



CLICK HERE  
to know more

## RELIABLE INOCULANTS












MYCORRHIZAE ■ RHIZOBIUM



Backed by more than 35 years of expertise in biological active ingredients, you can count on AGTIV® reliable inoculants: the only brand on the market to have the powerful combination of mycorrhizae and rhizobium. Available in different formulations, use them on the farm with confidence to push crops' yield potential thanks to increased nutrient and water uptake.



MYCORRHIZAE & RHIZOBIUM INOCULANTS

MYCORRHIZAE & RHIZOBIUM INOCULANTS			APPLICATION MODE						FORMULATION
ACTIVE INGREDIENT	ORGANIC	GRANULAR IN-FURROW	MIXING WITH SEEDS	LIQUID IN-FURROW	LIQUID ON SEED				
<div> <b>PULSES</b> (peas, lentils &amp; faba beans)</div>									
<b>AGTIV® PULSES • Powder</b>									
F: Powder (peat) S: 4.7 kg (10.3 lb) pail C: Peas & faba beans: <b>16 ha (40 acres)</b> – Lentils: <b>24 ha (60 acres)</b>	M	R	✓	●					
<b>AGTIV® PULSES • Granular</b>									
F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Peas, lentils & faba beans: Bag: <b>4 ha (10 acres)</b> – Tote bag: <b>80 ha (200 acres)</b>	M	R	✓	●					
<b>AGTIV® RHIZO • Granular for PULSES</b>									
F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Peas, lentils & faba beans: Bag: <b>4 ha (10 acres)</b> – Tote bag: <b>80 ha (200 acres)</b>		R	*	●					
<b>AGTIV® RHIZO • Liquid for PULSES</b>									
F: Liquid S: 8 L (8 kg) bag-in-box C: Peas, lentils & faba beans: <b>32 ha (80 acres)</b> or <b>6530 kg of seeds (240 bu)</b>	C	R	✓		●	●			
<b>AGTIV® ON SEED™ – RHIZO • Powder for PULSES</b>									
F: Powder (peat) S: 4.7 kg (10.3 lb) pail C: Peas & faba beans: <b>16 ha (40 acres)</b> – Lentils: <b>24 ha (60 acres)</b>		R	*	●					
<div> <b>SOYBEAN</b></div>									
<b>AGTIV® SOYBEAN • Powder</b>									
F: Powder (peat) S: 4.7 kg (10.3 lb) pail C: Soybean: <b>16 ha (40 acres)</b>	M	R	✓	●					
<b>AGTIV® SOYBEAN • Granular</b>									
F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Soybean: Bag: <b>4 ha (10 acres)</b> – Tote bag: <b>80 ha (200 acres)</b>	M	R	*	●					
<b>AGTIV® BRADY • Granular for SOYBEAN</b>									
F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Soybean: Bag: <b>4 ha (10 acres)</b> – Tote bag: <b>80 ha (200 acres)</b>		R	*	●					
<b>AGTIV® BRADY • Liquid for SOYBEAN</b>									
F: Liquid S: 11 L (11 kg) bag-in-box C: Soybean: <b>16 ha (40 acres)</b> or <b>4600 kg of seeds (200 units)</b>	C	R	✓		●	●			



CHICKPEA								
AGTIV® CHICKPEA • Powder								
F: Powder (peat) S: 4.7 kg (10.3 lb) pail C: Chickpea: 16 ha (40 acres)	M	R	✓		●			
AGTIV® CHICKPEA • Granular								
F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Chickpea: Bag: 3.2 ha (8 acres) – Tote bag: 64 ha (160 acres)	M	R	✓	●				
FORAGES								
AGTIV® FORAGES • Powder								
F: Powder (diatomaceous earth) S: 1.6 kg (3.5 lb) pail C: Alfalfa, mix forages & grass: 8 ha (20 acres)	M		*		●			
FIELD CROPS (cereals, flax & dry beans)								
AGTIV® FIELD CROPS – ● • Powder								
F: Powder (peat) S: Case of 4 x 800 g (4 x 1.75 lb) pails C: Cereals, flax & dry beans: 32 ha (80 acres) per case Alfalfa, mix forages & grass: 16 ha (40 acres) per case	M		✓		●			
AGTIV® FIELD CROPS • Powder								
F: Powder (diatomaceous earth) S: 2 kg (4.4 lb) pail C: Cereals, flax & dry beans: 16 ha (40 acres)	M		*		●			
AGTIV® FIELD CROPS • Granular								
F: Granules (zeolite) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Cereals, flax & dry beans: Bag: 3.2 ha (8 acres) – Tote bag: 64 ha (160 acres)	M		✓	●				
AGTIV® FIELD CROPS • Liquid								
F: Liquid (spores in suspension) S: Case of 2 x 950 ml (2 x 32 fl. oz) bottles C: Cereals, flax, beans & pulses: 16 ha (40 acres) per case	M	C	✓		●			
POTATO								
AGTIV® POTATO • Liquid								
F: Liquid (spores in suspension) S: Case of 2 x 950 ml (2 x 32 fl. oz) bottles C: Potato: 8 ha (20 acres) per case	M		✓		●	●		

