



AGTIV[®]

CORN GUIDE 2027

AGTIV®

DESIGNED BY NATURE. PERFECTED BY SCIENCE.



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SERENDIPITA

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

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

IMPROVE CHLOROPHYLL CONTENT AND PHOTOSYNTHESIS

- Increases the biosynthesis of chlorophyll¹
- Upregulates antioxidant system and aids in the maintenance of grana in chloroplasts and thus protects the photosynthetic machinery
- Improves Calvin cycle enzymes and prevents the disintegration of photosynthetic pigments and the structural components of chloroplasts² under stress.

BRANCHES AND FLOWERING

- Significantly increases the number of tillers and second branches of the aerial part¹⁰
- Consistently accelerates host bolting and flowering with several days in advance¹¹.

ABIOTIC STRESS TOLERANCE

- Mitigates detrimental effects of water stress by improving stomatal conductance, photosynthesis, antioxidative potential, redox-homeostasis, osmotic adjustment, water conservation, sugar and N metabolism, wax and suberin biosynthesis³.
- Enhances drought tolerance via modulating stomatal closure⁴.
- Improves biochemical pathways of plant partner which includes biosynthesis of prolines, organic acids and sugars, that serve as osmolytes facilitating osmotic adjustment or osmoregulation in the cell⁵. This aids plants to maintain water potential gradient for the flow of water from soil into root and further to aerial parts under water deficit conditions⁶.

NUTRITIONAL ASPECTS

Phosphorus:

- Enhances absorption of P by increasing expression of plant phosphate transporter⁶
- Promotes P uptake into the roots by solubilizing inorganic soil P via the production of organic acids as well as the stimulation of plants transport genes⁷.

Nitrogen

- Enhances plant N use efficiency by increasing expression of nitrate reductase, the first enzyme used by the plant to transform the absorbed mineral nitrogen to organic nitrogen⁸.

Sulphur

- Increases sulfur absorption by producing high affinity sulphur transporters⁹.

SEED QUALITY

- Consistently improves quality of oilseed, with a higher oil content and lower erucic acid and glucosinolates under field condition¹².
- Improves N, K, P, S, B and Zn levels in the seeds¹³

AGTIV IGNITE®

CORN



AGTIV IGNITE® L

F: Liquid
S: 11 L (11 kg) bag-in-box
C: **Canola: 454 kg (1000 lb) of seeds or 81 ha (200 ac)**
Cereal: 9165 kg (20 205 lb) of seeds or 81 ha (200 ac)
Corn: 3000 kg (6614 lb) of seeds or 121 ha (300 ac)

ACTIVE INGREDIENT(S)	APPLICATION MODE			
	IN-FURROW	MIXING WITH SEEDS	LIQUID ON SEED	LIQUID ON FERTILIZERS
ORGANIC				
FORMULATION				

S	✓				
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F: Formulation
S: Size
C: Coverage

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

PTAGTIV.COM

AGTIV IGNITE®



LIQUID ON SEED

AGTIV IGNITE® L



ACTIVE INGREDIENT:

S SERENDIPITA - PTB299 Technology
Serendipita indica: 2 x 10⁶ viable spores/g

COVERS
200/300
acres

INERT INGREDIENT: Water

PARTICLE SIZE: < 1 mm (18 mesh)
Contains non-soluble particles

SIZE	COVERS	CODE
11 L (11 kg) bag-in-box	Canola & brassicacea : 454 kg (1000 lb) of seeds or 81 ha (200 ac) Wheat & cereals : 9165 kg (20 205 lb) of seeds or 81 ha (200 ac) Corn : 3000 kg (6614 lb) of seeds or 121 ha (300 ac)	714114

