



AGTIV[®]

CORN GUIDE 2026

AGTIV[®]

DESIGNED BY NATURE. PERFECTED BY SCIENCE.



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AGTIV[®]

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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 Brassicacea 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® L

AGTIV®



CANOLA
CORN & CEREAL

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 acres)
Cereal: 9165 kg (20 205 lb) of seeds or 81 ha (200 acres)
Corn: 3000 kg (6 614 lb) of seeds or 121 ha (300 acres)

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



AGTIV IGNITE® L

AGTIV®



LIQUID ON SEED

AGTIV IGNITE® L



ACTIVE INGREDIENT:

S SERENDIPITA – PTB299 Technology
Serendipita indica (formerly known as *Piriformospora indica*)
2 x10⁶ 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 & brassicaceas:	714114
	454 kg (1000 lb) of seeds or 81 ha (200 acres)	
	Wheat & cereals:	
	9165 kg (20 205 lb) of seeds or 81 ha (200 acres)	
	Corn:	
	3000 kg (6 614 lb) of seeds or 121 ha (300 acres)	

DIRECTIONS FOR USE

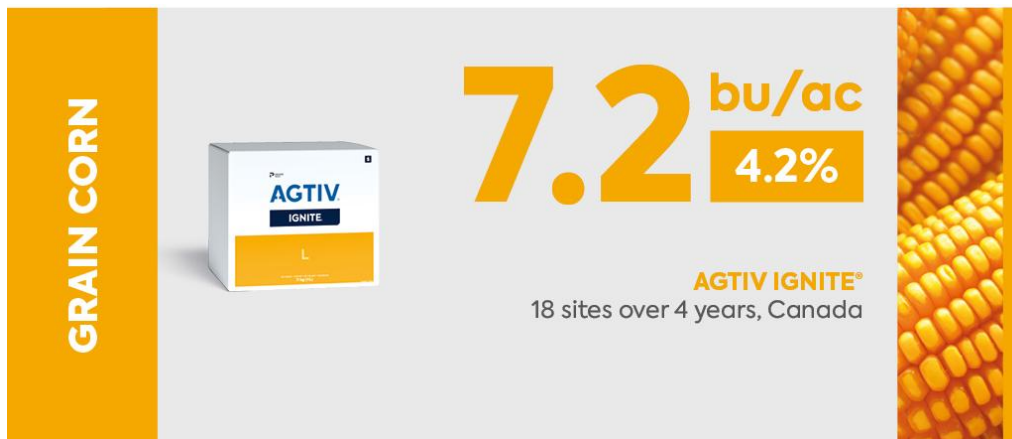
Ensure the seed treating equipment has been properly cleaned and calibrated and that applicator's tank is clean. Remove any filters on the treating system that are smaller than 1 mm (18 mesh) to prevent clogging. **Shake thoroughly the 11 liters bladder and add it completely to the applicator's tank.**

For wheat and other cereals, 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.



