



# Soybean Seed Treatment.

## Fully loaded for maximum performance.

Pioneer® brand soybean varieties come loaded with top-end yield potential plus strong agronomic and defensive traits. Adding the Pioneer Premium Seed Treatment (PPST) package means those varieties are fully loaded, providing an extra level of protection against early season insects and diseases.

### PPST 2030 Biological/Polymer

Exclusive on Pioneer® brand soybeans, PPST 2030 offers a distinctive green polymer coating and biological organisms to help improve overall plant health and yield potential. The biological components stimulate rhizobia that occur naturally in the soil and/or are applied to the seed, which help increase nodulation and enhance nutrient availability and uptake. The high-quality polymer base provides superior adhesion of seed treatment components, minimizes dust off and helps enhance plantability.



Treated and untreated seedlings are the same variety and grown under identical field conditions. Source: Becker Underwood.

### Rhizobia Inoculant/Extender: PPST 120+

PPST 120+ is a premium on-seed, inoculant plus extender product developed exclusively for our PPST offering that delivers a high concentration of beneficial rhizobia bacteria to the soybean plant. Excellent companion product to PPST 2030 + FST/IST seed treatment package. The extender component helps prolong on-seed rhizobia life up to 120+ days to provide added flexibility from the time inoculant is applied to when the seed is planted.

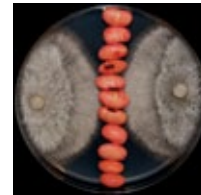
### FST-EverGol™ Energy

EverGol™ Energy fungicide treatment is a next generation technology with multiple modes of action, including two new active ingredients (Penflufen and Prothioconazole) that provide enhanced protection against a broad spectrum of early season diseases. These diseases include Rhizoctonia, Fusarium and Pythium. Utilizing a new, complimentary mode of action, this exciting PPST offering also supports good resistance management practices.

#### Untreated



#### Trilex



#### EverGol Energy



Note Rhizoctonia fungi growth engulfing untreated seed compared to seed treated with Trilex and new FST-EverGol Energy. Source: Bayer CropScience.

Crop	Disease	FST-EverGol Energy	Trilex® + Allegiance®
Soybean	<i>Rhizoctonia</i> Seedling Rot	++++	+++
	<i>Fusarium</i> Seedling Blight	+++	++
	<i>Pythium</i> Damping off	+++	+++
	Seedborne Fungi	++++	++

++++ Excellent Activity    +++ Good Activity    ++ Fair Activity  
 + Little Activity    - No Activity

Source: Bayer CropScience

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## FST-Allegiance® Fungicide

FST-Allegiance® fungicide helps control Pythium and is also available at a higher rate for improved protection against Phytophthora.

- Systemic control of Pythium damping off.
- Higher rate available for enhanced protection from Phytophthora.

## IST-Gaucho® Insecticide

IST-Gaucho® insecticide provides unmatched protection against destructive insects — acting both on contact to protect the roots and systemically to protect the plant.

- Improves plant health, leading to higher yield.
- Controls aphids, bean leaf beetles and seedcorn maggots.
- Suppresses aphid populations below the economic threshold for up to 65 days.
- Controls insects that spread viruses, like bean pod mottle and soybean mosaic viruses.
- Easy on beneficial insects.
- Protection from thrips and plant bugs.



**FST Only**

**FST/IST**

Seedlings on left treated with Fungicide only while seedlings on right treated with Fungicide/Insecticide. Seedlings from same field and grown under identical conditions.  
Source: DuPont Pioneer customer field in Illinois, May 2012.

## Enhanced Insect Protection Option: Poncho®/Votivo®

Poncho®/VOTiVO® seed treatment pairs a seed-applied insecticide with comprehensive nematode protection on the seed. This treatment protects early-season seedlings and roots from numerous insect and nematode pests. Poncho/VOTiVO employs multiple biological modes of action with a unique bacteria strain that lives and grows with young roots, creating a living barrier that helps keep soybean nematode species, including reniform, root-knot, and soybean cyst, from reaching the root. This seed treatment also provides control of many early-season insect pests including early-season aphids, overwintering bean leaf beetles, grape colaspis, seedcorn maggots, and wireworms.

### VOTiVO

- The bacteria colonize and grow around the roots to create a living barrier of protection.
- Immediate insect efficacy and protection from both first- and second-generation nematodes.

### Poncho/VOTiVO

- Helps control early-season aphids, overwintering bean leaf beetles and other early-season insects common in soybeans.
- Complements existing SCN-resistant soybean varieties for enhanced protection.
- Promotes higher yields through a healthier root system and a more vigorous and uniform crop.



## PPST Soybean Treatment Offerings

Category	Product	Benefits
Biological/Polymer	<b>PPST 2030</b>	Enhanced nitrogen availability resulting from improved nodulation helps soybean plants resist environmental stresses. Biological components incorporated into a distinctive green polymer coating to minimize dust-off and help improve seed flow through planting & seed handling equipment.
Rhizobia Inoculant/Extender	<b>PPST 120+</b>	Delivers high concentration of beneficial rhizobia bacteria for soybean plants. Extender product helps prolong rhizobia up to 120+ days.
Fungicide	<b>FST-EverGol™ Energy</b> <b>FST-Allegiance®</b>	Seed & seedling protection against seed-borne fungi causing seed decay and the soil-borne pathogens, Rhizoctonia solani and Fusarium. Systemic control of Pythium damping-off. Also available at higher rate for Phytophthora control.
Insecticide	<b>IST-Gaucho®</b>	Systemic protection of planted seeds and seedlings from damage caused by seedcorn maggot. Reduction in feeding damage caused by soybean aphids & overwintering bean leaf beetles.
Insecticide/Nematode	<b>Poncho®/VOTiVO®</b>	<b>Nematode Protection:</b> Combines early-season insect control with protection from all significant nematode types, including soybean cyst nematodes.