AGTIV® products also available for specialty crops.

F: Formulation  
S: Size  
C: Crop/  
Coverage

ACTIVE INGREDIENTS:  
M MYCORRHIZAE  
PTB297 Technology

R RHIZOBIUM  
PTB160 Technology (pulses)  
PTB162 Technology (soybean)  
Mesorhizobium ciceri (chickpea)

N New product  
C Combo available

ORGANIC:  
✓ For organic use  
\* Non eligible for organic use.  
Contact us for more details.

# TOOLS



# EQUIPMENT & PROGRAMS



Dedicated to offer technical support for product application, field demonstration, equipment and input compatibility, and to promote educational agronomic knowledge, Premier Tech provides various tools on PTAGTIV.COM.

To ensure performance through efficient and precise application of its inoculants, Premier Tech recommends the use of approved equipment, supported by pay-back programs on selected AGTIV® products.

## EASY TO USE

For an easy integration in your farming practices, access:

- ✓ Labels, SDS, organic certificates
- ✓ Application videos, charts and rate calculators

[PTAGTIV.COM/en/toolbox](https://ptagtiv.com/en/toolbox)



## EFFECTIVE

For the compatibility lists of our active ingredients with various agricultural inputs, such as:

- ✓ Pesticides
- ✓ Liquid fertilizers

[PTAGTIV.COM/en/compatibility](https://ptagtiv.com/en/compatibility)



## PROVEN RESULTS

Discover the third-party results proving the effectiveness of the active ingredients contained in AGTIV® products:

- ✓ Efficacy report
- ✓ Field observations

[PTAGTIV.COM/en/results](https://ptagtiv.com/en/results)



## AGRONOMIC KNOWLEDGE

Access blog articles on various agronomic topics:

- ✓ Soil biology
- ✓ Plant health
- ✓ Active ingredients, etc.

[PTAGTIV.COM/en/blog](https://ptagtiv.com/en/blog)



## LIQUID

### ✓ EQUIPMENT PROGRAM

The **AGTIV® Liquid Injection Kit**, integrating a Dosatron® Injection System, is a customized equipment designed and recommended by Premier Tech. Easy to install on your existing in-furrow application system, it operates off the main solution flow for precise application of AGTIV® liquid products. End-of-season pay-back programs are available for the AGTIV® Liquid Injection Kit and the Upgrade Kit.

### ✓ RETAILER FRIDGE PROGRAM

Premier Tech recommends to its retailer network the purchase of a fridge that can effectively store AGTIV® liquid products. Contact your representative to learn more.

[PTAGTIV.COM/en/program](https://ptagtiv.com/en/program)



## POWDER

Premier Tech has a list of recommended applicators to use with AGTIV® powder products. Ask your representative to learn more about the applicators and the pay-back program offered.

[PTAGTIV.COM/en/equipment](https://ptagtiv.com/en/equipment)





# PULSES

Peas, lentils and faba beans



CLICK HERE  
to know more

51%<sup>1</sup> more photosynthesis  
with the tripartite  
symbiosis

“[...] the tripartite interactions between legumes, AMF [Arbuscular Mycorrhizal Fungi] and rhizobia cause increases in legume productivity, and the N:P:C supply ratio as influenced by the tripartite symbiotic associations plays a fundamental role in controlling the legume's photosynthetic rate and biomass productivity.”<sup>2</sup>

<sup>1</sup> Kaschuk et al. 2009. Soil Biol. Biochem. 41:1233-1244  
<sup>2</sup> Koele et al. 2014. VFRC Report 2014/1, pp. 1-57

