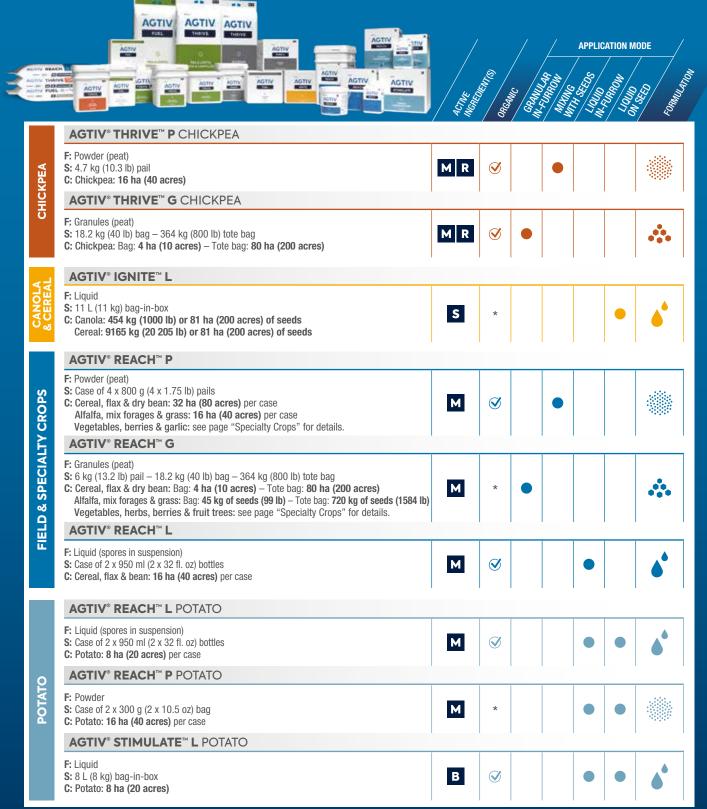


AGTIV

DESIGNED BY NATURE. PERFECTED BY SCIENCE.

AGTIV RELIABLE INOCULANTS

		/ 2/1/1	/ & / ° 🔾	-/ '2' '2	/ 101/ 4
	AGTIV° THRIVE™ P PEA & LENTIL				
	F: Powder (peat) S: 4.7 kg (10.3 lb) pail – 2.4 kg (5.3 lb) pail C: Pea & faba bean: Pail 4.7 kg: 16 ha (40 acres) – Pail 2.4 kg: 8 ha (20 acres) Lentil: Pail 4.7 kg: 24 ha (60 acres)	M R	⊗	•	
	AGTIV° THRIVE™ G PEA & LENTIL				
Z	F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Pea, lentil & faba bean: Bag: 4 ha (10 acres) – Tote bag: 80 ha (200 acres)	M R	⊗ •		•••
BEAN	AGTIV° THRIVE™ PEA & LENTIL				
FABA	F: Liquid S: Combo box: 8 L (8 kg) bag-in-box + 4 x 950 ml (4 x 32 fl. oz) bottles C: Pea, lentil & faba bean: 32 ha (80 acres)	M R	⊗	•	6 *
ΙĖ	AGTIV° FUEL™ P PEA & LENTIL				
PEA, LENTIL &	F: Powder (peat) S: 4.7 kg (10.3 lb) pail C: Pea & faba bean: 16 ha (40 acres) – Lentil: 24 ha (60 acres)	R	⊗		
•	AGTIV° FUEL™ G PEA & LENTIL				
	F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Pea, lentil & faba bean: Bag: 4 ha (10 acres) – Tote bag: 80 ha (200 acres)	R	⊗ ■		•
	AGTIV° FUEL™ L PEA & LENTIL �				<u> </u>
	F: Liquid S: 8 L (8 kg) bag-in-box C: Pea, lentil & faba bean: 32 ha (80 acres) or 6530 kg of seeds (240 bu)	R	⊗	•	• 6
	AGTIV° THRIVE™ P SOYBEAN				
	F: Powder (peat) S: 4.7 kg (10.3 lb) pail C: Soybean: 16 ha (40 acres)	M R	⊗	•	
	AGTIV° THRIVE™ G SOYBEAN				
	F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Soybean: Bag: 4 ha (10 acres) – Tote bag: 80 ha (200 acres)	M R	*		•••
	AGTIV° THRIVE™ SOYBEAN				
SOYBEAN	F: Liquid S: Combo box: 8 L (8 kg) bag-in-box + 2 x 950 ml (2 x 32 fl. oz) bottles C: Soybean: 16 ha (40 acres)	M R	⊗	•	6
OYE	AGTIV° FUEL™ G SOYBEAN				
Š	F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Soybean: Bag: 4 ha (10 acres) – Tote bag: 80 ha (200 acres)	R	*		•••
	AGTIV° FUEL™ L SOYBEAN €				
	F: Liquid S: 8 L (8 kg) bag-in-box C: Soybean: 16 ha (40 acres) or 5680 kg of seeds (250 units)	R	⊗	•	• 6
	AGTIV° ENRICH™ SOYBEAN �				
	F: Liquid S: Combo box: 8 L (8 kg) (<i>Bradyrhizobium</i>) bag-in-box + 300 ml (<i>Bacillus</i>) bottle C: Soybean: 16 ha (40 acres) or 5680 kg of seeds (250 units)	R B	⊗	•	• 6



See last page for complete product recommendations.

ACTIVE INGREDIENTS

MYCORRHIZAE PTB297 Technology B BACILLUS

PTB180 Technology PTB185 Technology

C: Crop/Coverage

S: Size

F: Formulation

★ Eligible with EXTENDER[™] L for AGTIV[®] inoculants For organic use

* Non eligible for organic use. Contact us for more details.



