PREMIER TECH

AGTIV®

EFFICACY SUMMARIES

2025

AGTIV AVERAGE YIELD INCREASE BY CROP

Learn more at
PTAGTIV.COM/en/results

PEA

3.5 bu/ac 6.1%

AGTIV® THRIVE™ PEA & LENTIL
28 sites over 13 years, Canada

CHICKPEA

3.1 bu/ac 8.7%

AGTIV® THRIVE™ CHICKPEA
6 sites over 7 years, Canada

DRY BEAN

258 lb/ac 9.0%

AGTIV® REACH™
16 sites over 11 years, North America

LENTIL

2.7 bu/ac 8.8%

AGTIV® THRIVE™ PEA & LENTIL
66 sites over 14 years, Canada

CANOLA & CEREAL

FOR CANOLA

2.4 bu/ac 6.5%

AGTIV® IGNITE™
33 sites over 7 years, Canada

FOR CEREAL

4.6 bu/ac 9.4%

AGTIV® IGNITE™
16 sites over 4 years, Canada

ONION & CARROT

3.5 t/ha 7.4%

AGTIV® REACH™
17 sites over 10 years, Canada and Europe

3.7 t/ha 7.7%

AGTIV® REACH™
11 sites over 6 years, North America

SOYBEAN

3.3 bu/ac 6.7%

AGTIV® THRIVE™ SOYBEAN
91 sites over 11 years, Canada and Europe

1.8 bu/ac 3.2%

AGTIV® ENRICH™ SOYBEAN
9 third-party trials over 4 years, Canada

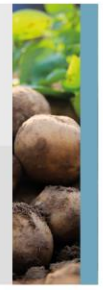
POTATO

31.6 cwt/ac 9.2%

AGTIV® REACH™ POTATO
1199 sites over 14 years, North America and Europe

+10.3 cwt/ac

AGTIV® REACH™ + AGTIV® STIMULATE™
16 third-party trials over 4 years, North America



FORAGE

576 kg/ha 16.0%

AGTIV® REACH™ P
47 sites over 2 years, Canada

AGTIV® RELIABLE INOCULANTS

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 acres)** – Pail 2.4 kg: **8 ha (20 acres)**
Lentil: Pail 4.7 kg: **24 ha (60 acres)**

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 acres)** – Tote bag: **80 ha (200 acres)**

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 acres)**

AGTIV® FUEL™ P 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)**

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)**

AGTIV® FUEL™ L PEA & LENTIL ✪
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)**

SOYBEAN

AGTIV® THRIVE™ P SOYBEAN
F: Powder (peat)
S: 4.7 kg (10.3 lb) pail
C: Soybean: **16 ha (40 acres)**

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)**

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 acres)**

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 acres)** – Tote bag: **80 ha (200 acres)**

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)**

AGTIV® ENRICH™ SOYBEAN ✪
F: Liquid
S: Combo box: 8 L (8 kg) (*Bradyrhizobium*) bag-in-box + 300 ml (*Bacillus*) bottle
C: Soybean: **16 ha (40 acres)** or **5680 kg of seeds (250 units)**

CHICKPEA

AGTIV® THRIVE™ P CHICKPEA
F: Powder (peat)
S: 4.7 kg (10.3 lb) pail
C: Chickpea: **16 ha (40 acres)**

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 acres)** – Tote bag: **80 ha (200 acres)**

CANOLA & CEREAL

AGTIV® IGNITE™ L
F: Liquid
S: 11 L (11 kg) bag-in-box
C: Canola: **454 kg (1000 lb) or 81 ha (200 acres) of seeds**
Cereal: **9165 kg (20 205 lb) or 81 ha (200 acres) of seeds**

FIELD & SPECIALTY CROPS

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 acres)** per case
Alfalfa, mix forages & grass: **16 ha (40 acres)** per case
Vegetables, berries & garlic: see page "Specialty Crops" for details.

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 acres)** – Tote bag: **80 ha (200 acres)**
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.

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 acres)** per case

POTATO

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 acres)** per case

AGTIV® REACH™ P POTATO
F: Powder
S: Case of 2 x 300 g (2 x 10.5 oz) bag
C: Potato: **16 ha (40 acres)** per case

AGTIV® STIMULATE™ L POTATO
F: Liquid
S: 8 L (8 kg) bag-in-box
C: Potato: **8 ha (20 acres)**

ACTIVE INGREDIENTS

- **M** **MYCORRHIZAE** — PTB297 Technology
- **R** **RHIZOBIUM** — PTB160 Technology (pea & lentil); PTB162 Technology (soybean); PTB161 Technology (chickpea)
- **B** **BACILLUS** — PTB180 Technology; PTB185 Technology
- **S** **SERENDIPITA** — PTB299 Technology