PTAGTIV.COM/en/tripartite



## ON-FARM MIXING WITH SEEDS

### AGTIV® ON SEED™ – RHIZO • Powder for PULSES

ACTIVE INGREDIENT:  
**R** RHIZOBIAL INOCULUM – PTB160 Technology  
*Rhizobium leguminosarum* biovar *viciae*: 1.6 x 10<sup>9</sup> viable 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	Peas & faba beans: 16 ha (40 acres) Lentils: 24 ha (60 acres)	710403

**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.

**RECOMMENDATIONS\*** (Refer to AGTIV® PULSES • Powder) —

## ON-FARM MIXING WITH SEEDS



ELIGIBLE FOR  
ORGANIC USE

### AGTIV® PULSES • Powder

ACTIVE INGREDIENTS:  
**M** ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 2 750 viable spores/g  
**R** RHIZOBIAL INOCULUM – PTB160 Technology  
*Rhizobium leguminosarum* biovar *viciae*: 1.6 x 10<sup>9</sup> viable 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	Peas & faba beans: 16 ha (40 acres) Lentils: 24 ha (60 acres)	710303



**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.  
Refer to the [list of compatible pesticides](#) at PTAGTIV.COM/en/compatibility.

#### \* RECOMMENDATIONS

- Avoid using the product with wet equipment.
- At seeding time, calibrate the seeder with the treated seeds.
- Do not freeze or expose to temperatures above 25°C (77°F). Store the product at constant temperature at all times.
- When seeding, ensure full seed-soil contact to minimize any desiccation of the inoculant. Seed within 4 hours after coating.

## GRANULAR IN-FURROW



ELIGIBLE FOR  
ORGANIC USE

### AGTIV® PULSES • Granular

ACTIVE INGREDIENTS:  
**M** ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 178 viable spores/g  
**R** RHIZOBIAL INOCULUM – PTB160 Technology  
*Rhizobium leguminosarum* biovar *viciae*: 1.3 x 10<sup>8</sup> 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)	710101, Organic: 710121
364 kg (800 lb) – tote bag	80 ha (200 acres)	710102, Organic: 710122



**DIRECTIONS FOR USE**  
Apply in the seed row at a rate of 4.5 kg/ha (4 lb/acre).  
**RECOMMENDATIONS**

- Avoid using the product with wet equipment.
- Calibrate the seeder before applying the product.
- **Flowability may be affected by conditions of high humidity. To avoid flow problems, do not fill tank or seed cart completely.**
- Do not freeze or expose to temperatures above 25°C (77°F).
- Store the product at constant temperature at all times.
- Do not blend with fertilizers.

## GRANULAR IN-FURROW

### AGTIV® RHIZO • Granular for PULSES

ACTIVE INGREDIENT:  
**R** RHIZOBIAL INOCULUM – PTB160 Technology  
*Rhizobium leguminosarum* biovar *viciae*: 1.3 x 10<sup>8</sup> 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)	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).

**RECOMMENDATIONS**

- Avoid using the product with wet equipment.
- Calibrate the seeder before applying the product.
- **Flowability may be affected by conditions of high humidity. To avoid flow problems, do not fill tank or seed cart completely.**
- Do not freeze or expose to temperatures above 25°C (77°F).
- Store the product at constant temperature at all times.
- Do not blend with fertilizers.

## LIQUID FOR IN-FURROW OR ON SEED



ELIGIBLE FOR  
ORGANIC USE

### AGTIV® RHIZO • Liquid for PULSES

ACTIVE INGREDIENT:  
**R** RHIZOBIAL INOCULUM – PTB160 Technology  
*Rhizobium leguminosarum* biovar *viciae*: 6 x 10<sup>8</sup> 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) On seed: 6530 kg of seeds (240 bu)	710204



COMBO  
AVAILABLE

**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).

**RECOMMENDATIONS**

- Refer to the [list of compatible pesticides and liquid fertilizers](#) at PTAGTIV.COM/en/compatibility.
- Ensure the tank and the liquid application system are clean and free of chemical residues.
- Shake well before use and maintain a constant agitation in the tank during application.
- Calibrate the application system to deliver the correct amount of inoculant.
- Ensure the temperature of the diluted tank mix doesn't exceed 22°C (72°F).
- Apply within 6 hours after mixing into the tank.



