such as PAL
- Production of biodegradable enzymes

Application Rate

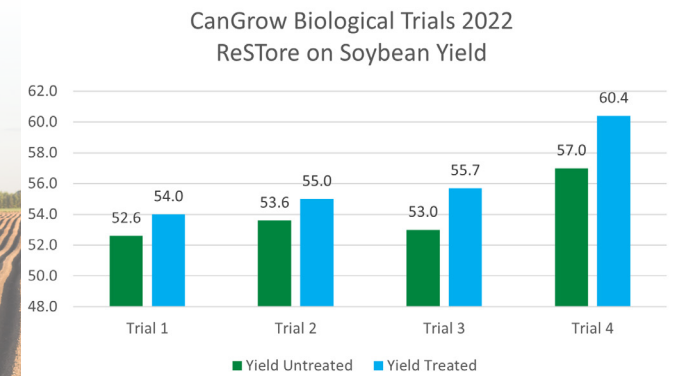
Seed Treatment: 44 - 60 mL (1.5 - 2 oz) per 50 lbs of seed

2022 Ontario Field Trials

Soybean seeds treated with CanGrow ReStore® showed an average increase of yield by 2.2 bushels/acre, resulting in an average return of investment (ROI) of \$35.05/acre.

The treated plants also showed:

- Bigger root systems
- Earlier nodulation
- More prolific nodulation



#BetterBiology