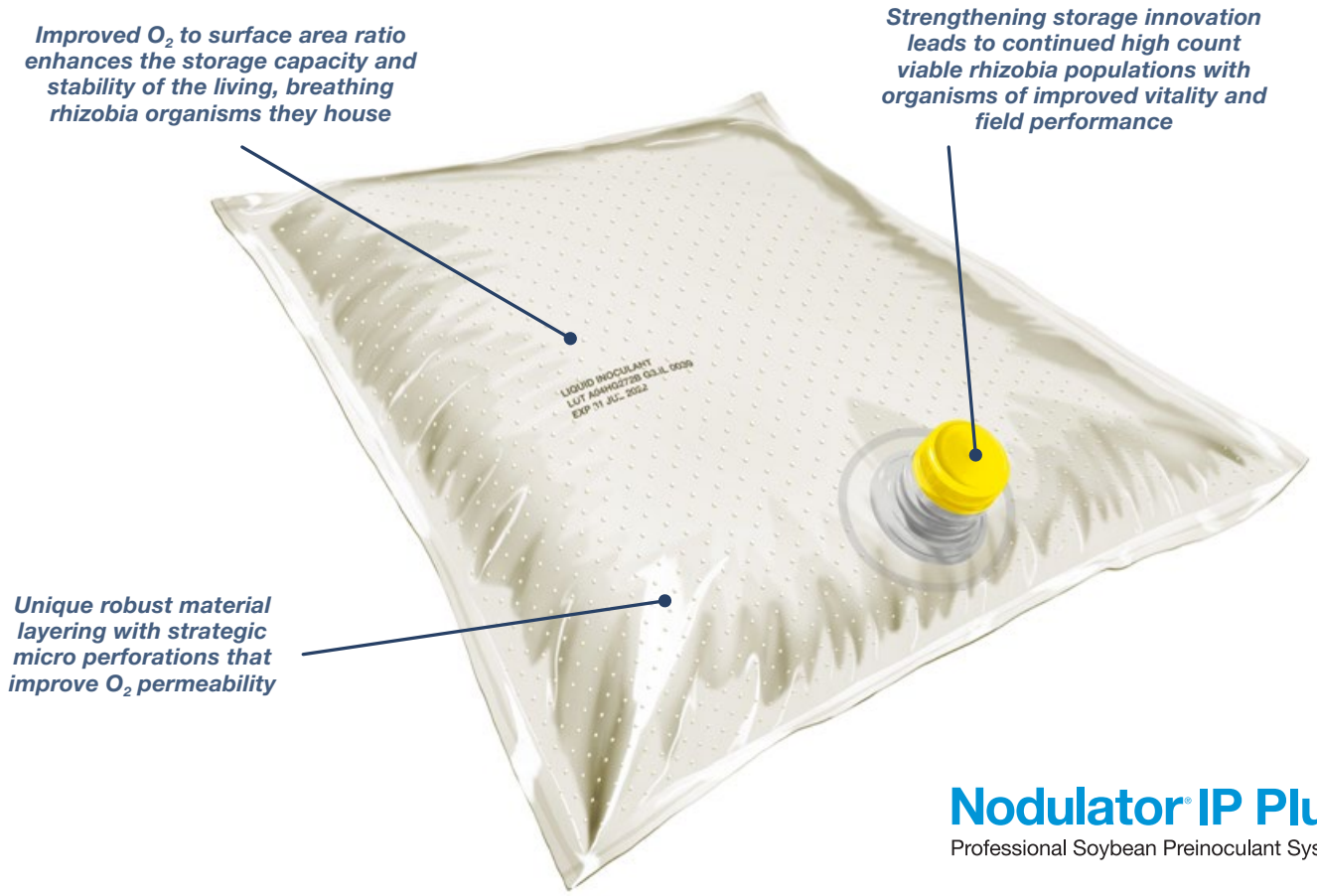
Soybean Preinoculant System
Professional Application Guidelines

Preinoculant systems provide soybean growers the convenience of bulk soybean seed, treated at a professional retail treatment site. They are also ideal for those who need high-quality Biostacked® products with longer on-seed survivability of rhizobia. Part of the effectiveness of preinoculants is the material and design of the new bladder system in which the inoculant is packaged. BASF is very proud to bring to market a new, patented and exclusive to BASF bladder for the inoculant within Nodulator® IP Plus. This unique bladder of inoculant is the base of the application. The bladder of conditioner extends the days on seed and the bottle of added biofungicide organisms, which is packaged in a separate case, is required for seedling disease suppression.

NEW exclusive bladder system



Nodulator® IP Plus
Professional Soybean Preinoculant System

BASF
We create chemistry

The components of Nodulator IP Plus.

1X IP Plus inoculant bladder

1X IP Plus conditioner bladder

+

1X Velondis® Plus bottle (packaged separately)

What do Biostacked inoculants deliver to the crop?

Robust population of rhizobia for root nodulation and nitrogen fixation

100 days of extended on-seed survivability for pre-season treating

Dual strain biofungicide strengthening root architecture

BASF Biostacked preinoculants for soybeans provide growers with biologicals that support the vital crop establishment timing each spring. From nodulation and nitrogen fixation to disease suppression, these biologicals impact early-season vigour, root architecture and the improvement of water and nutrient uptake.

Benefits of Nodulator IP Plus.