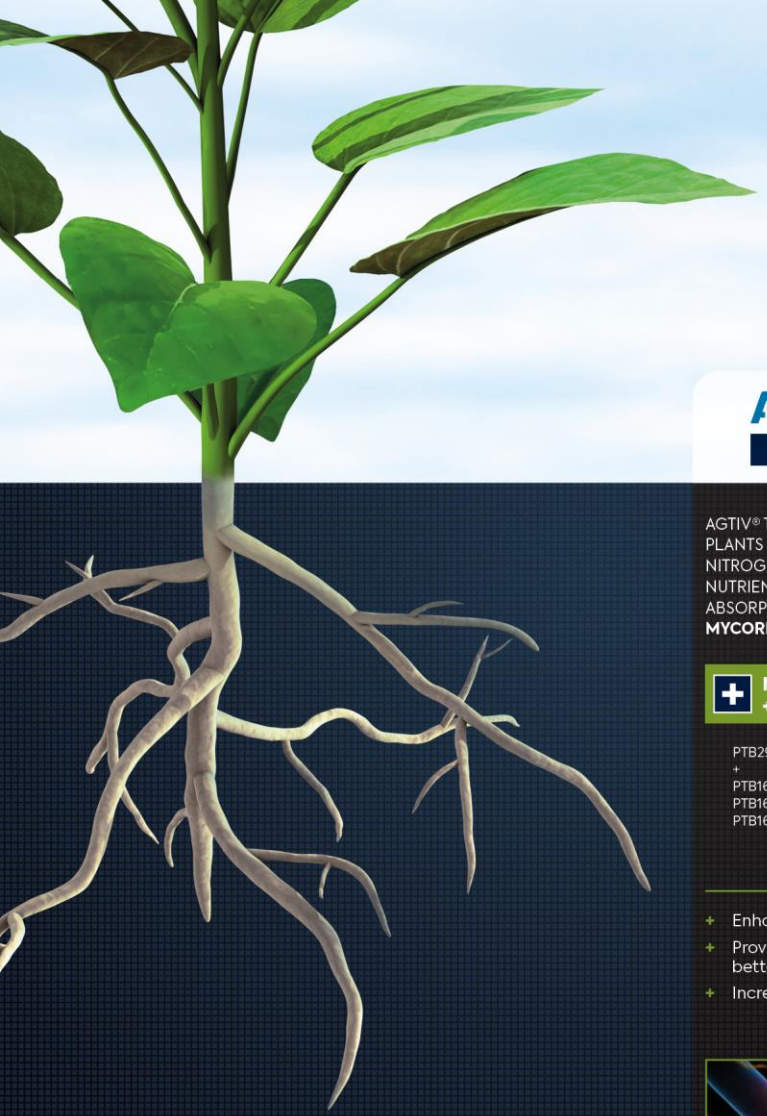
LEGEND

F: Formulation
S: Size
C: Crop/Coverage

✪ Eligible with EXTENDER™ L for AGTIV® inoculants
✓ For organic use
* Non eligible for organic use. Contact us for more details.

FORMULATIONS
Liquid | Granular | Powder

Learn more at PTAGTIV.COM/en/products



AGTIV® BIOLOGICAL ACTIVE INGREDIENTS

For more than 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.

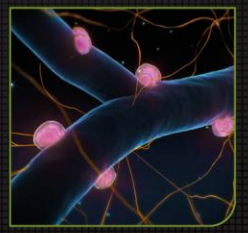
AGTIV® THRIVE

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

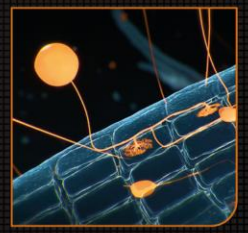
AGTIV® REACH

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



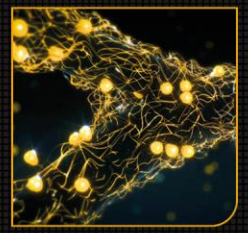
AGTIV® IGNITE

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 onobrychidis*

- Increases nodulation
- Fixes nitrogen
- Provides nutrients to pulses

AGTIV® STIMULATE

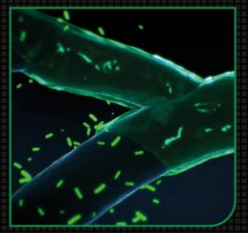
AGTIV® STIMULATE™ REINFORCES PLANTS WITH A HEALTHY ROOT ZONE THANKS TO **BACILLUS**

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

EFFICACY REPORT

SUMMARY – MYCORRHIZAL & RHIZOBIAL INOCULANT

LENTIL

AGTIV THRIVE

► PLOT & STRIP TRIALS

Research partners:
- Ag-Quest Inc.;
- GMAC's Ag Team;
- Prairie Ag Research Inc.;
- Small Plot Inc.;
- Wheatland Conservation Area.

