

LALFIX START

SPHERICAL PULSES



PULSES



SPHERICAL GRANULAR



INOCULANT



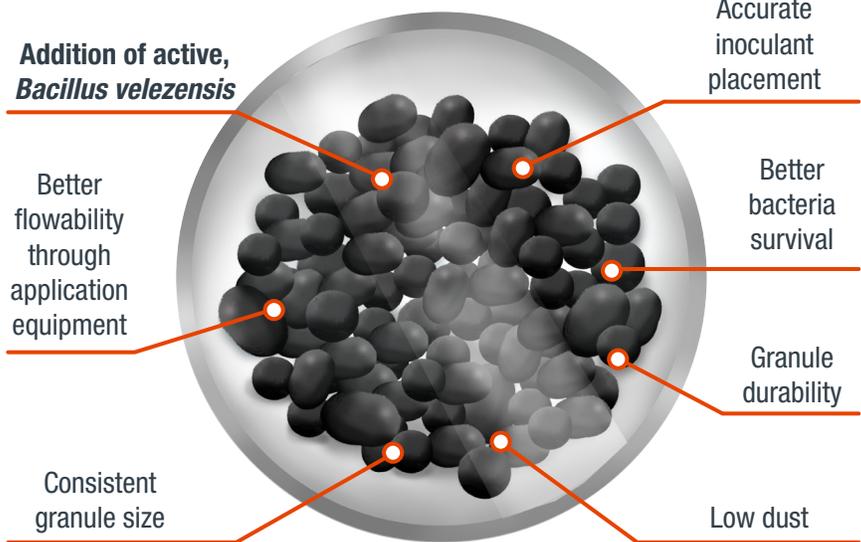
MULTI-ACTION PREMIUM PULSES GRANULAR INOCULANT

LALFIX® START SPHERICAL Pulses offers unmatched performance, durability, and ease of use. The granule's high porosity structure maintains the growth environment to protect and preserve its two unique strains of rhizobia and the additional microorganism, *Bacillus velezensis*.

Bacillus velezensis quickly colonizes the plant's roots unlocking available phosphorus and allowing it to be efficiently taken up by the plant. This bacterium is highly effective in all soil pH levels.

LALFIX START SPHERICAL Pulses promotes early nodulation and N fixation for better crop establishment and yields.

ADVANTAGES



CHARACTERISTICS

Active Ingredients

- 7.5×10^7 *Rhizobium leguminosarum* biovar *viciae* CFU/g
- 7.5×10^7 *Mezorhizobium ciceri* CFU/g
- 5×10^7 *Bacillus velezensis* CFU/g

Bulk Density

31.5 lbs per cu. ft., 0.505 kg/L

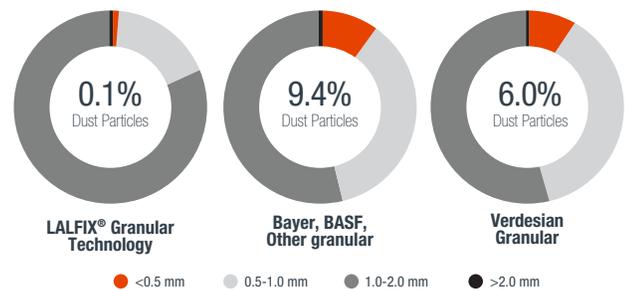
Package Sizes

- 27 lbs (12.2 kg) per bag
- 432 lbs (196 kg) per tote

Always read and follow label instructions.

SPHERICAL GRANULE: CONSISTENT SIZE & LOW DUST

AGVISE LABORATORIES, NORTHWOOD, ND - 2019



Microbial by nature

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LALLEMAND

ORGANIC ACIDS ACTION ON MINERAL PHOSPHORUS

+

PHYTASE ACTION ON ORGANIC PHOSPHORUS

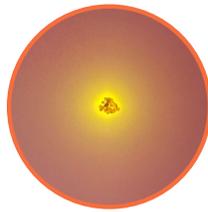
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INCREASED PHOSPHORUS AVAILABLE IN THE RHIZOSPHERE

Bacillus velezensis NCIMB 30322 colony

MODES OF ACTION

Bacillus velezensis
Phosphorus Solubilization



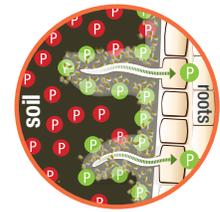
Below pH 5.2 ↔ Above pH 6.8

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Halo indicates bacterial phytase activity

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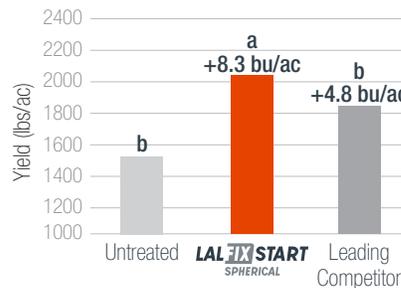
Solubilizes phosphorus: Up to 28% increase

TRIAL RESULTS - DRY PEAS

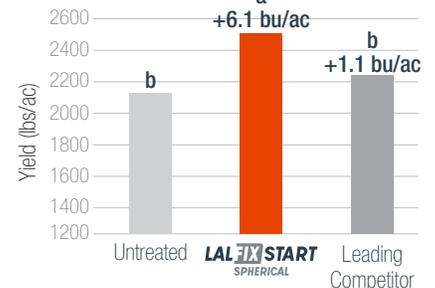
LALFIX START SPHERICAL GRANULE

- Conducted through Montana State University
- Conducted by Dr. Chengci Chen (Sidney) and Dr. Jed Eberly (Moccasin)
- Bushel advantage over untreated listed above bars

SIDNEY, MT



MOCCASIN, MT



4x Replications. Treatments with the same letters are not significantly different at $p < 0.1$. soil pH = 7.3 (Sidney), 7.6 (Moccasin)

APPLICATION TIPS

- Follow equipment manufacturer's calibration methods.
- Calibrate in field at time of product use.
- Environmental conditions may affect calibration set points and overall granular flowability. Check calibration regularly.
- Ensure hopper tank, metering system and delivery hoses are clean from moisture, fertilizer, and pesticide residue before calibration.
- Granules should be applied directly into the seed trench furrow with the seed.
- Application rates greater than recommended are not detrimental and increased application rates may be beneficial.

Reference chart below for specific row width and suggested application rates:

ROW WIDTH		RECOMMENDED RATE			AREA TREATED - ACRES	
in	cm	lbs/ac	kg/ac	kg/ha	BAG	TOTE
6	15	4.4	2	5	6.1	98
7	18	3.8	1.7	4.3	7.1	113.5
8	20	3.3	1.5	3.7	8.2	131
9	23	3.0	1.4	3.3	9.0	144
10	25	2.7	1.2	3.0	10.0	160
12	30	2.2	1.0	2.5	12.3	196.5

COMPATIBILITY

LALFIX® START SPHERICAL Pulses is compatible with seed-applied treatments and other in-furrow applications. If you have a compatibility question, contact your Lallemand Plant Care representative for more information.

About Lallemand Plant Care

For over 100 years, Lallemand has been an expert in yeast and bacteria manufacturing. It is now a global leader in the development, production, and marketing of microorganisms for various industries. Using sound science and know-how, Lallemand Plant Care provides effective microbial-based solutions that deliver agronomic, economic, and sustainable value to growers.