- A total application rate of 134.4 ml/100 kg of seed (130 ml Nodulator IP Plus + 4.4 ml of Velondis Plus) provides better performance and a smooth transition through treatment equipment to reduce bridging of seed and increase convenience
- Convenient on-seed survivability of up to 100 days

Packaging and application rate.

	Nodulator IP Plus (inoculant + conditioner)	**Velondis Plus**[1] (biofungicide)	**Nodulator IP Plus** (inoculant + conditioner)	**Velondis Plus**[1] (biofungicide)
Case size	1 x 3 L IP Plus liquid inoculant 1 x 3 L IP Plus conditioner	1 x 200 ml bottle	1 x 6 L IP Plus liquid inoculant 1 x 6 L IP Plus conditioner	1 x 400 ml bottle
140k units/case	200	200	400	400
Rate/100 kg seed	130 ml[2]	4.4 ml	130 ml[2]	4.4 ml

[1] Velondis Plus is a PMRA registered biofungicide and is packaged separately.

[2] Please refer to the product label for application rates without pesticides, as 134.4 ml/100 kg is not sufficient for even seed coverage and requires additional liquid volume (water and/or pesticide).

Application guidelines and best practices.

Store this product between 2ºC to 10ºC and away from direct sunlight while it is in retail packaging.

Do not allow this product to freeze. Do not use inoculant that is past its expiry date or has not been correctly stored. Products must be used (applied to seed) within 24 hours of being opened.

When applying as a standalone treatment (no seed treatment).

Prepare the slurry as directed on the label with the appropriate volumes for each treatment component as follows.

	IP Plus inoculant bladder	IP Plus conditioner bladder	Velondis Plus bottle	Add cool non-chlorinated water[3]
200 SU case	3 L	3 L	0.2 L	8.8 L
400 SU case	6 L	6 L	0.4 L	17.6 L

Mixing order.

1. With the slurry agitator (or re-circulation pump) turned on, thoroughly mix IP Plus liquid inoculant with the appropriate volume of IP Plus conditioner.
2. Add the separately packaged Velondis Plus biofungicide and **non-chlorinated**[3] water.
3. Continuous and gentle agitation throughout the mixing and application process will enhance application and survival characteristics.

This non-pesticide containing slurry should ideally be used during the same day of mixing and within a maximum of 24 hours. It is important that the temperature of the slurry does not exceed 20ºC.

Calibrate pumps and metering system to apply 326 ml/100 kg to seed.[4]

[3] Municipal water sources do contain chlorine; however, it can be used in combination with biologicals if allowed to sit exposed to the environment (e.g. in open tank) for a minimum of 24 hours to allow for chlorine to gas off.

[4] Note: While you may apply Nodulator IP Plus + Velondis Plus for soybeans at a rate as low as 134.4 ml/100 kg of seed without the addition of water, both the evenness of seed coverage and rhizobial survival will be enhanced when total volume of liquid applied to the seed is 326 ml/100 kg of seed.

When applying in combination with a seed treatment.

Nodulator IP Plus preinoculant plus Velondis Plus for soybeans must be applied at a rate of 134.4 ml/100 kg of seed with no additional water, as long as the total liquid volume being applied (Nodulator IP Plus plus all other seed treatment actives/polymers/colourants) is at least 326 ml/100 kg of seed.

- Both a wet sequential (also known as simultaneous), using a separate application tank for the active chemicals/polymers/colourant (preferred), or a tank mix can be used as application methods for this product
- If a tank mix application method is used, do not slurry the mixture for greater than 4 hours prior to application to the seed
- For extended days on-seed, we only recommend a wet sequential application and keeping the inoculant in a separate application tank. In this tank, this inoculant must be applied within 24 hours

Storage of treated seed.

In storage, keep seed treated with Nodulator IP Plus + Velondis Plus **as cool as possible** (not exceeding 10ºC) and away from direct sunlight. For more uniform temperature control, store treated seed as close to floor level as possible in a dry, covered and unheated storage area. If seed is not planted within the maximum safe planting window (100 days), depending on the combination of components being applied, the seed must be re-inoculated.

Guidance notes.

- Ensure slurry is made up correctly and that no additional non-approved components are added
- Use complete inoculant units (do not store "partially used" inoculant bladders for greater than 24 hours, and even in such situations, store at 2ºC to 10ºC during this period)
- If pesticides are used, ensure you follow the planting window recommendations
- Ensure seed is clean to reduce bridging
- Load treated seed into gravity wagon, tenders, etc. as needed. Occasional movement of the load head will reduce dry down time and potential for seed bridging
- Attach Velondis Plus and Nodulator IP Plus seed tags to treated unit as per regulatory requirements
- It is critical to keep inoculated seed cool and out of direct sunlight (e.g. tarped) if you are not planting it immediately to ensure maximum survival of the biological components that have been placed on the seed
- At the end of the day, rinse (with warm water, no detergents) the tank, pump and lines

Please note that this product is regulated by the CFIA under the *Fertilizer's Act.* As such, CFIA agents have the right to take the product and treated seed to ensure compliance with regulatory standards.

For updated seed treatment compatibility or more information on Nodulator IP Plus, please contact your local BASF Sales Representative or call **AgSolutions®** Customer Care at 1-877-371-BASF (2273).

Always read and follow label directions.

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