# SOYBEAN







uptake and transfer to the plant  
with mycorrhizae

Cavagnaro et al. (2005) established that *Glomus intraradices* was found to be one of the arbuscular mycorrhizal fungi that was able to control nutrient uptake amounts by individual hyphae depending on differing phosphorus levels in the surrounding soils.<sup>1</sup>

<sup>1</sup> Cavagnaro, T.; F. Smith; S. Smith; I. Jakobsen (2005) Functional diversity in arbuscular mycorrhizas: exploitation of soil patches with different phosphate enrichment differs among fungal species. Plant, Cell et Environment 28: 642 – 650.

PTAGTIV.COM/en/rotation

CLICK HERE  
to know more



ON-FARM MIXING WITH SEEDS

ELIGIBLE FOR ORGANIC USE

### AGTIV® SOYBEAN • Powder

ACTIVE INGREDIENTS:

M

ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 2 750 viable spores/g


R

RHIZOBIAL INOCULUM – PTB162 Technology  
*Bradyrhizobium japonicum*: 2.5 x 10<sup>9</sup> viable 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.

Refer to the [list of compatible pesticides](#) at PTAGTIV.COM/en/compatibility.

#### RECOMMENDATIONS

- Avoid using the product with wet equipment.
- At seeding time, calibrate the seeder with the treated seeds.
- Do not freeze or expose to temperatures above 25°C (77°F).
- Store the product at constant temperature at all times.
- When seeding, ensure full seed-soil contact to minimize any desiccation of the inoculant. Seed within 4 hours after coating.

GRANULAR IN-FURROW

### AGTIV® SOYBEAN • Granular

ACTIVE INGREDIENTS:

M

ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 178 viable spores/g


R

RHIZOBIAL INOCULUM – PTB162 Technology  
*Bradyrhizobium japonicum*: 1.1 x 10<sup>9</sup> viable cells/g

INERT INGREDIENT: Peat

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

BULK DENSITY: 650 g/L (41 lb/ft<sup>3</sup>)



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).

#### RECOMMENDATIONS

- Avoid using the product with wet equipment.
- Calibrate the seeder before applying the product.
- **Flowability may be affected by conditions of high humidity.**  
**To avoid flow problems, do not fill tank or seed cart completely.**
- Do not freeze or expose to temperatures above 25°C (77°F).
- Store the product at constant temperature at all times.
- Do not blend with fertilizers.

GRANULAR IN-FURROW

### AGTIV® BRADY • Granular for SOYBEAN

ACTIVE INGREDIENT:


R

RHIZOBIAL INOCULUM – PTB162 Technology  
*Bradyrhizobium japonicum*: 1.9 x 10<sup>9</sup> viable cells/g

INERT INGREDIENT: Peat

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

BULK DENSITY: 650 g/L (41 lb/ft<sup>3</sup>)



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).

#### RECOMMENDATIONS

- Avoid using the product with wet equipment.
- Calibrate the seeder before applying the product.
- **Flowability may be affected by conditions of high humidity.**  
**To avoid flow problems, do not fill tank or seed cart completely.**
- Do not freeze or expose to temperatures above 25°C (77°F).
- Store the product at constant temperature at all times.
- Do not blend with fertilizers.

LIQUID FOR IN-FURROW OR ON SEED

ELIGIBLE FOR ORGANIC USE

### AGTIV® BRADY • Liquid for SOYBEAN


ACTIVE INGREDIENT:

R

RHIZOBIAL INOCULUM – PTB162 Technology  
*Bradyrhizobium japonicum*: 8 x 10<sup>9</sup> viable cells/g

PARTICLE SIZE: < 0.1 mm (150 mesh)

Contains non-soluble particles



COMBO AVAILABLE

SIZE	COVERS	CODE
11 L (11 kg) – bag-in-box	In-furrow: 16 ha (40 acres) On seed: 4600 kg of seeds (200 units)	710604

#### DIRECTIONS FOR USE

**LIQUID IN-FURROW** – Apply directly in the seed row at a rate of 690 ml/ha (275 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 64.6 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).

#### RECOMMENDATIONS

- Refer to the [list of compatible pesticides and liquid fertilizers](#) at PTAGTIV.COM/en/compatibility.
- Ensure the tank and the liquid application system are clean and free of chemical residues.
- Shake well before use and maintain a constant agitation in the tank during application.
- Calibrate the application system to deliver the correct amount of inoculant.
- Ensure the temperature of the diluted tank mix doesn't exceed 22°C (72°F).
- Apply within 6 hours after mixing into the tank.