DIRECTIONS FOR USE

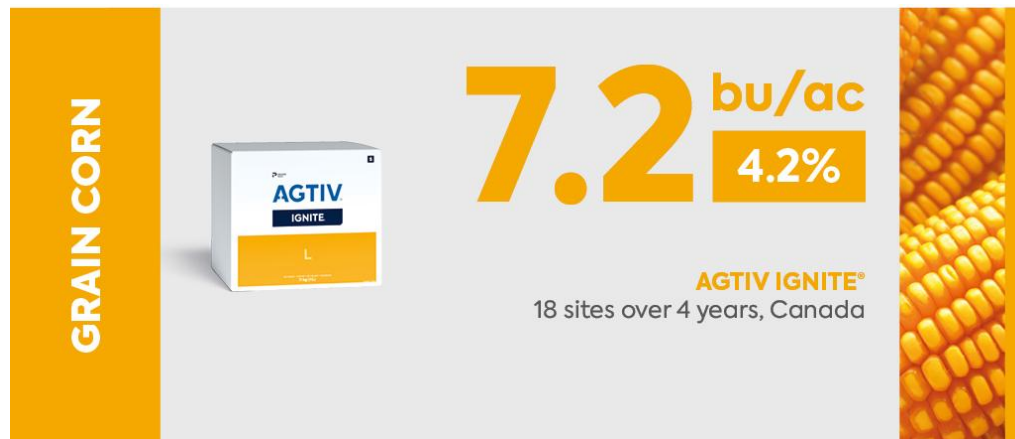
Ensure the seed treating equipment has been properly cleaned and calibrated and that applicator's tank is clean. Remove any filters on the treating system that are smaller than 1 mm (18 mesh) to prevent clogging. **Shake thoroughly the 11 litres bladder and add it completely to the applicator's tank.**

For corn, wheat and other cereals, it is recommended to dilute in non-chlorinated water to reach a total volume of liquid of 12 ml/kg of seeds.

Spray on seeds and ensure full coverage.



AVERAGE YIELD INCREASE



EFFICACY REPORT

SUMMARY – SERENDIPITA INOCULANT

► PLOT TRIALS

Research partners:

- BlackCreek Research Inc.;
- ICMS;
- New-Marc Research;
- Groupe PleineTerre;
- Tall Pines Agricultural Research Ltd.;
- Wellington Agricultural Research.

Research sites:

- Manitoba;
- Ontario;
- Quebec.

Treatments*:

- Untreated check;
- AGTIV IGNITE® L.

* Applied as recommended by the manufacturer.

Experimental design:

- Randomized Complete Block Design: 12 trials (6-8 repetitions each)
- Split plots: 6 trials (6 repetitions each)

Table 1. Summary of yield (bu/ac) per trial

Year	Sites	Variety	Untreated check yield (bu/ac)	AGTIV IGNITE® L yield (bu/ac)	Yield increase (bu/ac)
2021	Saint Marc	NK8618-5122A	157.9	158.9	1
	Sherrington	Dekalb 46-17	158.7	163.9	5.2
	Bright	DKB48-56RIB	245.4	251.7	6.3
	Carlisle	DKC 35-37 RIB	183.1	197.9	14.8
2022	Rockwood	Pionner 7527 PM	128.8	134.8	6
	Bright	Maizex 3120	158.9	167.1	8.2
	Elm Creek	PV 62181SRIB	152.8	153.5	0.7
2023	Portage la Prairie	CP2123VT2P/RIB	152.6	159.3	6.7
	Saint Marc	NK8519-DV	107.3	113.7	6.4
	Alma	Pioneer P7005	91.2	99.8	8.6
	Rockwood	Pioneer 8922AM	196.4	220.9	24.5
	Bright	DL 4555	227.5	232.1	4.6
	Sherrington	DKC 4640	163.8	170.2	6.4
2024	Sherrington	Dekalb 56-40	218.2	219.3	1.1
	Saint Marc	DK 44-13	109.9	116.1	6.2
	Bright	MZ3505 BDR RIB	229.5	236	6.5
	Bright	P9466 AML	227.2	235.6	8.4
	Carlisle	DKC 30-63 RIB	201.2	209.3	8.1
Total	18 sites		172.8	180	7.2 bu/ac*

* Yields are statistically different according to an ANOVA & a Tukey HSD test (p≤0.05).

