

Soltellus™ 2000L

Increase Crop Yield While Improving Soil Health

Overview

Introducing Soltellus™ polymer, a multifunctional, biodegradable, water soluble polymer that improves nutrient retention and availability, soil health and water quality—increasing crop yields by up to 10%. Better for you, your soil and the environment, Soltellus is a powerful and sustainable tool in your agricultural arsenal.

Benefits

IMPROVES NUTRIENT UPTAKE

With Soltellus, important nutrients are more readily accessible to plants over an extended period of time, without the use of non-biodegradable polymers.

IMPROVES SOIL HEALTH

Soltellus increases organic matter content in the soil, promoting microbial activity and improving overall soil health, versus non-biodegradable polymers and EDTA, typically used in slow-release fertilizer blends.

IMPROVES WATER QUALITY

Soltellus chelates Ca and Mg ions in hard water to reduce scale buildup, and provides a complimentary solution with other crop protection products.



10%

Up to 10% Yield Increases in
Soltellus™ Treated Crops

2-6X

Return on Investment



Soltellus™: Key Benefits to Corn Production

Farmers intensively manage their corn crop to produce maximal yields. This involves not only key decisions like hybrid selection, placement, and population, but also aggressive crop protection programs to ward off pests like weeds, insects and diseases.

Of paramount importance is supplying the crop a balanced fertility program of all 13 crop essential nutrients supplied by either applied fertilizers or released from the soil. These include N, P, K, Ca, Mg, S, Fe, Mn, Zn, Cu, B, Mo and Cl. Let's investigate key corn growth stages to see how nutrient needs change and how Soltellus can help provide optimal feeding and other benefits to the corn crop.



Planting to Emergence

From planting through emergence, the corn seedling survives and grows almost exclusively on the stored energy and nutrients in the seed. Therefore, it is imperative to activate the soil microbes and reduce stresses to the developing corn seedling. An application of Soltellus at or around planting stimulates the soil microbiome via carbon and nutrient feeding, which in turn interacts with the seedling to biochemically boost stress tolerance. This leads to more uniform emergence and a more actively growing stand.

SPECIFIC BENEFITS

- Water retention/drought tolerance
- Cold tolerance
- Enhanced protection from seedling rots
- More plants per acre emerging uniformly
- Positive growth effects (biomass, color, etc.)

V3-V6

As corn establishes roots and begins more active vegetative growth, its nutrient demand increases dramatically. An application of Soltellus from V3-V6 growth stage effectively chelates fertilizer and nutrient ions which reduces their potential for loss and increasing nutrient availability in the root zone. This is especially important if side-dress or broadcast fertilizer applications in season will occur.

SPECIFIC BENEFITS

- Increased nutrient availability at a critical time for corn development
- ~45 day half life of Soltellus supplies nutrients for exponential growth phase up to VT
- More biomass above-ground and bigger root systems; enhanced NDVI
- Increased root exudation further stimulates soil microbiome; more N-P-K cycling

VT-R3/Fungicide Timing

University data shows that up to 33% of N, K, Mg, B, Mn and Fe and up to 50% of P, S, Zn and Cu are taken up by corn AFTER the VT stage of growth. So making sure that the plant is supplied with balanced nutrition is critical to maximize yields even into the reproductive stages of corn. An application of Soltellus from VT-R3 will aid in supplying these key nutrients in needed amounts to finish out the crop.

SPECIFIC BENEFITS

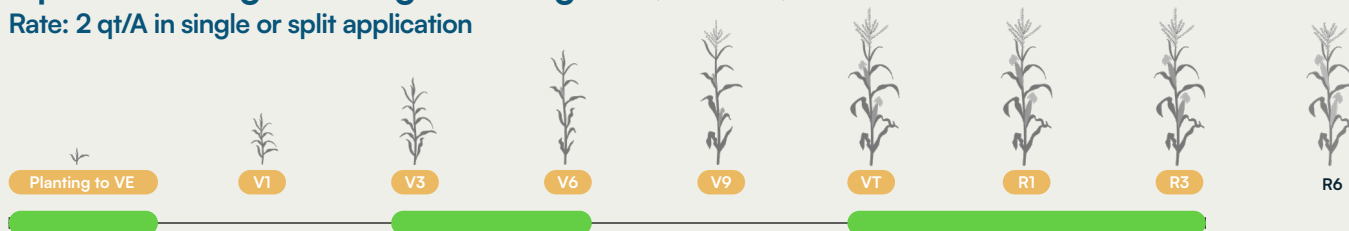
- Less tipback
- Bigger ears, more rows, kernels, test weight and yield
- Soltellus completely biodegrades by end of season
 - » No residues
 - » No microplastics
 - » Total nutrient release

Yield Performance History

- Across 21 corn trials in 2023 and 2024, Soltellus™ demonstrated a 90% win rate, an average yield increase of +7.1 bu/ac, and an average ROI of \$21.44 per acre, with an 86% chance of profitability.

Optimal Timing: Planting to Emergence, V3-V6, VT-R3

Rate: 2 qt/A in single or split application



Soltellus™: Key Benefits to Soybean Production

Soybeans have a higher nutrient demand per bushel than corn for the following nutrients: P, K, Ca, Mg, S, B, Cu, Fe, Mn and Zn, and Na. This means that balanced and metered feeding of nutrients is essential throughout the soybean's growing season to maximize yield. Thus applications of Soltellus are critical to chelate and release these key nutrients as soybeans move from vegetative to reproductive cycles. Let's examine how nutrient needs change and how Soltellus can positively impact soybeans during key growth stages.