Research sites:
- Saskatchewan;
- Alberta.

Treatments*:
a) AGTIV® THRIVE™ PEA & LENTIL;
b) Competitor inoculant A;
c) Competitor inoculant B;
d) Competitor inoculant C;
e) Competitor inoculant D.

*Products applied according to manufacturers recommended rate.

Experimental design:
- 63 replicated plots per treatment in randomized complete block design:
  - 5 trials with 6,
  - 1 trial with 7,
  - 3 trials with 8;
- 1 strip trial with 2 replicated.

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

Location	Year	Seed variety	AGTIV® THRIVE™ PEA & LENTIL	Competitor inoculant			
				A	B	C	D
Brock	2015	N.A.	18.4	13.4	11.4		
Swift Current	2016	Small Red Lentils, Imax CL	50.1	43.3	41.1	37.7	
Coalhurst	2017	N.A.	19.5	19.1	19.2	18.5	
Vulcan	2019	Pedigree CDC Proclaim	32.6	28.8			28.4
Lethbridge	2021	Proclaim	46.8		46.4		
Vulcan	2021	Impulse	10		8.4		
Lethbridge	2022	Impulse	32		31.9		
Vulcan	2022	Impulse	38.7		38.3		
Swift Current	2022	Impulse	35		32.6		
Taber	2023	Impulse	30.1		25.7		27.7

Table 2. **Summary of yields (kg/ha) per trial**

Location	Year	Seed variety	AGTIV® THRIVE™ PEA & LENTIL	Competitor inoculant			
				A	B	C	D
Brock	2015	N.A.	1 237	901	766		
Swift Current	2016	Small Red Lentils, Imax CL	3 367	2 910	2 762	2 533	
Coalhurst	2017	N.A.	1 310	1 284	1 290	1 243	
Vulcan	2019	Pedigree CDC Proclaim	2 192	1 937			1 910
Lethbridge	2021	Proclaim	3 145		3 118		
Vulcan	2021	Impulse	672		564		
Lethbridge	2022	Impulse	2 150		2 144		
Vulcan	2022	Impulse	2 601		2 574		
Swift Current	2022	Impulse	2 352		2 191		
Taber	2023	Impulse	2 024		1 728		1 863

EFFICACY REPORT

SUMMARY – MYCORRHIZAL & RHIZOBIAL INOCULANT

PEA

AGTIV THRIVE

► PLOT & STRIP TRIALS

Research partners:
- Ag-Quest Inc;
- ICMS;
- New Era Ag Technologies;
- Wheatland Conservation Area.

Research sites:
- Alberta;
- Saskatchewan;
- Manitoba.

Treatments*:
a) AGTIV® THRIVE™ PEA & LENTIL;
b) Competitor inoculant A;
c) Competitor inoculant B;
d) Competitor inoculant D.

*Products applied according to manufacturers recommended rate.

Experimental design:
65 replicated plots per treatment in randomized complete block design:
- 6 trials with 6,
- 3 trials with 8,
- 1 trial with 5.

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

Location	Year	Seed variety	AGTIV® THRIVE™ PEA & LENTIL	Competitor inoculant		
				A	B	D
Fort Saskatchewan	2015	Meadow	88.6	86.2	79.5	
Swift Current	2017	Amarillo	14	12.7	12.4	
Saskatoon	2019	AAC Ardill	65	52		63.2
Portage la Prairie	2021	Carver	45.2		41.3	
Josephburg	2022	Striker	45.4		46.6	
Saskatoon	2022	ACC Ardill	36.4		35.8	
Saskatoon	2022	CDC Spectrum	30.7		28.8	
Swan River	2022	Inca	91.5		87.1	
Swan River	2023	Inca	57.2		58.4	
Olds	2024	CDC Spectrum	75.5			74

Table 2. **Summary of yields (kg/ha) per trial**

Location	Year	Seed variety	AGTIV® THRIVE™ PEA & LENTIL	Competitor inoculant		
				A	B	D
Fort Saskatchewan	2015	Meadow	5 958	5 793	5 342	
Swift Current	2017	Amarillo	941	853	833	
Saskatoon	2019	AAC Ardill	4 371	3 497		4 250
Portage la Prairie	2021	Carver	3 037		2 775	
Josephburg	2022	Striker	3 051		3 132	
Saskatoon	2022	ACC Ardill	2 446		2 406	
Saskatoon	2022	CDC Spectrum	2 063		1 935	
Swan River	2022	Inca	6 149		5 853	
Swan River	2023	Inca	3 847		3 927	
Olds	2024	CDC Spectrum	5 077			4 977

EFFICACY REPORT

2024 – MYCORRHIZAL & RHIZOBIAL INOCULANT

PEA

AGTIV THRIVE

► PLOT TRIAL

Research partner: Olds College Centre for Innovation

Research site: Olds, AB

Treatments*:
a) Untreated check;
b) AGTIV® THRIVE™ PEA & LENTIL;
c) Competitor inoculant D.