COMPATIBILITY

PESTICIDES

Single action Serendipita products **IGNITE** plant growth and chlorophyll content for better yields.

Our inoculants are compatible with most pesticides and liquid fertilizers.

PESTICIDES

AGTIV[®]

TECHNOLOGIES

MORE THAN
40
years
OF EXPERTISE IN
ACTIVE INGREDIENTS

AGTIV[®] THRIVE

AGTIV THRIVE[®] POWERS PLANTS BY BOOSTING NITROGEN FIXATION, NUTRIENT AND WATER ABSORPTION THANKS TO **MYCORRHIZAE & RHIZOBIUM**

+ MYCORRHIZAE + RHIZOBIUM

PTB297 Technology
+
PTB160 (pea & lentil)
PTB161 (chickpea)
PTB162 (soybean)

- + Enhances P uptake
- + Provides more energy for better nitrogen fixation
- + Increases photosynthesis



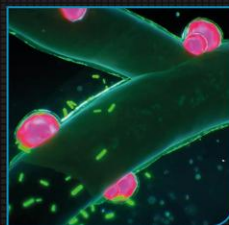
AGTIV[®] ENRICH

AGTIV ENRICH[®] STRENGTHENS LEGUME NITROGEN FIXATION AND PROVIDES A VIGOROUS ROOT SYSTEM THANKS TO **RHIZOBIUM & BACILLUS**

+ RHIZOBIUM + BACILLUS

PTB162 Technology
+
PTB180 Technology

- + Increases nodulation and nitrogen fixation
- + Improves rooting environment
- + Enhances plant vigor and productivity



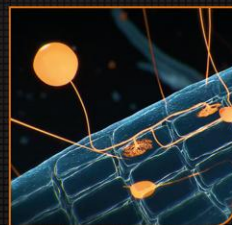
AGTIV[®] REACH

AGTIV REACH[®] HELPS PLANTS REACH AND ABSORB MORE NUTRIENTS AND WATER THANKS TO **MYCORRHIZAE**

M MYCORRHIZAE

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

- + Expands root system
- + Enhances nutrient and water uptake
- + Promotes plant robustness and vigor



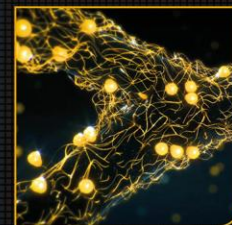
AGTIV[®] IGNITE

AGTIV IGNITE[®] IMPROVES PHOTOSYNTHESIS AND MITIGATES IMPACT OF ENVIRONMENTAL STRESSES THANKS TO **SERENDIPITA**

S SERENDIPITA

PTB299 Technology,
Serendipita indica

- + Mitigates abiotic stresses
- + Increases photosynthesis rate
- + Enhances plant establishment, growth and yield



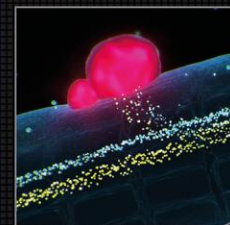
AGTIV[®] FUEL

AGTIV FUEL[®] FEEDS LEGUMES BY FIXING ATMOSPHERIC NITROGEN THANKS TO **RHIZOBIUM**

R RHIZOBIUM

PTB160 Technology
(pea & lentil) *Rhizobium leguminosarum biovar viciae*
PTB161 Technology (chickpea)
Mesorhizobium anobrychidis
PTB162 Technology (soybean)
Bradyrhizobium japonicum