PTB160 Technology (pea & lentil) PTB162 Technology (soybean) *Mesorhizobium ciceri* (chickpea)







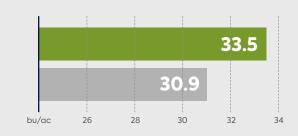
Learn more at PTAGTIV.COM/en/products





- ∀ Highly-effective strain
- ✓ Early Puptake
- Better legume productivity

2.5 bu/ac 8.4%



AGTIV® THRIVE™ PEA & LENTIL

COMPETITOR

Average yield increase 65 sites over 12 years, Canada





- ∀ High-quality active ingredients
- ✓ Increased nodulation
- ⊗ Better pod fill

3 4 bu/ac 6.1%



AGTIV® THRIVE™
PEA & LENTIL

COMPETITOR

Average yield increase 24 sites over 10 years,

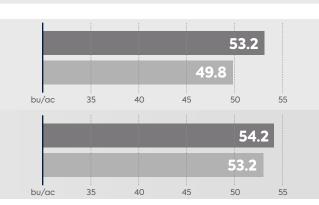




- More nodules and larger leaves
- ✓ Quicker row closure
- ✓ Fuller pods

3 4 bu/ac 6.8%

1.0 bu/ac



AGTIV® THRIVE™ SOYBEAN

COMPETITOR

Average yield increase 93 sites over 8 years, Canada and Europe

AGTIV® ENRICH™ SOYBEAN

COMPETITORS

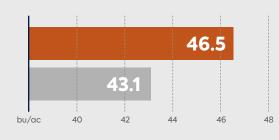
Average yield increase 5 third-party trials over 2 years, Canada





- More branching

3 4 bu/ac 7.9%



AGTIV° THRIVE™ CHICKPEA

COMPETITOR

Average yield increase 4 sites over 4 years, Canada





- Mitigated abiotic stresses
- ✓ Increased photosynthesis rate
- Better establishment, growth and yield

2.5 bu/ac 6.7%

3 8 bu/ac



AGTIV° IGNITE™

UNTREATED

Average yield increase 27 sites over 5 years, Canada



Average yield increase 8 sites over 2 years, Canada







ON-FARM MIXING WITH SEEDS

AGTIV° THRIVE™ P PEA & LENTIL



ACTIVE INGREDIENTS:

MYCORRHIZAE – PTB297 Technology

Rhizophagus irregularis: 2750 viable spores/g

RHIZOBIUM – PTB160 Technology

Rhizobium leguminosarum biovar viciae: 1.6 x 109 active cells/g

INERT INGREDIENT: Peat

PARTICLE SIZE: < 1 mm (18 mesh)
BULK DENSITY: 400 g/L (1 lb/US dry qt)

SIZE	COVERS	CODE
4.7 kg (10.3 lb) – pail	Pea & faba bean: 16 ha (40 acres) Lentil: 24 ha (60 acres)	710303
2.4 kg (5.3 lb) - pail	Pea & faba bean: 8 ha (20 acres)	710313

DIRECTIONS FOR USE

DRY APPLICATION — Mix evenly with seeds at the bottom of the grain auger while filling drill, or directly in the drill box. Ensure uniform seed coverage is obtained.

Peas & faba beans: apply at 300 g/ha (120 g or 4.2 oz/acre).

Lentils: apply at 200 g/ha (80 g or 2.8 oz/acre).

SLURRY APPLICATION — Pour one 4.7 kg pail in a clean container. Gradually add 8-10 liters of clean, non-chlorinated water and stir well (for one 2.4 kg pail, add only 4-5 liters of water). Add more water if the slurry is too thick. Pour onto the seeds and mix thoroughly to ensure even coating.

GRANULAR IN-FURROW

AGTIV° THRIVE™ G PEA & LENTIL



ACTIVE INGREDIENTS:

MYCORRHIZAE – PTB297 Technology

Rhizophagus irregularis: 178 viable spores/g

RHIZOBIUM – PTB160 Technology

Rhizobium leguminosarum biovar viciae: 1.3 x 108 viable cells/g

INERT INGREDIENT: Peat

PARTICLE SIZE: 0.5 mm to 2.5 mm (8 - 30 mesh)

BULK DENSITY: 600 g/L (37.4 lb/ft³)

SIZE	COVERS	CODE
18.2 kg (40 lb) - bag	4 ha (10 acres)	710101
364 kg (800 lb) - tote bag	80 ha (200 acres)	710102

DIRECTIONS FOR USE

Apply in the seed row at a rate of 4.5 kg/ha (4 lb/acre).

COMBO LIQUID FOR IN-FURROW

AGTIV® THRIVE™ PEA & LENTIL



ACTIVE INGREDIENTS:

MYCORRHIZAE – PTB297 Technology

Rhizophagus irregularis: 6400 viable spores/g

R RHIZOBIUM — PTB160 Technology

Rhizobium leguminosarum biovar viciae: 6 x 109 viable cells/g

INERT INGREDIENT: Water

PARTICLE SIZE: < 0.2 mm (70 mesh) – PTB297 Technology < 0.1 mm (150 mesh) – PTB160 Technology

Contains non-soluble particles

SIZE	COVERS	CODE
Combo box:	32 ha (80 acres)	710214
4 x 950 ml (4 x 32 fl. oz) – bottles 8 L (8 kg) – bag-in-box		

DIRECTIONS FOR USE

This product should be applied using the AGTIV® Liquid Injection Kit. To apply, pour 4 x 950 ml bottles of Mycorrhizae and one 8 L bladder of Rhizobium in the tank and adjust the Dosatron® injection rate following the application chart and video at PTAGTIV.COM/en/liquid-injection-kit.

Apply directly in the seed row at a rate of 118.75 ml/ha (47.5 ml/acre) for Mycorrhizae and 250 ml/ha (100 ml/acre) for Rhizobium, for a total of 368.75 ml/ha (147.5 ml/acre). If the mixture does not contain pesticides or fertilizers, it can be emptied, refrigerated and used within 24 hours.

PEA LENTIL & FABA BEAN



ON-FARM MIXING WITH SEEDS

AGTIV[®] **FUEL**[™] **P** PEA & LENTIL



ACTIVE INGREDIENT:

RHIZOBIUM – PTB160 Technology

Rhizobium leguminosarum biovar viciae: 1.6 x 109 active cells/g

INERT INGREDIENT: Peat

PARTICLE SIZE: < 1 mm (18 mesh)
BULK DENSITY: 400 q/L (1 lb/US dry qt)

SIZE	COVERS	CODE
4.7 kg (10.3 lb) - pail	Pea & faba bean: 16 ha (40 acres)	710403
	Lentil: 24 ha (60 acres)	

DIRECTIONS FOR USE

DRY APPLICATION — Mix evenly with seeds at the bottom of the grain auger while filling drill, or directly in the drill box. Ensure uniform seed coverage is obtained.

Peas & faba beans: apply at 300 g/ha (120 g or 4.2 oz/acre). Lentils: apply at 200 g/ha (80 g or 2.8 oz/acre).

SLURRY APPLICATION — Pour one 4.7 kg pail in a clean container. Gradually add 8 - 10 litres of clean, non-chlorinated water and stir well. Add more water if the slurry is too thick. Pour onto the seeds and mix thoroughly to ensure even coating.