## BIOLOGICAL ACTIVE INGREDIENTS

Backed by more than 35 years of expertise in biological active ingredients, Premier Tech masters a unique large-scale manufacturing process that meets the highest quality control standards, allowing you to fully benefit from the highly effective inoculants of our AGTIV® agricultural product line. For stronger growth through better plant resistance to stresses, **higher yields** and superior **crop quality**, you can count on AGTIV®.

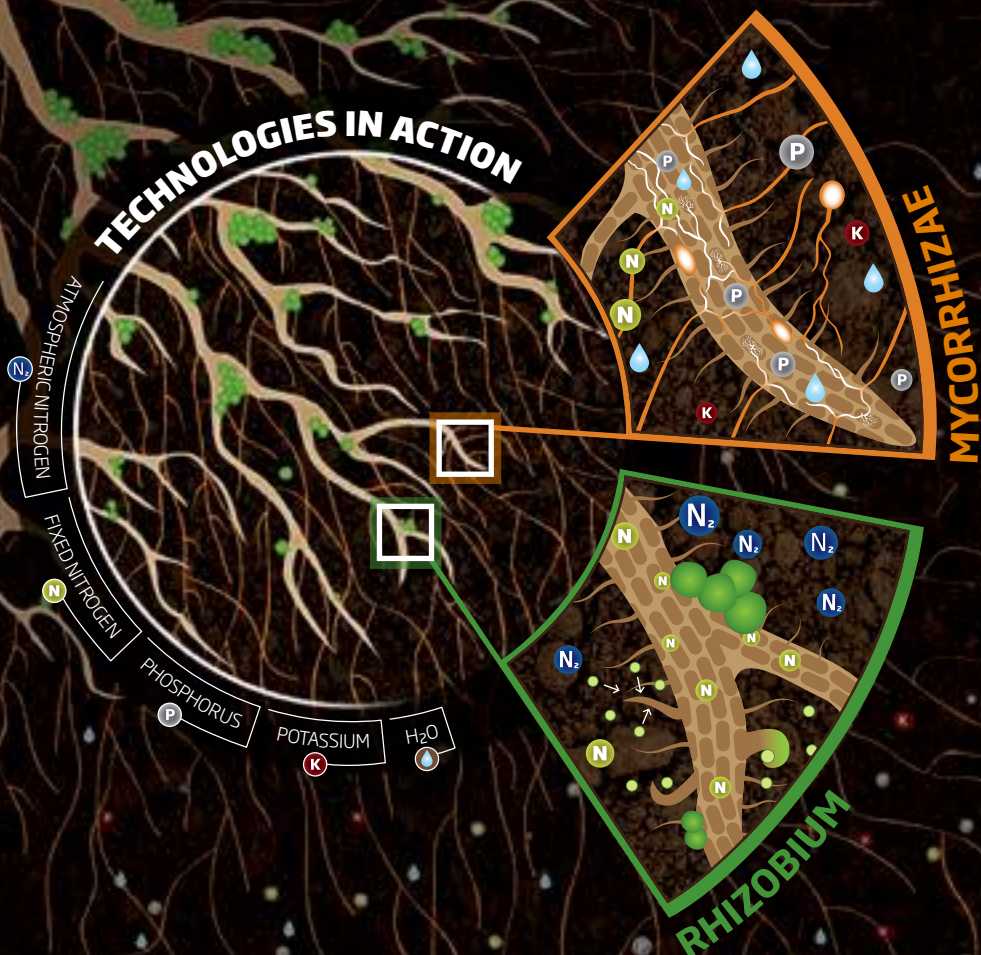
### P PLANT

Nutrients and water are essential components for effective plant growth. By adding biological active ingredients, such as beneficial mycorrhizae and rhizobium, an earlier and efficient use of water and nutrients will help plants reach optimum crop yield.

UNTREATED

WITH AGTIV®

### TECHNOLOGIES IN ACTION



### MYCORRHIZAE



### RHIZOBIUM



### TRIPARTITE SYMBIOSIS

PTB297 Technology, *Glomus intraradices*

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

- ✓ EXPAND ROOT SYSTEM GROWTH
- ✓ ENHANCE NUTRIENT & WATER UPTAKE
- ✓ INCREASE TOLERANCE TO STRESSES
- ✓ IMPROVE 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.

- ✓ FIX NITROGEN & MAKE IT AVAILABLE TO THE PLANT

**Tripartite symbiosis is the biological interaction between Mycorrhizae, Rhizobium and the Plant.**

By enhancing root system growth and creating a network of filaments, mycorrhizae help plants to uptake more nutrients, such as phosphorus, and increase the nodulation process for the rhizobium.