- + Increases nodulation
- + Fixes nitrogen
- + Provides nutrients to pulses



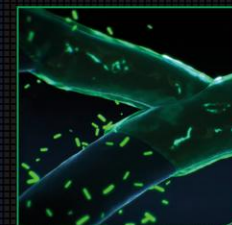
AGTIV[®] STIMULATE

AGTIV STIMULATE[®] REINFORCES PLANTS WITH A HEALTHY ROOT ZONE THANKS TO **BACILLUS**

B BACILLUS

PTB180 Technology,
Bacillus pumilus
PTB185 Technology,
Bacillus inaquosorum

- + Stimulates rooting environment
- + Improves plant establishment
- + Increases plant vigor and productivity



AGTIV[®] UPTAKE

AGTIV UPTAKE[®] ENHANCES FERTILIZER AND SOIL NUTRIENT UPTAKE THANKS TO BENEFICIAL **BACTERIA**

B BACTERIA

PTB101 Technology,
Bacillus velezensis
PTB108 Technology,
Bacillus halotolerans
PTB124 Technology,
Priestia megaterium

- + Improves soil nutrient assimilation
- + Promotes better fertilizer use
- + Enhances plant stress resistance and growth



Learn more at

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

AGTIV®

RELIABLE INOCULANTS

ACTIVE INGREDIENT(S)	APPLICATION MODE				
	ORGANIC	IN-FURROW	MIXING WITH SEEDS	LIQUID ON SEED	LIQUID ON FERTILIZERS



ACTIVE INGREDIENT(S)	APPLICATION MODE				
	ORGANIC	IN-FURROW	MIXING WITH SEEDS	LIQUID ON SEED	LIQUID ON FERTILIZERS

PEA, LENTIL & FABA BEAN

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 ac)** - Pail 2.4 kg: **8 ha (20 ac)**
Lentil: Pail 4.7 kg: **24 ha (60 ac)**

M	R	✓	●	●	●
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AGTIV THRIVE® 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 ac)** - Tote bag: **80 ha (200 ac)**

M	R	✓	●	●	●
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AGTIV THRIVE® PEA & LENTIL

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 ac)**

M	R	✓	●	●	●
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AGTIV FUEL® P PEA & LENTIL

F: Powder (peat)
S: 4.7 kg (10.3 lb) pail
C: **Pea & faba bean:** **16 ha (40 ac)**
Lentil: **24 ha (60 ac)**

R	✓	●	●	●	●
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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 ac)** - Tote bag: **80 ha (200 ac)**

R	✓	●	●	●	●
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AGTIV FUEL® L PEA & LENTIL

F: Liquid
S: 8 L (8 kg) bag-in-box
C: **Pea, lentil & faba bean:** **32 ha (80 ac)** or **6530 kg of seeds (240 bu)**

R	✓	●	●	●	●
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SOYBEAN

AGTIV THRIVE® P SOYBEAN

F: Powder (peat)
S: 4.7 kg (10.3 lb) pail
C: **Soybean:** **16 ha (40 ac)**

M	R	✓	●	●	●
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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 ac)** - Tote bag: **80 ha (200 ac)**

M	R	✓	●	●	●
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AGTIV THRIVE® 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 ac)**

M	R	✓	●	●	●
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AGTIV FUEL® G SOYBEAN

F: Granules (peat)
S: 18.2 kg (40 lb) bag - 364 kg (800 lb) tote bag
C: **Soybean:** Bag: **4 ha (10 ac)** - Tote bag: **80 ha (200 ac)**

R	✓	●	●	●	●
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AGTIV FUEL® L SOYBEAN

F: Liquid
S: 8 L (8 kg) bag-in-box
C: **Soybean:** **16 ha (40 ac)** or **5680 kg of seeds (250 units)**

R	✓	●	●	●	●
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AGTIV ENRICH® SOYBEAN

F: Liquid
S: Combo box: 8 L (8 kg) bag-in-box + 300 ml bottle
C: **Soybean:** **16 ha (40 ac)** or **5680 kg of seeds (250 units)**

R	B	✓	●	●	●
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AGTIV THRIVE® P CHICKPEA

F: Powder (peat)
S: 4.7 kg (10.3 lb) pail
C: **Chickpea:** **16 ha (40 ac)**

M	R	✓	●	●	●
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AGTIV THRIVE® G CHICKPEA