GRANULAR IN-FURROW

AGTIV° FUEL™ G PEA & LENTIL



ACTIVE INGREDIENT:

R RHIZOBIUM – PTB160 Technology

Rhizobium leguminosarum biovar viciae: 1.3 x 10⁸ viable cells/g

INERT INGREDIENT: Peat

PARTICLE SIZE: 0.5 mm to 2.5 mm (8 - 30 mesh)

BULK DENSITY: 600 g/L (37.4 lb/ft3)

SIZE	COVERS	CODE
18.2 kg (40 lb) - bag	4 ha (10 acres)	710111
364 kg (800 lb) - tote bag	80 ha (200 acres)	710112

DIRECTIONS FOR USE

Apply in the seed row at a rate of 4.5 kg/ha (4 lb/acre).

LIQUID FOR IN-FURROW OR ON SEED

AGTIV® FUEL™ L PEA & LENTIL



ACTIVE INGREDIENT:

RHIZOBIUM – PTB160 Technology

Rhizobium leguminosarum biovar viciae: 6 x 10° viable cells/g

PARTICLE SIZE: < 0.1 mm (150 mesh) Contains non-soluble particles

SIZE	COVERS	CODE
8 L (8 kg) – bag-in-box	In-furrow: 32 ha (80 acres)	710204
	On seed: 6530 kg of seeds (240 bu)	

DIRECTIONS FOR USE

LIQUID IN-FURROW — Apply directly in the seed row at a rate of 250 ml/ha (100 ml/acre). This product should be applied using the AGTIV® Liquid Injection Kit. To apply, prepare the product mixture and adjust the Dosatron® injection rate following the application chart and video at PTAGTIV.COM/en/liquid-injection-kit.

LIQUID ON SEED — Shake well before use and apply directly to the seed. Apply 33 ml per 27 kg seeds, ensure full coverage. Optimum on-seed viability for 30 days when treated seeds are stored below 12°C (54°F).

♦ Use EXTENDER™ L for AGTIV® inoculants for longer shelf life.



ON-FARM MIXING WITH SEEDS

AGTIV° THRIVE™ P SOYBEAN



ACTIVE INGREDIENTS:

MYCORRHIZAE – PTB297 Technology
Rhizophagus irregularis: 2 750 viable spores/g

R HIZOBIUM – PTB162 Technology

Bradyrhizobium japonicum: 2.5 x 109 active cells/g

INERT INGREDIENT: Peat

PARTICLE SIZE: < 1 mm (18 mesh) BULK DENSITY: 400 g/L (1 lb/US dry qt)

SIZE	COVERS	CODE
4.7 kg (10.3 lb) - pail	16 ha (40 acres)	710703

DIRECTIONS FOR USE

DRY APPLICATION — Mix evenly with seeds at the bottom of the grain auger while filling drill, or directly in the drill box. Ensure uniform seed coverage is obtained. Apply at 300 g/ha (120 g or 4.2 oz/acre).

SLURRY APPLICATION — Pour one 4.7 kg pail in a clean container. Gradually add 8-10 litres of clean, non-chlorinated water and stir well. Add more water if the slurry is too thick. Pour onto the seeds and mix thoroughly to ensure even coating.

GRANULAR IN-FURROW

AGTIV® THRIVE™ G SOYBEAN



ACTIVE INGREDIENTS:

MYCORRHIZAE – PTB297 Technology

Rhizophagus irregularis: 178 viable spores/g

R RHIZOBIUM – PTB162 Technology

Bradyrhizobium japonicum: 1.1 x 10⁸ viable cells/g

INERT INGREDIENT: Peat

PARTICLE SIZE: 0.3 mm to 2 mm (10 - 50 mesh)

BULK DENSITY: 650 g/L (41 lb/ft³)

SIZE	COVERS	CODE
18.2 kg (40 lb) - bag	4 ha (10 acres)	710501
364 kg (800 lb) – tote bag	80 ha (200 acres)	710502

DIRECTIONS FOR USE

Apply in the seed row at a rate of 4.5 kg/ha (4 lb/acre).

COMBO LIQUID FOR IN-FURROW

AGTIV® THRIVE™ SOYBEAN



ACTIVE INGREDIENTS:

MYCORRHIZAE – PTB297 Technology
Rhizophagus irregularis: 6400 viable spores/g

R RHIZOBIUM – PTB162 Technology

Bradyrhizobium japonicum: 8 x 10⁹ viable cells/g

INERT INGREDIENT: Water

 $\begin{aligned} \textbf{PARTICLE SIZE:} &< 0.2 \text{ mm (70 mesh)} - \text{PTB297 Technology} \\ &< 0.1 \text{ mm (150 mesh)} - \text{PTB162 Technology} \end{aligned}$

Contains non-soluble particles

SIZE	COVERS	CODE
Combo box:	16 ha (40 acres)	710614
2 x 950 ml (2 x 32 fl. oz) – bottles 8 L (8 kg) – bag-in-box		

DIRECTIONS FOR USE

This product should be applied using the AGTIV® Liquid Injection Kit. To apply, pour 2 x 950 ml bottles of Mycorrhizae and one 8 L bladder of Rhizobium in the tank and adjust the Dosatron® injection rate following the application chart and video at PTAGTIV.COM/en/liquid-injection-kit.

Apply directly in the seed row at a rate of 118.75 ml/ha (47.5 ml/acre) for Mycorrhizae and 500 ml/ha (200 ml/acre) for Rhizobium, for a total of 618.75 ml/ha (247.5 ml/acre). If the mixture does not contain pesticides or fertilizers, it can be emptied, refrigerated and used within 24 hours.

SOYBEAN



GRANULAR IN-FURROW

AGTIV® FUEL™ G SOYBEAN



ACTIVE INGREDIENT:

RHIZOBIUM – PTB162 Technology

Bradyrhizobium japonicum: 1.1 x 10⁸ viable cells/g

INERT INGREDIENT: Peat

PARTICLE SIZE: 0.3 mm to 2 mm (10 - 50 mesh)

BULK DENSITY: 650 g/L (41 lb/ft3)

DOER DENSITT: 050 9/E (41 IB/IE)				
SIZE	COVERS	CODE		
18.2 kg (40 lb) - bag	4 ha (10 acres)	710511		
364 kg (800 lb) - tote bag	80 ha (200 acres)	710512		

DIRECTIONS FOR USE

Apply in the seed row at a rate of 4.5 kg/ha (4 lb/acre).