- ✓ INCREASE PROPAGATION OF RHIZOBIUM TO OTHER ROOTS
- ✓ HELP FEED THE PLANT
- ✓ ENHANCE PHOTOSYNTHESIS

To learn more about the tripartite symbiosis

[PTAGTIV.COM/en/tripartite](https://ptagtiv.com/en/tripartite)

SPORE 100 µm  
ARBUSCULE  
VESICLE

RHIZOBIUM 2 µm  
NODULE

© Premier Tech Ltd, 2020. All rights reserved.



# CHICKPEA

# FORAGES



NEW

ON-FARM MIXING WITH SEEDS

ELIGIBLE FOR ORGANIC USE

## AGTIV® CHICKPEA • Powder

ACTIVE INGREDIENTS:

M

ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 2 750 viable spores/g

R

RHIZOBIAL INOCULUM  
*Mesorhizobium ciceri*: 7.0 x 10<sup>8</sup> viable cells/g

INERT INGREDIENT: Peat

PARTICLE SIZE: < 1 mm (18 mesh)

BULK DENSITY: 400 g/L (1 lb/US dry qt)

TRIPARTITE

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.

Refer to the [list of compatible pesticides](#) at PTAGTIV.COM/en/compatibility.

### RECOMMENDATIONS

- Avoid using the product with wet equipment.
- At seeding time, calibrate the seeder with the treated seeds.
- Do not freeze or expose to temperatures above 25°C (77°F).
- Store the product at constant temperature at all times.
- When seeding, ensure full seed-soil contact to minimize any desiccation of the inoculant. Seed within 4 hours after coating.

ELIGIBLE FOR ORGANIC USE

GRANULAR IN-FURROW

## AGTIV® CHICKPEA • Granular

ACTIVE INGREDIENTS:

M

ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 142 viable spores/g

R

RHIZOBIAL INOCULUM  
*Mesorhizobium ciceri*: 1.3 x 10<sup>8</sup> viable cells/g

INERT INGREDIENT: Peat

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

BULK DENSITY: 650 g/L (41 lb/ft<sup>3</sup>)

TRIPARTITE

SIZE	COVERS	CODE
18.2 kg (40 lb) – bag	3.2 ha (8 acres)	712901
364 kg (800 lb) – tote bag	64 ha (160 acres)	712902

### DIRECTIONS FOR USE

Apply in the seed row at a rate of 5.7 kg/ha (5 lb/acre).

### RECOMMENDATIONS

- Avoid using the product with wet equipment.
- Calibrate the seeder before applying the product.
- **Flowability may be affected by conditions of high humidity.**  
**To avoid flow problems, do not fill tank or seed cart completely.**
- Do not freeze or expose to temperatures above 25°C (77°F).
- Store the product at constant temperature at all times.
- Do not blend with fertilizers.

ON-FARM MIXING WITH SEEDS

## AGTIV® FORAGES • Powder

ACTIVE INGREDIENT:

M

ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 8 000 viable spores/g

INERT INGREDIENT: Diatomaceous earth

PARTICLE SIZE: < 1 mm (18 mesh)

BULK DENSITY: 275 g/L (0.7 lb/US dry qt)

TRIPARTITE

SIZE	COVERS	CODE
1.6 kg (3.5 lb) – pail	8 ha (20 acres)	712703

### 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. Apply at 200 g/ha (80 g or 2.8 oz/acre).

Refer to the [list of compatible pesticides](#) at PTAGTIV.COM/en/compatibility.

### RECOMMENDATIONS

- Avoid using the product with wet equipment.
- At seeding time, calibrate the seeder with the treated seeds.
- Seed within 8 hours after coating.
- Do not freeze or expose to temperatures above 35°C (95°F).
- Store the product at constant temperature at all times.
- When seeding, ensure full seed-soil contact to minimize any desiccation of the inoculant.



# FIELD CROPS

Cereals, flax and dry beans



80% of plants can be colonized with the collaborative<sup>1</sup> species *Glomus intraradices*

“*G. intraradices* has turned out to be a “wonder fungus” in several surveys, and field trials so far has shown it to be equal or superior to mixtures of other fungi.”<sup>2</sup>

<sup>1</sup>Kiers et. al. 2011. Reciprocal Rewards Stabilize Cooperation in the Mycorrhizal Symbiosis. Science 333:80-882.  
<sup>2</sup>Trivedi et. al. 2007. Organic farming and mycorrhizae in agriculture.I.K. International Publishing House Ltd. New Delhi, pp.290.

