Optimize ST

SOYBEAN

BREAKTHROUGH PERFORMANCE FOR SOYBEANS

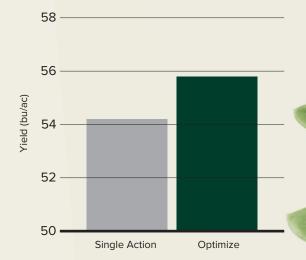
Optimize ST technology is a retailer-applied dual-action inoculant that delivers the benefits of a specially selected *Bradyrhizobium japonicum* inoculant along with LCO (lipochitooligosaccharides) technology – helping to improve your crop's potential by enhancing nutrient availability.

BENEFITS OF USING OPTIMIZE ST

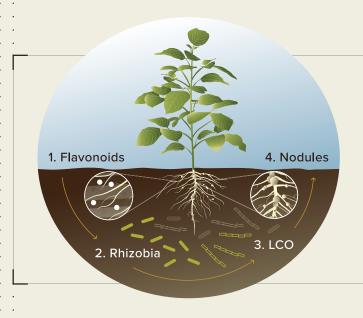
- Includes an elite strain of Bradyrhizobium japonicum and LCO to help with effective nodulation.
- Increased nitrogen fixation through nodule formation.
- Enhanced nutrient capability, which supports root and shoot growth.
- Broad seed treatment compatibility with up to 220 days on-seed stability depending on the seed treatment used.*

With Optimize ST, there is no lag time for plant development waiting for the LCO signal, as it is delivered on the seed. This gives the plant more time to grow (closing the communication gap between the plant and the rhizobia).

Optimize can help to increase yield potential compared to single-action competitors.



Source: Summary of 29 large-plot independent research trials in Eastern Canada from 2010–2011. Individual results may vary.



HOW THE TECHNOLOGY WORKS

- **1.** Needing nitrogen, the plant releases flavonoids to signal rhizobia.
- **2.** Sensing the flavonoids, the rhizobia signal LCO back to the plant.
- **3.** The plant can respond to the LCO, allowing the rhizobia to infect its roots.
- **4.** This symbiotic relationship creates nodules, which can help fix atmospheric nitrogen.

WHAT IS LCO TECHNOLOGY?

LCO is a molecule involved in the rhizobia legume nodulation system. When the LCO molecule is present at the time of planting, it allows for the nodulation process to begin, independent of variety, soil and environmental conditions. The benefit of earlier nodulation initiation is earlier nitrogen availability to the plant, which supports plant growth such as root and shoot development. The result of this early-season activity is better plant performance.

LCO is an important component in nodulation as a key driver in the communication between plants and rhizobia.

OPTIMIZE® ST APPLICATION

Optimize ST is applied to soybean seed by retailers. Please contact your seed retailer to order.

For complete application instructions, please refer to the Optimize Retail Application Guide available at **useOptimizeST.ca**.

Optimize ST for soybean is available in a liquid formulation, in two sizes to treat either 100 or 400 units per box.

Optimize ST liquid application

Package size and contents	Amount of seed treated/box	
2 x 1.6 L Optimize ST liquid, plus 2 x 475 ml Liquid Additive	100 units	5,000 lb
12.8 L Optimize ST liquid, plus 3.8 L Liquid Additive	400 units	20,000 lb

If you need more information or have questions about Optimize ST, contact Monsanto BioAg toll-free at

1-800-667-4944 or visit **Monsantobioag.ca**.