LIQUID FOR IN-FURROW OR ON SEED

AGTIV° FUEL™ L SOYBEAN



ACTIVE INGREDIENT:

RHIZOBIUM – PTB162 Technology

Bradyrhizobium japonicum: 8 x 10⁹ viable cells/g

PARTICLE SIZE: < 0.1 mm (150 mesh)

Contains non-soluble particles

SIZE		COVERS	CODE
	8 L (8 kg) - bag-in-box	In-furrow: 16 ha (40 acres)	710604
		On seed: 5680 kg of seeds (250 units)	

DIRECTIONS FOR USE

LIQUID IN-FURROW — Apply directly in the seed row at a rate of 500 ml/ha (200 ml/acre). This product should be applied using the AGTIV® Liquid Injection Kit. To apply, prepare the product mixture and adjust the Dosatron® injection rate following the application chart and video at PTAGTIV.COM/en/liquid-injection-kit.

LIQUID ON SEED — Shake well before use and apply directly to the seed. Apply 64 ml per 45.5 kg of seeds, ensure full coverage. Optimum on-seed viability for 30 days when treated seeds are stored below 12°C (54°F).

Suse EXTENDER™ L for AGTIV® inoculants for longer shelf life.

COMBO LIQUID FOR IN-FURROW OR ON SEED

AGTIV® ENRICH™ SOYBEAN



ACTIVE INGREDIENTS:

BACILLUS – PTB180 Technology

Bacillus pumilus: 3 x 109 viable spores/g

R RHIZOBIUM – PTB162 Technology

Bradyrhizobium japonicum: 8 x 109 viable cells/g

PARTICLE SIZE: < 0.1 mm (150 mesh)

Contains non-soluble particles

SIZE	COVERS	CODE
Combo box:	In-furrow: 16 ha (40 acres)	710814
8 L (8 kg) – bag-in-box 300 ml – bottle	On seed: 5680 kg of seeds (250 units)	

DIRECTIONS FOR USE

ON SEED — Mix the bladder of *Bradyrhizobium* and the bottle of *Bacillus* in the application tank. Apply at a rate of 66.4 ml/45.5 kg of seeds. Agitate constantly during application to keep bacteria in suspension. Optimum on-seed viability for 30 days when treated seeds are stored below 12°C (54°F).

IN-FURROW — Mix the content of the bladder and the bottle in the mix tank. Dilute the inoculants in the required volume of clean, non-chlorinated water according to the product label. Apply in the furrow, directly on the seed, at a rate of 518.75 ml/ha (207.5 ml/acre).

③ Use EXTENDER™ L for AGTIV® inoculants for longer shelf life.



ON-FARM MIXING WITH SEEDS

AGTIV° THRIVE™ P CHICKPEA



ACTIVE INGREDIENTS:

MYCORRHIZAE – PTB297 Technology

Rhizophagus irregularis: 2750 viable spores/g

R RHIZOBIUM

Mesorhizobium ciceri: 7.0 x 108 active cells/g

INERT INGREDIENT: Peat

PARTICLE SIZE: < 1 mm (18 mesh) BULK DENSITY: 400 g/L (1 lb/US dry qt)

SIZE	COVERS	CODE
4.7 kg (10.3 lb) - pail	16 ha (40 acres)	713103

DIRECTIONS FOR USE

DRY APPLICATION — Mix evenly with seeds at the bottom of the grain auger while filling drill, or directly in the drill box. Ensure uniform seed coverage is obtained. Apply at 300 g/ha (120 g or 4.2 oz/acre).

SLURRY APPLICATION — Pour one 4.7 kg pail in a clean container. Gradually add 8-10 litres of clean, non-chlorinated water and stir well. Add more water if the slurry is too thick. Pour onto the seeds and mix thoroughly to ensure even coating.

GRANULAR IN-FURROW

AGTIV[®] **THRIVE**[™] **G** CHICKPEA



ACTIVE INGREDIENTS:

MYCORRHIZAE – PTB297 Technology
Rhizophagus irregularis: 178 viable spores/g

R RHIZOBIUM

Mesorhizobium ciceri: 1.6 x 108 viable cells/g

INERT INGREDIENT: Peat

PARTICLE SIZE: 0.5 mm to 2.5 mm (8 - 30 mesh)

BULK DENSITY: 600 g/L (37.4 lb/ft³)

SIZE	COVERS	CODE
18.2 kg (40 lb) - bag	4 ha (10 acres)	712901
364 kg (800 lb) – tote bag	80 ha (200 acres)	712902

DIRECTIONS FOR USE

Apply in the seed row at a rate of 4.5 kg/ha (4 lb/acre).

CHICKPEA







LIQUID ON SEED

AGTIV® IGNITE™ L



ACTIVE INGREDIENT:

S SERENDIPITA – PTB299 Technology

Serendipita indica (formerly known as Piriformospora indica) 2 x10⁶ viable spores/g

INERT INGREDIENT: Water

PARTICLE SIZE: < 1 mm (18 mesh)

Contains non-soluble particles

SIZE	COVERS	CODE
11 L (11 kg) – bag-in-box	Canola: 454 kg of seeds (1000 lb)	714114
	Cereal: 9165 kg of seeds (20 205 lb)	

DIRECTIONS FOR USE

Ensure the seed treating equipment has been properly cleaned and calibrated and that applicator's tank is clean. Remove any filters on the treating system that are smaller than 1 mm (18 mesh) to prevent clogging. Shake thoroughly the 11 liters bladder and add it completely to the applicator's tank.

For canola and other Brassicaceae, one bladder of 11 liters can treat up to 454 kg (1000 lb) or 81 ha (200 acres) of seeds.

For wheat and other cereals, one bladder of 11 liters can treat up to 9165 kg (20 205 lb) or 81 ha (200 acres) of seeds. It is recommended to dilute in non-chlorinated water to reach a total volume of liquid to add between 12 to 20 ml/kg of seeds.

Spray on seeds and ensure full coverage.

CANOLA & CEREAL





PRODUCT NAMES

Since entering the agriculture market 15 years ago, we are constantly widening our AGTIV® inoculant offering to suit and benefit more crops.

Staying true to our AGTIV® brand's three pillars:

NATURE, SCIENCE and PERFORMANCE, our product names reflect the actions of our inoculants on plants.