CLICK HERE  
to know more

PTAGTIV.COM/en/glomus

## ON-FARM MIXING WITH SEEDS



ELIGIBLE FOR  
ORGANIC USE

### AGTIV® FIELD CROPS - Powder

#### ACTIVE INGREDIENT:

**M** ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 8 000 viable spores/g

#### INERT INGREDIENT:

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



SIZE (case)	COVERS (1 case)	CODE (case)
4 x 800 g (4 x 1.75 lb) – pails	Cereals, flax & dry beans: 32 ha (80 acres) Alfalfa, mix forages & grass: 16 ha (40 acres)	712324

#### 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). Refer to the [list of compatible pesticides](#) at PTAGTIV.COM/en/compatibility.

#### RECOMMENDATIONS

- Avoid using the product with wet equipment.
- At seeding time, calibrate the seeder with the treated seeds.
- Seed within 8 hours after coating.
- Do not freeze or expose to temperatures above 35°C (95°F).
- Store the product at constant temperature at all times.
- When seeding, ensure full seed-soil contact to minimize any desiccation of the inoculant.

## ON-FARM MIXING WITH SEEDS

### AGTIV® FIELD CROPS • Powder

#### ACTIVE INGREDIENT:

**M** ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 6 400 viable spores/g

#### INERT INGREDIENT:

Diatomaceous earth  
PARTICLE SIZE: < 1 mm (18 mesh)  
BULK DENSITY: 275 g/L (0.7 lb/US dry qt)



SIZE	COVERS	CODE
2 kg (4.4 lb) – pail	16 ha (40 acres)	712313

#### 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. Apply at 125 g/ha (50 g or 1.8 oz/acre) for cereals, flax & dry beans. Refer to the [list of compatible pesticides](#) at PTAGTIV.COM/en/compatibility.

#### RECOMMENDATIONS

- Avoid using the product with wet equipment.
- At seeding time, calibrate the seeder with the treated seeds.
- Seed within 8 hours after coating.
- Do not freeze or expose to temperatures above 35°C (95°F).
- Store the product at constant temperature at all times.
- When seeding, ensure full seed-soil contact to minimize any desiccation of the inoculant.

## GRANULAR IN-FURROW



ELIGIBLE FOR  
ORGANIC USE

### AGTIV® FIELD CROPS • Granular

#### ACTIVE INGREDIENT:

**M** ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 142 viable spores/g

#### INERT INGREDIENT:

Zeolite  
PARTICLE SIZE: 0.4 mm to 1.4 mm (14 - 40 mesh)  
BULK DENSITY: 920 g/L (57 lb/ft³)



SIZE	COVERS	CODE
18.2 kg (40 lb) – bag	3.2 ha (8 acres)	712101
364 kg (800 lb) – tote bag	64 ha (160 acres)	712102

#### DIRECTIONS FOR USE

Apply in the seed row at a rate of 5.7 kg/ha (5 lb/acre). Refer to the [list of compatible pesticides](#) at PTAGTIV.COM/en/compatibility.

#### RECOMMENDATIONS

- Avoid using the product with wet equipment.
- Calibrate the seeder before applying the product.
- **Flowability may be affected by conditions of high humidity. To avoid flow problems, do not fill tank or seed cart completely.**
- Do not freeze or expose to temperatures above 35°C (95°F).
- Store the product at constant temperature at all times.
- Do not blend with fertilizers.

## LIQUID IN-FURROW



ELIGIBLE FOR  
ORGANIC USE

### AGTIV® FIELD CROPS • Liquid

#### ACTIVE INGREDIENT:

**M** ENDOMYCORRHIZAL INOCULUM – PTB297 Technology  
*Glomus intraradices*: 6 400 viable spores/g in liquid suspension



#### INERT INGREDIENT:

Water  
PARTICLE SIZE: < 0.2 mm (70 mesh)  
Contains non-soluble particles



SIZE (case)	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 ac). Dilute the product in the required volume of clean, non-chlorinated water, according to the application modes below. **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. Refer to the [list of compatible pesticides and liquid fertilizers](#) at PTAGTIV.COM/en/compatibility.

