



BioBuild® Soy BioST + R

PCT | Sunrise® BioBuild® Soy BioST + R combines a select group of concentrated beneficial microbes with an organic food source applied as a seed treatment inoculant for enhanced early growth, vigor and to develop a larger root mass on many crops. This product contains over three-quarters of a billion bacteria per milliliter, more than twenty different strains of active bacteria and a rhizobial inoculant.

Soy BioST + R contains living bacteria in a formulation that is crop ready and should be applied to seed that will soon be planted to maintain the highest degree of microbial activity of the multiple species. Since Soy BioST + R does contain biological material in an active state the product will have a strong odor.

About PCT | Sunrise BioBuild Soy BioST + R

- ↳ Contains strains of bacteria that will help the following:
 - Break seed dormancy; thorough coverage of the seed coat during treatment is important
 - Fix and convert nitrogen for the plant
 - Assimilate phosphorus from organic and inorganic sources
 - Stimulate root and shoot initiation and continue to help the seedling develop plant structure
- ↳ The multiple strains of bacteria for each class will provide a consistent source of nutrition across a wide range of soil conditions and environments.
- ↳ Soy BioST + R has 7 team members that provide nitrogen fixation: 6 root zone nitrogen fixers + 1 endophytic (moves nitrogen within cells throughout the plant)
- ↳ In addition to nitrogen fixing, Soy BioST + R contains 14 microbe team members that provide ammonification (process of converting organic nitrogen into inorganic ammonia (NH₃) or ammonium ions (NH₄⁺))
- ↳ Soy BioST + R also possess' 6 microbe team members that release Urease (the enzyme that stimulates the conversion of urea to ammonia)



Directions

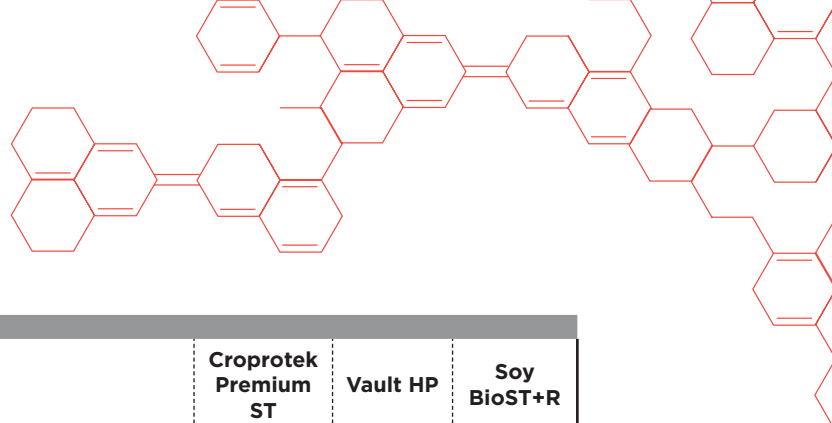
Apply Soy BioST + R at a rate of 2.4 ounces per unit (140,000 seeds/unit) of soybeans through a liquid dosing seed treatment system. On-seed survival treatment is 110 days post-treating. Be sure to keep treated seed dry and avoid high humidity environments when storing seed until planting.

Precautions

Soy BioST + R has been tested and used successfully with many crop protection products. However, as with any compound, be sure to jar test tank mix compatibility before applying with other materials on the seed. When selecting other chemical products to mix with Soy BioST + R consideration should be given since some products can be detrimental to living organisms.

BioBuild Soy BioST + R Includes the Following

- ↳ A rhizobial inoculant for increased nitrogen fixation and accelerated nodule development
- ↳ Over twenty strains of microorganisms that allow for increased nutrient availability and help plants resist diseases.
 - **Azospirillum (2):** atmospheric nitrogen fixation conversion to a form usable for plants, root stimulant
 - **Bacillus (8):** subtilis, cereus, licheniformis are a few: nitrogen fixation, release inhibitory compounds and enhance plant health and vigor
 - **Cellulomonas (3):** root growth colonization and promotion of nutrient uptake
 - **Diazotrophicus (1):** mobile within the plant; atmospheric nitrogen fixation without nodulation
 - **Pseudomonas (7):** solubilizes unavailable phosphate, plant hormone stimulation, siderophore secretion
 - **Streptomyces (3):** growth enhancement, promotes a healthy more tolerant and productive plant



Features	Croprotek Premium ST	Vault HP	Soy BioST+R
Improves Germination	X	X	X
Improves early growth and vigor	X	X	X
Application window of 90+ days	X	X	X
Compatible with other products	X	X	X
Contains Crop Protection chemicals	X	X	
Contains nodulating N-Fixing inoculant		X	X
Contains other beneficial microbes		X	X
Provides food sources microbes in blend		X	X
Contains phosphate releasing technology		X	X
No special replant restrictions		X	X
Contains strains of microbes		X (3)	X (20+)
Contains 7 strains of nitrogen fixing bacteria			X
Produces many root growth hormone compounds			X
Contains iron releasing technologies			X
Works well in high pH calcareous soils			X
No special mixing or agitation required			X
No special bag tagging required			X
Live entire season in conjunction with plant roots			X
Produce enzymes that fix atmospheric N to soil			X
Produce enzymes that degrade cellulose into food			X
Produce enzymes that degrade chemicals into food			X
Contains both bacterial and fungal strains			X
Contains multiple strains producing chitinase			X
Contains strains that work in a wide temp range			X
Contains food sources that chelate micronutrients			X
Contains strains that work in varying environmental conditions			X