POWERS PLANTS BY
BOOSTING NITROGEN
FIXATION, NUTRIENT AND
WATER ABSORPTION THANKS
TO MYCORRHIZAE &
RHIZOBIUM



HELPS PLANTS REACH AND ABSORB MORE NUTRIENTS AND WATER THANKS TO MYCORRHIZAE



FEEDS LEGUMES BY FIXING ATMOSPHERIC NITROGEN THANKS TO RHIZOBIUM



IMPROVES PHOTOSYNTHESIS AND MITIGATES IMPACT OF ENVIRONMENTAL STRESSES THANKS TO **SERENDIPITA**



REINFORCES PLANTS WITH A HEALTHY ROOT ZONE THANKS TO **BACILLUS**



STRENGTHENS LEGUME NITROGEN FIXATION AND PROVIDES A VIGOROUS ROOT SYSTEM THANKS TO RHIZOBIUM & BACILLUS

Learn more at

PTAGTIV.COM/en/brand





AGTIV BIOLOGICAL ACTIVE INGREDIENTS

For 100 years, Premier Tech has been growing along with producers. Being a world leader in the industrial production of mycorrhizal inoculants has inspired us to go further in our search for natural technologies. Since then, we have introduced the benefits of Bacillus, rhizobium, and Serendipita to the agricultural market. Furthermore, we have combined these powerful technologies to improve the quality and the yield of crops for the benefit of our clients.

Learn more at

PTAGTIV.COM/en/technologies



MYCORRHIZAE

PTB297 Technology, Rhizophagus irregularis (formerly known as Glomus intraradices)

Mycorrhizae are beneficial associations between a mycorrhizal fungus and roots. The mycorrhizal spores germinate in the soil and produce filaments (hyphae) which enter into root cells. This association allows the formation of an intra and extra-radical network of filaments that explore the soil and access more nutrients and water, and transfer them to the plant.

- **SEXPANDS ROOT** SYSTEM GROWTH
- **SOLUTION** ENHANCES NUTRIENT & WATER UPTAKE
- **♥** INCREASES TOLERANCE TO ABIOTIC STRESSES
- **⋘** IMPROVES SOIL **STRUCTURE**



PTB160 Technology (pulses), Rhizobium leguminosarum biovar viciae

PTB162 Technology (soybean), Bradyrhizobium japonicum

Mesorhizobium ciceri (chickpea)

Rhizobium bacteria live and thrive in symbiosis in root nodules produced by the plant. They are responsible for fixing the atmospheric nitrogen and making it available for the plant.

BACILLUS

PTB180 Technology, Bacillus pumilus

PTB185 Technology, Bacillus inaquosorum

Bacillus are bacteria that provide a healthy root zone which leads to better vields. As root colonizers, they stimulate the plant to grow more efficiently. Selected for their beneficial action of growth stimulation.

SERENDIPITA

PTB299 Technology, Serendipita indica (formerly known as Piriformospora indica)

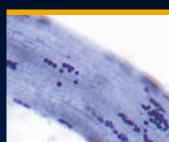
The beneficial fungus Serendipita indica, a natural microorganism, forms an association with roots of many plants such as canola and cereals. It induces some of the plant gene expression and promotes phytohormone production.

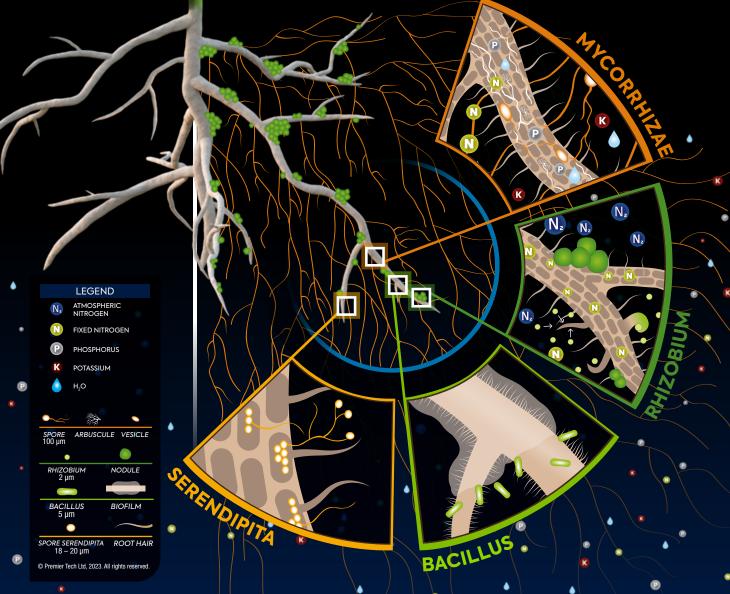
- **♥** FIXES NITROGEN
- **PROVIDES NUTRIENTS TO LEGUMES**
- **ENVIRONMENT & PLANT ESTABLISHMENT**
- **♥** INCREASES PLANT **VIGOR & PERFORMANCE**
- **✓** MITIGATES ABIOTIC STRESSES
- **INCREASES** PHOTOSYNTHESIS RATE
- **ENHANCES PLANT** ESTABLISHMENT, **GROWTH AND YIELD**







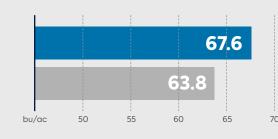






- ✓ Enhanced nutrient and water uptake
- More robust and vigorous plants

3 bu/ac 6.0%





AGTIV®

DESIGNED BY NATURE.

Born from **nature** and perfected by **science**. AGTIV® is an innovative

technology brand

made of high-quality

and proven natural

active ingredients

performance for

Discover more at

that deliver superior

agricultural producers.

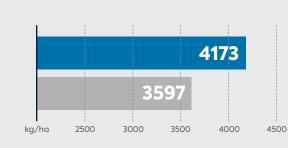
PTAGTIV.COM/brand

PERFECTED BY SCIENCE.



- ✓ Increased plant establishment and survival
- Better growth
- ✓ Increased crop yield

576 kg/ha
16.0%



AGTIV® REACH™ P

UNTREATED

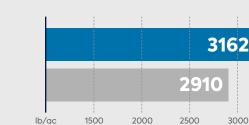
Average yield increase 47 sites over 2 years, Canada





- Bigger branches and greener leaves





AGTIV® REACH™

UNTREATED

Average yield increase 12 sites over 7 years, North America





- root system
- Quicker plant establishment
- ✓ Increased marketable yields

3.5 t/ha
7.4%

2.5 t/ha
8.8%



AGTIV® REACH®

3000

UNTREATED Average yield increase 17 sites over 9 years, Canada and Europe

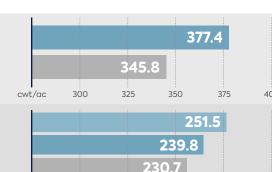
AGTIV® REACH™ + AGTIV® STIMULATE™ **AGTIV® REACH™** UNTREATED

Average yield increase



AGTIV® REACH® POTATO

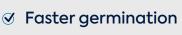
Average yield increase



UNTREATED Average yield increase 1184 sites over 12 years, North America and Europ

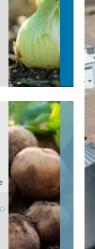






 ✓ Improved crop yield, quality and uniformity





AGTIV® REACH™ P



ACTIVE INGREDIENT:

MYCORRHIZAE – PTB297 Technology Rhizophagus irregularis: 8000 viable spores/g

INERT INGREDIENT: Peat

PARTICLE SIZE: < 1 mm (18 mesh) BULK DENSITY: 400 g/L (1 lb/US dry qt)

SIZE	COVERS	CODE
4 x 800 g	Cereal, flax & dry bean: 32 ha (80 acres)	712324
(4 x 1.75 lb) - pails	Alfalfa, mix forages & grass: 16 ha (40 acres)	

DIRECTIONS FOR USE

Mix evenly with seeds at the bottom of the grain auger while filling drill, or directly in the drill box. Ensure uniform seed coverage is obtained.