**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 24 hours.

**TANK MIX:** Refer to PTAGTIV.COM/en/FC-liquid for [application details](#).

#### RECOMMENDATIONS

- Product must be refrigerated (2-8°C, 36-46°F). Do not freeze product.
- Ensure the tank and the liquid injection system are clean and free of chemical residues, and agitation system is operational.
- 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).
- Ensure the temperature of the diluted tank mix doesn't exceed 22°C (72°F).

The following plant families cannot be colonized (no effect on plant) by the fungus contained in AGTIV®: *Chenopodiaceae* (spinach, beets), *Brassicaceae* (canola, turnip, radish, mustard), buckwheat.



# POTATO



10x more area for water uptake with mycorrhizae than root hairs

For an increased nutrient and water access, the plant can partner with mycorrhizae to expand its root system and reach more soil. “The absorptive area of mycorrhizal hyphae is approximately 10 times more efficient than that of root hairs and about 100 times more efficient than that of roots.”<sup>1</sup>

<sup>1</sup>Jones, C. E. 2009. Mycorrhizal fungi - powerhouse of the soil. Evergreen Farming 8:4-5.

[PTAGTIV.COM/en/water](https://ptagtiv.com/en/water)



## AGTIV® POTATO • Liquid



### ACTIVE INGREDIENT:

**M** **ENDOMYCORRHIZAL INOCULUM** – PTB297 Technology  
*Glomus intraradices*: 10 500 viable spores/g in liquid suspension  
(315 000 viable spores/fl. oz)

**INERT INGREDIENT:** Water  
**PARTICLE SIZE:** < 0.2 mm (70 mesh)  
Contains non-soluble particles



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

### RECOMMENDATIONS

- The insulated box has been designed to allow the product to be kept outside of the fridge for 12 hours at 15°C (59°F). Refrigerate upon receipt.
- Product must be refrigerated (2-8°C, 36-46°F). Do not freeze product.
- Ensure the temperature of the diluted tank mix doesn't exceed 22°C (72°F).
- Do not use after the best before date indicated on the label.

### IN-FURROW APPLICATION

#### DIRECTIONS FOR USE

Dilute the product in the required volume of clean, non-chlorinated water. Refer to the [application charts available](https://ptagtiv.com/en/potato) 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. Refer to the [list of compatible pesticides and liquid fertilizers](https://ptagtiv.com/en/compatibility) at PTAGTIV.COM/en/compatibility.

See recommendations below based on the application mode:

#### 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](https://ptagtiv.com/en/liquid-injection-kit) 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.

#### TANK MIX

- 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](https://ptagtiv.com/en/potato) at PTAGTIV.COM/en/potato.

### SEED-PIECE TREATMENT

#### DIRECTIONS FOR USE

In a clean tank, pour the contents 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 sprouting). Refer to the [list of compatible pesticides](https://ptagtiv.com/en/compatibility) at PTAGTIV.COM/en/compatibility.

See recommendations below based on the application mode:

#### MILESTONE TREATER:

- Validate that the atomizing head and the mixing paddles correspond to the approved specifications. Visit [PTAGTIV.COM/en/equipment](https://ptagtiv.com/en/equipment) for more details or contact your representative.

#### OTHER MODELS:

- 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

**35**  
*year*  
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.



## PRODUCTION

In 2000, Premier Tech set up a world-first endomycorrhizal inoculum plant, developing a new mycoreactor process for industrial scale production. Backed by more than 35 years of expertise in active ingredients, Premier Tech constantly develops and innovates in terms of production of mycorrhizae, rhizobium 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:

- ✓ Carrier 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 also tailored for organic production



[CLICK HERE](#)  
to know more



## APPLICATION

Caring about our clients' 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 team and research project managers 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

[PTACTIV.COM/en/expertise](https://ptactiv.com/en/expertise)





Complete AGTIV® product offer

## PEOPLE AND TECHNOLOGIES MAKING A DIFFERENCE

Making a difference, this is what we are all about at Premier Tech. One team driven by a shared passion to deliver solutions that will better the lives of people, businesses and communities. At Premier Tech, People and Technologies connect in lasting, transformative ways, giving life to products and services that help feed, protect and improve our world. We are committed to creating sustainable solutions that help bring beautiful gardens to life, increase crop yields, improve the efficiency of manufacturing facilities, treat and recycle water, and much more as we keep innovating.



World Headquarters  
1, avenue Premier  
Campus Premier Tech  
Rivière-du-Loup (Québec)  
G5R 6C1 CANADA



**PTAGTIV.COM**  
**1 866 454-5867**  
**info@ptagtiv.com**