

BioBuild® BioComplete II



PCT | Sunrise® BioBuild® BioComplete II is a blend of over two dozen various strains of beneficial microbes that enhance plant health and vigor. This product is designed to increase flower production, healthier and more vigorous root systems along with phosphate solubilization and nitrogen fixation.

BioComplete II contains millions of organisms that have been chosen for our soils and climate to maximize corn and soybean production. There are nine (9) different genera and 16 different species of microbes included in BioComplete II.

There are several strains of beneficial microbes that produce plant growth stimulating hormones. This blend of beneficial microbes has many modes of action and increases the number of naturally occurring organisms.

About PCT | Sunrise BioBuild BioComplete II

- ↳ Contains strains of bacteria that will help the following:
 - 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.
- ↳ BioComplete II 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, BioComplete II contains 14 microbe team members that provide ammonification (process of converting organic nitrogen into inorganic ammonia (NH_3) or ammonium ions (NH_4^+))
- ↳ BioComplete II also possess' 6 microbe team members that release Urease (the enzyme that stimulates the conversion of urea to ammonia)

Advantages of Organic Acid

- ↳ Stimulates metabolism.
- ↳ Organic acid appears to cause the genetic mechanism of plants to function at a higher level. It has been concluded that any means by which plant cells are exposed to organic acid can improve growth.
- ↳ Oxygen is absorbed more intensely in the presence of organic acids. Organic acid aids in penetrating roots and then quickly transports to the shoots of plants.

Multiple Strains Bacteria

Beneficial microbes that provide broad benefits for many plants including:

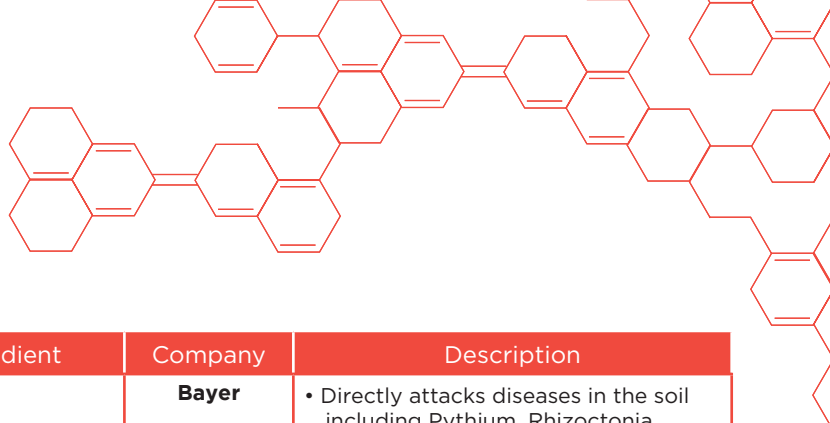
- ↳ Increased health and vigor
- ↳ Healthier roots
- ↳ Stronger and longer stems
- ↳ Increased flower/fruit production
- ↳ Phosphate solubilization capabilities
- ↳ Nitrogen fixing capabilities

Usage Rates:

- ↳ In-Furrow: 16 oz/acre
- ↳ Foliar: 8 oz/acre
- ↳ The most effective way to introduce the microbes in the soil close to the roots is in-furrow



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Product	Rate/Acre	Active Ingredient	Company	Description
Serenade Soil	In-furrow - 1-4 pt	<i>Bacillus Subtilis</i>	Bayer	<ul style="list-style-type: none"> • Directly attacks diseases in the soil including Pythium, Rhizoctonia, Fusarium and some strains of Phytophthora • Activates plant's natural defenses by priming systemic responses in the plant • Promotes growth and stress resistance
Ethos XB	In-furrow - 4-8 oz	<i>Bifenthrin</i> <i>Bacillus amyloliquefaciens</i>	FMC	<ul style="list-style-type: none"> • Defend against corn rootworms, wireworms, grubs, seed corn maggots, cutworms and common stalk borers • Disease defense includes Fusarium, Pythium, Rhizoctonia, and Phytophthora
VGR Soil Amendment	In-furrow - 0.18 oz	<i>Bacillus Licheniformis</i>	FMC	<ul style="list-style-type: none"> • VGR™ Soil Amendment contains a specific strain of bacillus licheniformis, a naturally occurring bacteria, with properties that result in larger root systems, improved water use efficiency, increased phosphorus solubility for better nutrient uptake and improved plant defense against abiotic stresses
Xanthion	In-furrow - (Co Pack) .6 - 1.2 oz (A) 3.0 - 6.0 oz (B)	<i>Bacillus Subtilis</i> (A) <i>Pyraclostrobin</i> (B) <i>Pyrazol</i> (B)	BASF	<ul style="list-style-type: none"> • Controls Rhizotonia and Fusarium spp. and suppresses Pythium spp. • Enhances root growth, seedling vigor and cold tolerance • Complementary biological and chemical modes of action deliver longer lasting residual disease control
PCT Sunrise® BioComplete II	In-furrow - 16 oz	<i>Azospirillum</i> <i>Bacillus Subtilis</i> <i>Bacillus Cereus</i> <i>Bacillus Licheniformis</i> <i>Cellulomonas</i> <i>Diazotrophicus</i> <i>Pseudomonas</i> <i>Streptomyces</i> <i>Has over twenty strains</i>	PCT	<ul style="list-style-type: none"> • Nitrogen fixation and release inhibitory compounds and enhance plant resistance against numerous diseases and pathogens • Root growth colonization and promotion of nutrient uptake • Solubilizes unavailable Phosphate, plant hormone stimulation and siderophore secretion • Growth enhancement, produce antifungal compounds and aid pathogen exclusion
QuickRoots®	Wettable Powder 7.2 grams per 80,000 seeds	<i>Bacillus amyloliquefaciens</i> <i>Trichoderma vierns</i>	Monsanto	<ul style="list-style-type: none"> • QuickRoots® is a microbial seed inoculant for improving availability of nitrogen, phosphorus and potassium resulting in improved yield potential