Cereals, flax & dry beans: apply at 100 g/ha (40 g or 1.4 oz/acre).

Alfalfa, mix forages & grass: apply at 200 g/ha (80 g or 2.8 oz/acre).

GRANULAR IN-FURROW

AGTIV® REACH™ G



ACTIVE INGREDIENT:



MYCORRHIZAE – PTB297 Technology Rhizophagus irregularis: 178 viable spores/g

INERT INGREDIENT: Peat

PARTICLE SIZE: 0.5 mm to 2.5 mm (8 - 30 mesh)

BULK DENSITY: 600 g/L (37.4 lb/ft3)

SIZE	COVERS	CODE
18.2 kg (40 lb) - bag	4 ha (10 acres)	712101
364 kg (800 lb) - tote bag	80 ha (200 acres)	712102

DIRECTIONS FOR USE

Apply in the seed row at a rate of 4.5 kg/ha (4 lb/acre).

LIQUID FOR IN-FURROW

AGTIV® REACH™ L



ACTIVE INGREDIENT:



MYCORRHIZAE – PTB297 Technology Rhizophagus irregularis: 6400 viable spores/g

INERT INGREDIENT: Water

PARTICLE SIZE: < 0.2 mm (70 mesh)

Contains non-soluble particles

SIZE	COVERS (1 case)	CODE (case)
2 x 950 ml (2 x 32 fl. oz) - bottles	16 ha (40 acres)	712204

DIRECTIONS FOR USE

One 950 ml bottle covers 8 ha (20 acres). Dilute the product in the required volume of clean, non-chlorinated water, according to the product label. Shake the bottle well before use and maintain a constant agitation in the tank during application to avoid settling and clogging. Apply directly in the seed row.

LIQUID INJECTION — To apply using the **AGTIV**® **Liquid Injection Kit**, prepare the product mixture and adjust the Dosatron® injection rate following the application chart and video at PTAGTIV.COM/en/liquid-injection-kit. If the mixture does not contain pesticides or fertilizers, it can be emptied, refrigerated and used within

TANK MIX — Refer to PTAGTIV.COM/en/REACH-L for application details.

FIELD CROPS





AGTIV® REACH™ G





MYCORRHIZAE - PTB297 Technology Rhizophagus irregularis: 178 viable spores/g

INERT INGREDIENT: Peat

PARTICLE SIZE: 0.5 mm to 2.5 mm (8 - 30 mesh)

BULK DENSITY: 600 g/L (37.4 lb/ft³)

SIZE	CODE
6 kg (13.2 lb) – pail	712103

DIRECTIONS FOR USE

IN-FURROW — Apply directly in-furrow at a rate of 40 g (1/4 cup) per 100 m row length (0,26 lb/1000 ft).

INCORPORATION INTO GROWING MEDIA — Mix thoroughly into the growing media before filling the trays.

Quantity of AGTIV® to use per volume of growing media		
Cell or container volume	Qty of product to add/m³ of media	Qty of product to add/yd³ of media
40-200 ml	3.4 kg (5.6 L)	5.7 lb (18 cups)
200-500 ml	2.2 kg (3.7 L)	3.8 lb (12 cups)
500 ml-1500 ml	1.1 kg (1.9 L)	1.9 lb (6 cups)
1500 ml or more	0.8 kg (1.4 L)	1.4 lb (4.5 cups)

TRANSPLANTING — Apply the product at the bottom and on the sides of the planting hole. Product must be in direct contact with roots.

BERRIES	FRUIT TREES
1.7 g (1 tsp)	8 g (1 Tbsp)

AGTIV® REACH™ P



ACTIVE INGREDIENT:

MYCORRHIZAE - PTB297 Technology Rhizophagus irregularis: 8000 viable spores/g

INERT INGREDIENT: Peat

PARTICLE SIZE: < 1 mm (18 mesh) BULK DENSITY: 400 g/L (1 lb/US dry qt)

SIZE	CODE
4 x 800 g (4 x 1.75 lb) - pails	712324

DIRECTIONS FOR USE

TRANSPLANTING

VEGETABLE TRANSPLANTS OR BARE-ROOT BERRIES — Right before planting, coat the root plugs or the bare roots with the product. A 800 g pail of product can treat up to 117 000 transplants or 21 300 bare roots (according to plant size).

ASPARAGUS - Right before planting, coat the bottom of the crown with the product. The recommended quantity is 38 g (80 ml) for 1 000 crowns.

INCORPORATION INTO GROWING MEDIA

Mix the quantity of product into the growing media. For application chart, visit PTAGTIV.COM/en/REACH-P. For a better homogeneity, it is preferable to premix the recommended quantity of product to a part of the growing media (or one of the dry ingredient used in its composition). For application onto tray surface, contact your local representative for application details depending on your practices.

MIXING WITH SEEDS

At planting time, mix evenly with seeds (Table 1). Ensure uniform seed coverage is obtained. The product formulation may "bulk up" seeds. It is important to calibrate the planter to ensure correct planting rate is attained. Avoid using AGTIV® with wet equipment. When seeding, ensure full seed-soil contact to minimize any desiccation

Table 1 - (Duantity	of AGTIV® to use per 1 000 seeds	

Type of seed	g	0Z	ml
Nantes carrot	0.34	0.012	0.7
Market carrot	0.33	0.012	0.7
Spanish onion	0.56	0.020	1.2
Yellow onion	0.41	0.015	0.9
Lettuce	0.42	0.015	0.9
Pea/bean	0.38	0.013	0.8
Cucumber	1.98	0.070	4.2
Squash/pumpkin	4.95	0.170	10.4
Garlic	37.5	1.320	78.9

1 cup equals 240 ml (96 g) of product.

