

NODULATOR® N/T LQ

Liquid Biostacked® soybean Inoculant

Bradyrhizobium japonicum
Bacillus subtilis



Registration Number 2008021A Fertilizers Act

Sufficient to treat 4544 kg (10 000 lbs. / 200 x 50 lb. units) of Seed

Net contents: 12.8 kg

Store inoculant in a cool (below 20°C), dry place, out of direct sunlight. DO NOT ALLOW TO FREEZE

DIRECTIONS FOR USE

Before using this product, read all the following instructions carefully.

IN-FURROW USE

Prior to application: Add the contents of the enclosed bottle of liquid *Bacillus subtilis* (400 mL) to the larger Rhizobium liquid inoculant bladder (12.4 L). Shake well to thoroughly mix.

Application rate: 30 mL of Rhizobium/Bacillus mixture (30 g) per 304 meters of row. The Rhizobium/Bacillus mixture must be diluted with cool, clean water and applied as indicated in the table below. Use the table to estimate application volumes for individual row widths.

Row Width	Recommended Application Rate*	Co-pack Unit Treats
38 cm (15")	2640 mL/ha (1070 mL/acre)	4.8 ha (12 acres)
51 cm (20")	1960 mL/ha (790 mL/acre)	6.4 ha (16 acres)
76 cm (30")	1280 mL/ha (520 mL/acre)	10.0 ha (24 acres)
91 cm (36")	1130 mL/ha (460 mL/acre)	11.2 ha (28 acres)

* The indicated volume of Rhizobium/Bacillus mixture should be diluted with water and applied at 45-90 litres per hectare for low-volume sprayers, or 90-180 litres per hectare for larger sprayers. For a known row width, ensure the equipment is calibrated to deliver the correct application volume.

- A. CLEAN.** Ensure that the liquid application machinery is fully flushed of chemical residues before adding inoculant to spray tanks.
- B. CONFIGURE.** Configure the sprayer for in-furrow application. Select and install an appropriate flow regulator (orifice) disk in order to achieve a constant, uninterrupted stream of liquid into the furrow. Carefully adjust the position and flow of the liquid inoculant so that it falls directly onto the seed surface prior to covering in the furrow. Product efficacy may be limited if the inoculant is either applied above, or to the side of the seed in the furrow.
- C. MIX.** Prior to use, shake the product well in order to re-suspend any settled out components. Do not open the unit until required. Pour the complete contents into the spray tank. Adjust the volume of the spray tank to the required level using cool, dechlorinated water (Refer to In-Furrow Application Table above). Ensure that the inoculant is thoroughly mixed prior to use. To avoid any settling out of the nitrogen fixing bacteria, ensure that the spray tank volume is periodically agitated. The diluted inoculant must be used within 24 hours. Do not allow diluted tank mix to exceed 25°C.
- D. SELECT RATE.** The application rate per acre will vary according to row width. For guidance regarding specific application details and treatable areas refer to In-Furrow Application Table above.

ON-SEED USE

Prior to application: Add the contents of the enclosed bottle of liquid *Bacillus subtilis* (400 mL) to the larger Rhizobium liquid inoculant bladder (12.4 L). Shake well to thoroughly mix.

- **Planter box application:** Shake the Rhizobium / Bacillus mixture well, and apply to the seed at the rate of 77 mL of inoculant (77 g) per 27.2 kg (1 bushel) of seed.
- **Bulk seed application :**
 1. Remove cap. Insert gasket into valve body. Attach flow valve and hose to bladder.
 2. Invert bladder above treatment area so the end of the hose is just above the seed (for accurate application rates, ensure hose is straight when dispensing inoculant).
 3. Adjust flow valve to match output of grain auger. (See table below).
 4. To ensure adequate mixing of seed and inoculant it is recommended to run auger at 50% capacity.
 5. Assess the application rate several times during inoculation to ensure correct target flow rate.

Plant all treated seed as soon as possible, and within a maximum of 10 days following inoculation. Keep treated seed as cool as possible (1 - 20°C).

Flow Valve Setting	Inoculant Flow Rate	Seed/Auger Flow Rate		
	mL/min	Kg/min	Lbs/min	Approx Bu (50 lb units)/min
1	360	127	279	5(6)
2	860	303	667	11(13)
3	1340	473	1041	17(21)
4	1660	586	1289	22(26)
5	1780	628	1382	23(28)
6	2030	717	1577	26(32)

STORAGE/PRECAUTIONS

Store below 20°C. Do not allow product to freeze. Ensure that inoculant is stored correctly in the field prior to use. Once opened, use within 24 hours. Plant seed as soon as possible after inoculation and within the maximum stated period above. Do not use inoculant that is past its expiry date or that has not been correctly stored. Unless otherwise directed, do not mix inoculant with caustic fertilizers or pesticides. If soils are especially dry at planting, any risk of damage to the inoculant can be minimized through light irrigation.

SEED TREATMENT COMPATIBILITY

Some seed treatments are harmful to liquid inoculants. Contact your dealer/manufacturer for current details. Please observe planting window recommendations for optimal responses.

GUARANTEE

This product contains a minimum of 3.0×10^9 viable cells of *Bradyrhizobium japonicum* per gram and 2.2×10^{10} viable cells of *Bacillus subtilis* per gram.

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