F: Granules (peat)
S: 18.2 kg (40 lb) bag - 364 kg (800 lb) tote bag
C: **Chickpea:** Bag: **4 ha (10 ac)** - Tote bag: **80 ha (200 ac)**

M	R	✓	●	●	●
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AGTIV IGNITE® L

F: Liquid
S: 11 L (11 kg) bag-in-box
C: **Canola:** **454 kg (1000 lb) of seeds or 81 ha (200 ac)**
Cereal: **9165 kg (20 205 lb) of seeds or 81 ha (200 ac)**
Corn: **3000 kg (6614 lb) of seeds or 121 ha (300 ac)**

S	✓	●	●	●	●
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AGTIV UPTAKE®

F: Liquid
S: Combo box: 3.5 L (3.5 kg) + 3.5 L (3.5 kg) + 7 L (7 kg) bags-in-box
C: **Fertilizer:** **7 to 50 metric tons**, see page "FERTILIZER COMPLEMENT" for details.

B	✓	●	●	●	●
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AGTIV REACH® P

F: Powder (peat)
S: Case of 4 x 800 g (4 x 1.75 lb) pails
C: **Cereal, flax & dry bean:** **32 ha (80 ac)**
Alfalfa, mix forages & grass: **16 ha (40 ac)**
Vegetables, berries & garlic: see page "SPECIALTY CROPS" for details.

M	✓	●	●	●	●
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AGTIV REACH® G

F: Granules (peat)
S: 6 kg (13.2 lb) pail - 18.2 kg (40 lb) bag - 364 kg (800 lb) tote bag
C: **Cereal, flax & dry bean:** Bag: **4 ha (10 ac)** - Tote bag: **80 ha (200 ac)**
Alfalfa, mix forages & grass: Bag: **45 kg of seeds (99 lb)** - Tote bag: **720 kg of seeds (1584 lb)**
Vegetables, herbs, berries & fruit trees: see page "SPECIALTY CROPS" for details.

M	✓	●	●	●	●
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AGTIV REACH® L

F: Liquid (spores in suspension)
S: Case of 2 x 950 ml (2 x 32 fl. oz) bottles
C: **Cereal, flax & bean:** **16 ha (40 ac)**

M	✓	●	●	●	●
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AGTIV REACH® L POTATO

F: Liquid (spores in suspension)
S: Case of 2 x 950 ml (2 x 32 fl. oz) bottles
C: **Potato:** **8 ha (20 ac)**

M	✓	●	●	●	●
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AGTIV REACH® P POTATO

F: Powder (diatomaceous earth)
S: Case of 2 x 300 g (2 x 10.5 oz) bags
C: **Potato:** **16 ha (40 ac)**

M	*	●	●	●	●
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AGTIV STIMULATE® L POTATO

F: Liquid
S: 8 L (8 kg) bag-in-box
C: **Potato:** **8 ha (20 ac)**

B	✓	●	●	●	●
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See last page for complete product recommendations.

Learn more at
[PTAGTIV.COM/en/products](https://ptagtiv.com/en/products)



ACTIVE INGREDIENTS	
M MYCORRHIZAE PTB297 Technology	S SERENDIPITA PTB299 Technology
R RHIZOBIUM PTB160 Technology (pea & lentil) PTB161 Technology (chickpea) PTB162 Technology (soybean)	B BACTERIA PTB101 Technology PTB108 Technology PTB124 Technology PTB180 Technology PTB185 Technology

ONLINE TOOLS



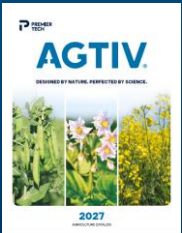
LABELS



EFFICACY REPORT



APPLICATION VIDEOS



BROCHURES



SOCIAL MEDIA

AND MUCH MORE

[Safety data sheets](#), [organic certificates](#)