SPECIALTY CROPS



TREATED SEEDS

AGTIV® REACH™ AGTIV® STIMULATE™



ACTIVE INGREDIENTS:

MYCORRHIZAE – PTB297 Technology Rhizophagus irregularis: 6 400 viable spores/g

B BACILLUS – PTB180 Technology Bacillus pumilus: 3 x 109 viable spores/q

Ask for AGTIV® REACH™ (Mycorrhizae) & AGTIV® STIMULATE™ (Bacillus) combined on your treated seeds

AGTIV® inoculants are specially designed seed-applied technologies integrating biological active ingredients to promote healthy emergence and greater seedling vigor that increases: UNIFORMITY • YIELD • QUALITY.

With the AGTIV® proven technologies, you have access to certified inoculants backed by a close partnership with seed treaters for technology integration, compatibility with other inputs and quality control.

Validate with your representative which active ingredients are currently available for your specialty crops.

The following plant families cannot be colonized (no effect on plant) by the mycorrhizal fungi contained in AGTIV®: Brassicaceae (broccoli, cabbages, cauliflower, radish, rutabaga, watercress), Chenopodiaceae (beets, spinach), Ericaceae (blueberries, cranberries).



IN-FURROW APPLICATION OR SEED-PIECE TREATMENT

AGTIV® REACH™ L POTATO



ACTIVE INGREDIENT:

MYCORRHIZAE – PTB297 Technology

Rhizophagus irregularis: 10 500 viable spores/g

INERT INGREDIENT: Water

PARTICLE SIZE: < 0.2 mm (70 mesh)

Contains non-soluble particles

SIZE	COVERS (1 case)	CODE (case)
2 x 950 ml (2 x 32 fl. oz) – bottles	8 ha (20 acres)	711004

DIRECTIONS FOR USE

IN-FURROW APPLICATION — Dilute the product in the required volume of clean, non-chlorinated water. Refer to the application charts available at PTAGTIV.COM/en/potato. Shake the bottle well before use and maintain a constant agitation in the tank during application to avoid settling and clogging. Apply directly on seed pieces into furrow.

SEED-PIECE TREATMENT — In a clean tank, pour the content of one 950 ml (32 fl. oz) bottle in the volume of liquid required to treat the amount of seed pieces for 4 hectares (10 acres) of seedbed (110 000 - 170 000 seed pieces). Shake the bottle well before use and maintain a constant agitation in the tank during application to avoid settling and clogging. Apply directly on seed pieces. Do not treat seed pieces more than 48 hours before seeding (could activate seed-piece

SEE RECOMMENDATIONS BELOW

IN-FURROW APPLICATION OR SEED-PIECE TREATMENT

AGTIV® REACH™ P POTATO



ACTIVE INGREDIENT:

MYCORRHIZAE - PTB297 Technology Rhizophagus irregularis: 67 000 viable spores/g

INERT INGREDIENT: Diatomaceous earth PARTICLE SIZE: < 0.2 mm (70 mesh)

SIZE	COVERS	CODE (case)				
2 x 300 g (2 x 10.5 oz) – bags	Potato: 16 ha (40 acres)	711104				

DIRECTIONS FOR USE

Pour the content of a 300 g pouch of the product into 5.7 liters of clean and nonchlorinated water. Mix well and maintain under agitation during application. Apply directly on seed pieces into furrow.

SEE RECOMMENDATIONS BELOW.

IN-FURROW APPLICATION

AGTIV® STIMULATE™ L POTATO 🛕

ACTIVE INGREDIENT:



B BACILLUS - PTB185 Technology Bacillus inaquosorum: 2 x 109 viable spores/g

INERT INGREDIENT: Water

PARTICLE SIZE: < 0.1 mm (150 mesh)

Contains non-soluble particles

SIZE	COVERS (1 case)	CODE (case)
8 L (8 kg) – bag-in-box	Potato: 8 ha (20 acres)	711021

DIRECTIONS FOR USE

Apply inoculant in the furrow, directly on the seed pieces, at a rate of 1000 ml/ha (400 ml/acre).

SEE RECOMMENDATIONS BELOW.

POTATO



IN-FURROW APPLICATION

RECOMMENDATIONS

LIQUID INJECTION:

The AGTIV® Liquid Injection Kit, integrating a Dosatron® pump, is a customized equipment designed for the precise application of AGTIV® liquid products. Easy to install on your existing in-furrow application system, it operates off the main solution flow.

- Ensure the tank and the liquid injection system are clean and free of chemical residues, and agitation system is operational.
- On the planter, remove all cylinder screens by the nozzles or use filters with openings of at least 50 mesh (0.28 mm).
- Prepare your product mixture and adjust the Dosatron® injection rate following the calculation chart and application video at PTAGTIV.COM/en/liquid-injection-kit.
- Spray band width should be limited to 7 in (18 cm) or less.
- If the mixture does not contain pesticides or fertilizers, it can be emptied, refrigerated and used within 24 hours.

- Use filters with openings of at least 50 mesh (0.28 mm).
- Use a diaphragm (or peristaltic) pump for product application.
- Up and down agitation at all times in the tank.
- Spray band width should be limited to 7 in (18 cm) or less.
- Apply within 6 hours after mixing into the liquid tank. • See the application video at PTAGTIV.COM/en/potato.

SEED-PIECE TREATMENT

RECOMMENDATIONS

MILESTONE TREATER:

• Validate that the atomizing head and the mixing paddles correspond to the approved specifications. Visit PTAGTIV.COM/en/equipment for more details or contact your representative.

- Validate that the atomizing head and the mixing paddles correspond to the approved specifications (ask your representative for more info).
- Use filters with openings of at least 50 mesh (0.28 mm).
- Use a diaphragm (or peristaltic) pump for product application.
- Up and down agitation at all times in the tank.



CELEBRATING DECADES OF INNOVATION AND VALUE

years

OF EXPERTISE IN ACTIVE INGREDIENTS

Established manufacturer and marketer, Premier Tech builds on innovation and collaboration with local partners and growers to offer reliable high-quality inoculants. Every day, in our labs, facilities, and in the field, highly experienced scientists, engineers, and specialists from various domains collaborate to maximize the outcomes of research and turn them into effective products making a difference on your bottom line.

