Cell-Tech® Multi-Pulse granular

nitrogen-fixing inoculant for

pea, lentil, chickpea, faba bean and vetch

ATTENTION:
This Specimen label is provided for general information only.

CONTAINS NONPLANT FOOD INGREDIENT(S)

ACTIVE: 1 x 10^8 viable cfu/g *Rhizobium leguminosarum* bv. *viciae*
1 x 10^8 viable cfu/g *Mesorhizobium ciceri*

INERT: peat-based carrier >99%

Warning

May form combustible dust concentrations in air.

Read the entire label before using this product.
Use only according to label directions.

How it Works

The active ingredients in Cell-Tech® Multi-Pulse granular nitrogen-fixing inoculant are the bacterium *Rhizobium leguminosarum* bv. *viciae* (Pea, lentil, faba bean, vetch), and *Mesorhiozboium ciceri* (chickpea). *Rhizobium leguminosarum* bv. *viciae* and *Mesorhizobium ciceri* form root nodules which convert, or fix, nitrogen in the air into forms the plant can use.

Directions for Use

Shipping and stacking of Cell-Tech® Multi-Pulse granular may cause some granules to become compacted. Loosen compacted granules before using this product.

Screen granular product when filling tank or seed cart.

Cell-Tech® Multi-Pulse granular should be applied directly with the seed in the seed row using a granular tank for application. Application rates will vary according to row spacing; refer to Table 1 for details. Apply in-furrow only. Do not band. Do not mix Cell-Tech® Multi-Pulse granular in the same tank with fertilizers, granular pesticides, or seed. Cell-Tech® Multi-Pulse granular can be used with pesticide treated seed. Do not leave Cell-Tech® Multi-Pulse granular in tank or seed cart overnight. Be sure to calibrate your equipment to deliver the correct amount of Cell-Tech® Multi-Pulse granular per acre for your row spacing, refer to Table 1 for details. Under humid conditions, reduce the weight of Cell-Tech® Multi-Pulse granular per tank and check flow on a regular basis.

NON-PLANT FOOD INGREDIENT
Not a fertilizer substitute

Calibrate with approximately 50 kg (110 lbs) before adding more inoculants to the tank or seed cart. A maximum of 454 kg (1000 lbs) per tank should be used.

- Before using, make sure the hopper, rotor, feed mechanism, and calibration equipment are free from chemical residue, fertilizer, and debris.
- Make sure that the tubing to the planting shoe is as straight and vertical as possible.
- If using an air seeder, ensure that the tank screen is clean when filling tank or seed cart. Follow calibration instructions supplied by the air cart manufacturer. Check flow regularly.
- If augering, please do so at low speeds to avoid damage to Cell-Tech® Multi-Pulse granular.

Table 1. Application rates for Cell-Tech® Multi-Pulse granular nitrogen-fixing inoculant for pea, lentil, chickpea, faba bean and vetch

Row spacing (cm)	15.2	17.8	20.3	22.9	25.4	30.5	38.1
Row spacing (in)	6.0	7.0	8.0	9.0	10.0	12.0	15.0
Application rates (kg/ha)	6.1	5.3	4.6	4.0	3.7	3.1	2.4
Application rates (lb/ac)	5.5	4.7	4.1	3.6	3.3	2.7	2.2

Note: The bulk density for Cell-Tech® Multi-Pulse granular is approximately 0.6 g/cm^3 (37 lb/ft^3).

novozymes®

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Product of Canada

Cell-Tech® Multi-Pulse granular

nitrogen-fixing inoculant for

pea, lentil, chickpea, faba bean and vetch

Special Considerations

Environmental conditions can change the flowability of Cell-Tech® Multi-Pulse granular.

- Do not allow Cell-Tech® Multi-Pulse granular to get wet or to dry out.
- In humid conditions, check and clean metering system regularly to ensure consistent flow.

Where to use for Maximum Benefit

Higher nitrogen fixation with Cell-Tech® Multi-Pulse granular occurs in soils that are low in available forms of nitrogen and populations of *Rhizobium leguminosarum* bv. *viciae* or *Mesorhizobium ciceri.*

Benefits of using Cell-Tech® Multi-Pulse granular may be limited on:

Soils with high nitrogen levels or with high application rates of nitrogen fertilizer.

Applicators and Other Handlers

The active ingredient in Cell-Tech® Multi-Pulse granular nitrogen-fixing inoculant are *Rhizobium leguminosarum* bv. *viciae* (pea, lentil, faba bean and vetch) and *Mesorhizobium ciceri* (chickpea) viable cells. Eye or skin contact, inhalation, or ingestion should be avoided. Wear standard protective clothing and equipment including gloves and safety glasses. Ensure adequate ventilation. Where exposure through inhalation may occur, use respiratory protective equipment. This product contains microorganisms that may have the potential to provoke sensitizing reactions; use appropriate personal protective equipment (PPE) to reduce exposure. Sensitized individuals should wear a NIOSH-approved respirator. In case of contact with skin or eyes, immediately flush exposed areas with plenty of water. Get medical attention if irritation occurs.

Storage and Disposal

The active ingredient in Cell-Tech® Multi-Pulse granular nitrogen-fixing inoculant is a living organism and requires specific storage conditions to ensure viability and product performance. To maintain product viability:

- Store bags under cool conditions, <20°C (68°F), away from sunlight and direct heat sources.
- Minimize temperature fluctuations.
- Avoid freeze/thaw cycles.
- Keep container closed when not in use.
- Use before the expiration date. The expiration date is valid only for unopened bags stored under the conditions listed above.
- Use this product only in well-ventilated areas.

Unused Cell-Tech® Multi-Pulse granular should be disposed of in accordance with applicable Federal, state/provincial, and local requirements. Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html.

Limited Warranty

The seller warrants that this product contains a minimum number of *Rhizobium leguminosarum* bv. *viciae* and *Mesorhizobium ciceri* viable cells as specified on this label. The Seller makes no other warranty expressed or implied as to product viability or performance since product storage, use and growing conditions are beyond the Seller's control. Seller's guarantee is limited to the terms set out on the label and subject thereto. Buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition. If this product does not perform as warranted above, and to the extent consistent with applicable law, customer's sole remedy for breach of warranty shall be replacement of the product or refund of the purchase price paid, at the option of the seller.

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