**Nodulator XL Self-adhering peat inoculant technology sheet**

**High-performance inoculant for value and yield boosts of 3% to 8% in peas and lentils.**

- Highly efficient and more active strain of rhizobia.
- Built-in adhesive qualities make inoculation quick and simple.
- Eliminates the need for commercial sticking agents.
- Reliable self-adhering inoculant that can be applied dry, slurried or damp at the time of seeding.

<table>
<thead>
<tr>
<th>Bioactive ingredients</th>
<th>Crops</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Rhizobium leguminosarum</em> biovar <em>viceae</em>, strain 1435</td>
<td>Peas</td>
<td>Dry, slurry or damp inoculation on seed.</td>
</tr>
<tr>
<td><strong>Formulation</strong></td>
<td>Lentils</td>
<td></td>
</tr>
<tr>
<td>Self-adhering sterile peat</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>One case contains</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 x 1.2 kg packages</td>
<td></td>
<td></td>
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<tr>
<td><strong>Storage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protect from temperatures above 25°C and away from direct sunlight.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Inoculant activity**

The product provides a reliable inoculant that is guaranteed to contain a minimum of $1 \times 10^9$ rhizobia per gram.

Nodulator® XL inoculant contains *Rhizobium leguminosarum* biovar *viceae*, a highly efficient, more active strain of rhizobium, selected to perform on pea and lentil crops for increased yield potential.

The rhizobia help to maximize nodulation resulting in increased fixation of nitrogen for higher yield and protein potential.

In 72 combined research trials over multiple years in Western Canada, Nodulator XL outyielded competitive products more than 80% of the time. Trial results showed yield increases of 3% to 8% and more, when compared to yields from competitive products.

**Uninoculated peas**

Source: Becker Underwood trials, Southern AB, 2012

**Nodulator XL peas**

**Uninoculated lentils**

Source: BASF research farm, Lethbridge, AB, 2013

**Nodulator XL lentils**

Source: BASF research farm, Lethbridge, AB, 2013
Sustainability
The organism formulated into this product is classified as *Rhizobium leguminosarum* biovar *viceae*. All of the organisms used by BASF products are common to Canadian soils. No BASF inoculant products sold in Canada contain GMO material.

Performance
Research shows that Nodulator® XL, in peas and lentils, boosts yields up to 8% over the competitor.

**Application rates**

**One case will treat 110 bushels of seed.**

The standard rate of application is 1.2 kg per 600 kg of seed.

**Directions for use**

After opening pack, work gently between fingers to disperse contents. The addition of water at the time of application will optimize the activity of the integral sticker, resulting in even seed coverage with the inoculant.

**Slurry application**

Add complete pack contents to approximately 2 L of clean, dechlorinated water and stir well in a clean container to form a lump-free slurry. Do not allow slurry to settle out. Pour onto the seed and mix thoroughly to ensure the seeds are evenly coated. Allow seed to dry before further handling.

**Damp inoculation**

Apply just enough water to slightly dampen seed (2 ml/kg). Mix the damp seed thoroughly with the inoculant so that they are evenly coated.

**Dry inoculation**

Pour the correct amount of inoculant onto thin layers of seed in the drill hopper and mix thoroughly to evenly coat seed. For bulk seed handling systems, the inoculant can be metered directly onto augured seed.

**Application tips**

When applied as directed, the product has a 24 hour on-seed survivability. Sow seeds within 4 to 6 hours of inoculation. If not sown within 24 hours, seed must be re-inoculated.

If seed is of low moisture content, use either slurry or damp application methods.

The product can be used as a stand-alone on virgin sites and/or stressed soils.

**Follow crops**

No follow-crop restrictions.

**Seed treatment compatibility**

This inoculant is compatible with most seed treatments when dry and can also be applied to specific treated seed when wet.

Please see respective product labels or call AgSolutions® Customer Care for further information.

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**Increased Yield:**

**Nodulator XL vs Competitor vs Uninoculated control**

<table>
<thead>
<tr>
<th></th>
<th>90%</th>
<th>100%</th>
<th>110%</th>
<th>115%</th>
<th>120%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nodulator XL</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitor</td>
<td>112%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uninoculated Control</td>
<td>100%</td>
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</tbody>
</table>

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**Source:** Independently generated field data from 87 station years (peas) and 84 station years (lentils).

(n sites x n years)