EFFICACY SUMMARY



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

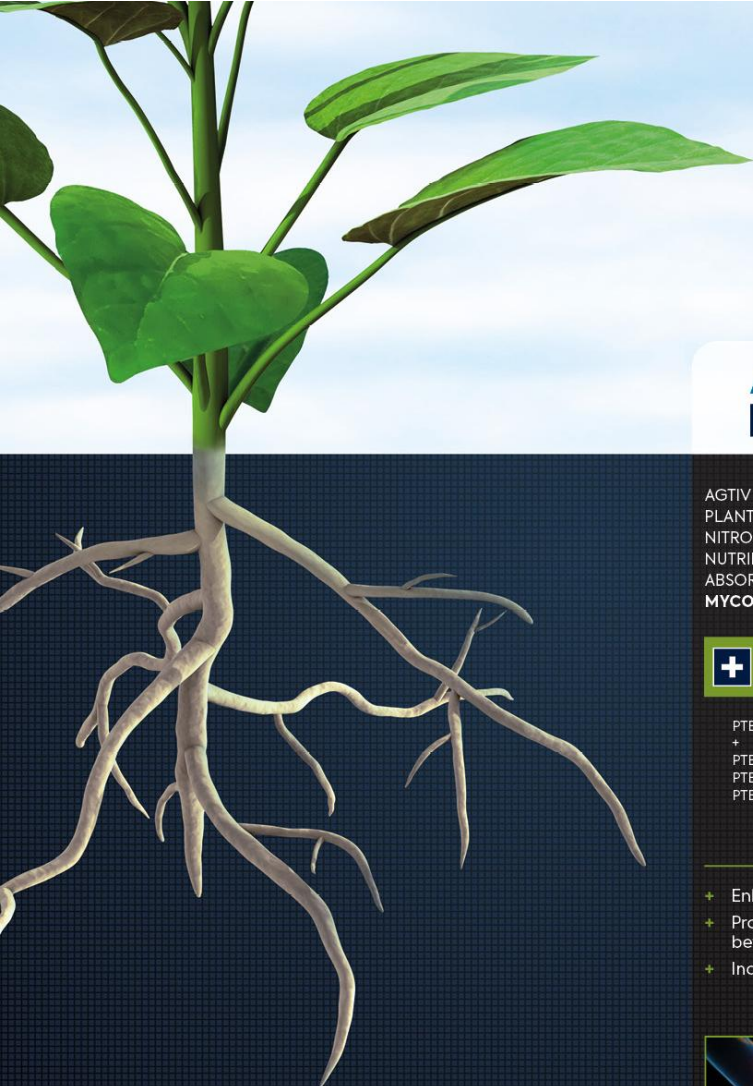
Year	Sites	Variety	Untreated check yield (bu/ac)	AGTIV IGNITE® L yield (bu/ac)	Yield increase (bu/ac)
2021	Saint Marc	NK8618-5122A	157.9	158.9	1
	Sherrington	Dekalb 46-17	158.7	163.9	5.2
	Bright	DKB48-56RIB	245.4	251.7	6.3
	Carlisle	DKC 35-37 RIB	183.1	197.9	14.8
2022	Rockwood	Pionner 7527 PM	128.8	134.8	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≤05).

PESTICIDES COMPATIBILITY

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.
THRIVE.

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

+ **MYCORRHIZAE + RHIZOBIUM**

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

- + 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



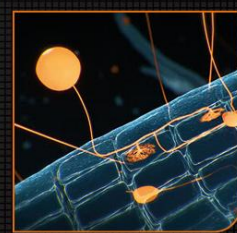
AGTIV.
REACH.

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



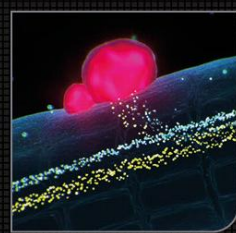
AGTIV.
FUEL.

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

R **RHIZOBIUM**

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

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



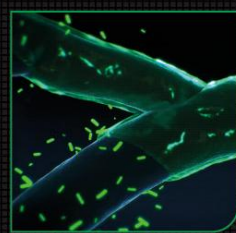
AGTIV.
STIMULATE.

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



Learn more at

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

CLICK ON A PICTURE TO SEE THE TECHNOLOGY IN ACTION

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

While staying true to the AGTIV® brand's three pillars:

NATURE, **SCIENCE** and **PERFORMANCE**, we are introducing new product names reflecting the actions of our inoculants for plants.

AGTIV® FUEL
Single action **rhizobium** products FUEL legumes by fixing nitrogen for better growth.

AGTIV® ENRICH
Dual action **rhizobium** and **Bacillus** collaborate to ENRICH the plant's nitrogen fixation with a healthy root system.

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

AGTIV® THRIVE
Dual action **mycorrhizae** and **rhizobium** products make plants THRIVE by increasing nutrient uptake.

AGTIV® STIMULATE
Single action **Bacillus** products STIMULATE the plant to grow more efficiently with a healthy root zone.

AGTIV® REACH
Single action **mycorrhizae** products REACH into the soil and help uptake more nutrients and water.

AGTIV®

**DESIGNED BY NATURE.
PERFECTED BY SCIENCE.**

Born from **nature** and perfected by **science**, AGTIV® is an innovative technology brand made of high-quality and proven natural active ingredients that deliver superior **performance** for agricultural producers.

Discover more at

PTAGTIV.COM/brand

ONLINE TOOLS



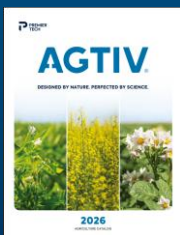
LABELS



EFFICACY REPORT



APPLICATION VIDEOS



BROCHURES



SOCIAL MEDIA

AND MUCH MORE

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