Planting to Emergence

Soybean seedlings rely on stored seed reserves for early growth, but soil microbes still play a key role in stress tolerance and root development from the start. Soltellus supports this by feeding beneficial microbes while chelating Ca^{2+} and Mg^{2+} , keeping these cations soluble and preventing them from tying up phosphorus (P).

About a week after emergence, nodulation begins and increases into the reproductive stages, requiring adequate P, Ca, and micronutrients such as Mo and Co. By improving the availability of these nutrients and maintaining a more favorable root-zone environment, Soltellus enhances early nodulation success and supports stronger nitrogen fixation.

SPECIFIC BENEFITS

- Better emergence, uniformity and stands
- Improved stress tolerances
- Successful nodulation and better N fixation
- Early season growth advantages

V3-V6

Adding Soltellus to an early post-emergence herbicide application can enhance nodulation and nitrogen-fixation success as the plant transitions into rapid vegetative growth. During V3—V6, soybean nutrient demand increases sharply, and microbial activity around the root system remains a key driver of nutrient cycling and nodule function.

Just as important, Soltellus provides strong chelation and nutrient-release benefits at this stage. By binding Ca^{2+} , Mg^{2+} , and critical micronutrients, Soltellus prevents precipitation and reduces tie-up with P, keeping these nutrients soluble and accessible as roots expand and metabolic activity rises.

SPECIFIC BENEFITS

- Balanced and optimal nutrient supply
- Ability to temporarily bind heavy metals, reducing root toxicity and stress
- Reduces antagonism for more consistent crop protection product performance

R1-R3/Fungicide Timing

Unlike corn, soybeans can still add yield through filling pods and developing seeds late in the season. As a result, continued nutrient supply is critical. Applying Soltellus with a reproductive stage fungicide spray, for instance, can help extend nutrient supply all the way to harvest.

SPECIFIC BENEFITS

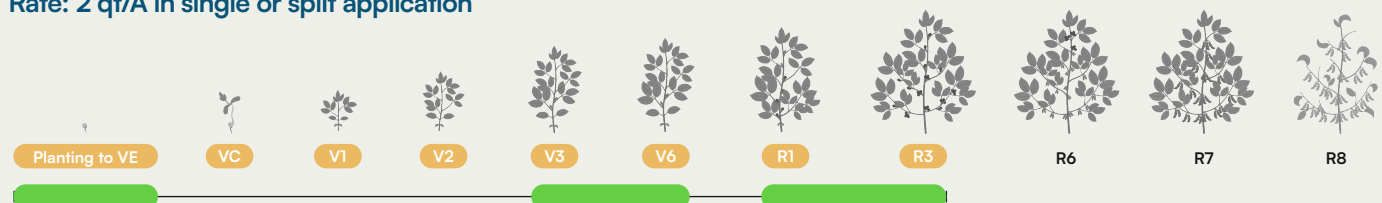
- Extends nutrient supply to adequately fill pods late-season to pods maximize yield
- Total biodegradability of Soltellus polymer leaves no residues
- Stress mitigation

Yield Performance History

- In-furrow use at planting (0.5 gal/A) was shown to enhance root and nodule establishment vs. untreated plants.
- Foliar applications showed less leaf scorch from crop protection products and quicker recovery.
- Application at early pod-fill (R3—R4) or combined with foliar micronutrient blends maximized chelation and nutrient uptake efficiency.
- Yield increases of 2-4 bu/A are common with occasional 5-10 bu/A increases seen. The 2-6X ROI has been confirmed in past field studies.

Optimal Timing: Planting to Emergence, V3-V6, R1-R3

Rate: 2 qt/A in single or split application



Application Scenarios on Key Row Crops

Use Rates

1 to 2 quarts per application

Acceptable Application Methods

In-furrow, 2 x 2, Soil Broadcast, Side-dress, Y-drop, Foliar (Aerial or Ground), Irrigation

Recommended Timing By Crop



Alfalfa

- Establishment year: at or prior to seeding
- Mature: After winter dormancy, and after subsequent cuttings (up to 5" regrowth)



Soybean

- At planting
- V3-V6
- R1-R3



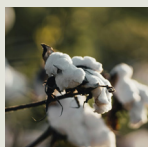
Corn/Silage

- At planting
- V3-V6
- VT-R3



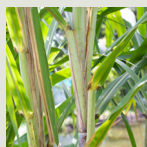
Sugarbeet

- At Planting
- 3rd through 6th Leaf Stage
- At Row Closure



Cotton

- At Planting through Seedling Stage
- Pin-head Square through Boll Set



Sugarcane

- At Planting
- Beginning of Tillering
- Beginning of Grand Growth Phase



Peanut

- At Planting
- At Pegging



Sunflower

- At Planting to emergence
- Stem elongation
- Pre-Budding to Budding



Potato

- At Planting
- At Tuber initiation
- Beginning of Tuber Bulking



Wheat/Cereals (Barley, Rye, etc)

- At Planting
- End of Tillering
- Flag Leaf Emergence



Sorghum/Milo

- At Planting
- 4th through 8th Leaf Stage

Performance Guarantee

We know Soltellus delivers and we back that promise to our growers. Purchase and apply 270 gallons (540 acres) and achieve a return on investment equal or greater than 2x the costs or we refund your money. Reach out for program details.