PTAGTIV.COM/en/quality







PRODUCTION

In 2000, Premier Tech set up a world-first endomycorrhizal inoculum plant, developing a new mycoreactor process for industrial scale production. Backed by 40 years of expertise in active ingredients, Premier Tech constantly develops and innovates in terms of production of MYCORRHIZAE, RHIZOBIUM, BACILLUS, SERENDIPITA and other active ingredients:

- No contamination through a strictly controlled and aseptic environment
- Large-scale manufacturing production
- Adapted quality control for each step of the production processes, ensuring consistent high-quality inoculum





FORMULATION

Premier Tech's know-how makes it possible to adapt formulations with multiple active ingredients, concentrations and carriers tailored to different crops and application methods. Because a quality inoculant makes all the difference, our proven formulations are based on these important elements:

- Carriers compatible with the active ingredients
- Formulations that guarantee active ingredient viability until use
- Quality control at several key points ensuring the performance of active ingredients
- Various formulations tailored for organic production





APPLICATION

Caring about our clients' crop performance, each recommendation for product use takes into consideration validation by our field experts and by farmers themselves, which ensures:

- Effective application rates, at the right time and place, with the right inoculant
- Products adapted to growers' equipment
- Easy integration into farming practices
- Validation of compatibility with other agricultural inputs





SERVICE

The AGTIV® experience combines highly effective value-added products and the access to a team of field experts dedicated to supporting your growth. From our management and research teams to our field specialists, our multidisciplinary team is listening to growers' needs to continuously improve our products and level of service:

- Technical support for product application, equipment compatibility and field demonstration
- Proud promoter of science education and knowledge sharing
- Partnership with agriculture retailers throughout Canada, the United States and Europe

GET THE INFO YOU NEED AT **PTAGTIV.COM**

TOOLBOX

Labels, SDS, organic certificates, application videos, charts and rate calculators

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RESULTS

Efficacy report
Field observations

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EDUCATION

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COMPATIBILITY

Pesticide compatibility lists Liquid fertilizer compatibility lists

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PROGRAMS

Liquid and Powder equipments Retailer fridge program

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	CROPS																					
RECOMMENDATIONS CHART	SOYBEAN							PEA, LENTIL & FABA BEAN					CANOLA & CEREAL POTATO			FIELD & SPECIALTY CROPS			СНІС	CHICKPEA		
	AGTIV® THRIVE™ P SOYBEAN	AGTIV® THRIVE™ G SOYBEAN	AGTIV® THRIVE™ SOYBEAN	AGTIV® FUEL™ G SOYBEAN	AGTIV® FUEL™ L SOYBEAN	AGTIV® ENRICH™ SOYBEAN		AGTIV® THRIVE™ P PEA & LENTIL	AGTIV® Thrive™ G Pea & Lentil	AGTIV® THRIVE™ PEA & LENTIL	AGTIV® FUEL™ G PEA & LENTIL	AGTIV® FUEL™ L PEA & LENTIL	AGTIV® FUEL™ P Pea & Lentil	AGTIV® IGNITE™ L	AGTIV® REACH™ L POTATO	AGTIV® REACH™ P POTATO	AGTIV® STIMULATE™ L POTATO	AGTIV® REACH™ P	AGTIV® Reach™ G	AGTIV® REACH™ L	AGTIV® Thrive™ P Chickpea	THRIVET G
Use EXTENDER™ L for AGTIV® inoculants for longer shelf life					*	*						⊗										
APPLICATION																						
After coating, seed within	8h				30 days	30 days		8h				30 days	30 days	180 days	48h			8h			8h	
Apply within 6 hours after mixing into the tank			•		•	•				•		•		•	•	•	•			•		
Avoid using the product with wet equipment	•	•		•				•	•		•		•		•			•	•		•	•
Ensure full seed-soil contact when seeding	•							•					•					•			•	
To avoid flow problems, do not fill tank or seed cart completely		•		•					•		•								•			•
Ensure the tank and the liquid application system are clean and free of chemical residues			•		•	•				•		•		•	•	•	•			•		
Shake well before use and during the application			•		•	•				•		•		•	•		•			•		
Use diaphragm pump for product application (or peristaltic pump)															•	•				•		
Ensure the temperature of the diluted tank mix doesn't exceed			22°C (72°F)		22°C (72°F)	22°C (72°F)				22°C (72°F)		22°C (72°F)		22°C (72°F)	22°C (72°F)	22°C (72°F)	22°C (72°F)			22°C (72°F)		
CALIBRATION																						
Calibrate the application system to deliver the correct amount of product	•	•	•	•	•	•		•	•	•	•	•	•	•				•	•		•	•
Band width should be limited to 7 in (18 cm) or less															•	•	•			•		
On the planter or seeder, make sure to remove all cylinder screens by the orifices or use filters with openings of at least 50 mesh (0.28 mm)															•	•	•			•		
COMPATIBILITY																						
Do not mix with fertilizers	•	•	•	•	•	•		•	•	•	•			•				•	•		•	•
Refer to the list of compatible pesticides at PTAGTIV.com/en/compatibility	•		•		•	•		•		•		•	•	•	•	•	•	•		•	•	•
Refer to the list of compatible liquid fertilizers at PTAGTIV.com/en/compatibility			•		•	•				•		•			•	•	•			•		
STORAGE																						
Product must be refrigerated at															2-8°C (36-46°F)	2-12°C (36-54°F)				2-8°C (36-46°F)		
Do not freeze or expose to temperatures above	25°C (77°F)	25°C (77°F)	20°C (68°F)	25°C (77°F)	20°C (68°F)	20°C (68°F)		25°C (77°F)	25°C (77°F)	20°C (68°F)	25°C (77°F)	20°C (68°F)	25°C (77°F)	12°C (54°F)	8°C (46°F)	12°C (54°F)	20°C (68°F)	35°C (95°F)	35°C (95°F)	8°C (46°F)	25°C (77°F)	25°C (77°F)
Store the product at constant temperature	•	•		•				•	•		•		•	•	•	•	•	•	•	•	•	•
If the mixture does not contain pesticides or fertilizers, it can be emptied, refrigerated and used within 24 hours															•	•				•		

DESIGNED BY NATURE. PERFECTED BY SCIENCE.



PEOPLE AND TECHNOLOGIES MAKING A DIFFERENCE

At Premier Tech, we are all about making a difference by connecting People and Technologies for now 100 years. One team driven by a shared will to deliver sustainable solutions that help feed, protect and improve our world. Premier Tech has a wide range of products, services, brands and technologies allowing to increase crop yields, bring beautiful gardens to life, automate the handling and packaging operations of many manufacturing facilities, treat and recycle water, support companies in their digital transformation and offer bio-ingredients for the well-being of humans and animals.







PT Growers and Consumers

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