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 8 repetitions, 12 m^2 plots

Variety: CDC Spectrum

Previous crop: Barley (hay)

Seeding details: Seeded on May 28 with a plot drilling machine at a rate of 88 plants/m^2 in a loam soil (pH: 7.2, OM: 7.3%). Emergence on June 4.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 12-51-0 (25 kg/ha): May 28

Pesticides:
- Viper ADV (0.404 l/ac): At the 4th internode stage
- UAN (0.81 l/ac): At the 4th internode stage

Harvesting: September 9, 2024

Month	Precipitation (mm)
May	69
June	72.8
July	21
August	70.8
TOTAL	**233.6**

Table 1. **Summary of yields per treatment**

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	70.7	-
AGTIV® THRIVE™ PEA & LENTIL	75.5	4.8
Competitor inoculant D	74	3.3

EFFICACY REPORT

SUMMARY – MYCORRHIZAL & RHIZOBIAL INOCULANT

SOYBEAN

AGTIV THRIVE

► PLOT & STRIP TRIALS

Research partners:
- Ag-Quest;
- ICMS;
- New Era Ag research;
- South East Research Farm (SERF);
- Stoney Ridge Ag Services.

Research sites:
- Manitoba;
- Saskatchewan.

Treatments*:
a) AGTIV® THRIVE™ SOYBEAN;
b) Competitor inoculant A;
c) Competitor inoculant B;
d) Competitor inoculant C;
e) Competitor inoculant D;
f) Competitor inoculant E.

*Products applied according to manufacturers recommended rate.

Experimental design:
- 86 replicated plots per treatment in randomized complete block design;
- 1 strip trial with 2 replicated strips.

Table 1. **Summary of yields (bu/ac)[1] per trial[2]**

Location	Year	Seed variety	AGTIV® THRIVE™ SOYBEAN	Competitor inoculant				
				A	B	C	D	E
Morden	2015	Northstar	31.8 [a]	27.8 [b]	30.5 [a,b]			
Portage La Prairie	2015	Pride Seeds	57.3	55.4	58.2			
Oakville	2016	Legend Seeds	79.7	77.8	77.7			
Swan River	2017	Prograin	40.7 [a]	35 [b,c]		32.5 [c]		
Portage La Prairie	2017	Northstar	58.3	54.5	54.5	54.7		
Binscarth	2017	Pioneer	30.1 [a]	27.7 [b]	29 [a,b]	28.5 [b]		
Redvers	2018	Prograin	31.1	28.2	25.8			
Swan River	2018	Prograin	57.7	47.2	54.3	55.5		
Portage La Prairie	2018	Secan	49.4	47.2	47.8			
Elm Creek	2019	Gray R2	37.1	36.9			35.9	
Redvers	2019	NSC Watson	16.3	14.9		15.8		
Swan River	2019	Syngenta	35.7 [a]	29.9 [b]		35.7 [a]		
Swan River	2021	Syngenta	46.3 [b]					43.5[b]
Redvers	2021	Watson	21					20
Redvers	2022	NSC Redvers	54.9	53.7				
Portage La Prairie	2022	NSC Redvers	64.9	63.4				

[1] Average yields followed by different letters are significantly different at p≤05.
[2] To obtain kg/ha results, multiply bushels by 60 and then by 1.12085 (n*60*1.12085).

EFFICACY REPORT

SUMMARY – RHIZOBIAL & BACILLUS INOCULANT

SOYBEAN AGTIV ENRICH

► PLOT TRIALS

Research partners:

- BlackCreek Research;
- ICMS;
- New Era Ag Research and Technologies;
- New Marc Research;
- Tall Pines Agricultual Research Ltd;
- Wellington Agricultural Research Ltd.

Research sites:

- Ontario;
- Manitoba;
- Quebec.

Treatments*:

a) AGTIV® ENRICH™ SOYBEAN;
b) Competitor inoculant B;
c) Competitor inoculant C;
d) Competitor inoculant E.

*Products applied according to manufacturers recommended rate.

Experimental design: 60 replicated plots per treatment in randomized complete block design.

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

Location	Year	Seed variety	AGTIV® ENRICH™ SOYBEAN	Competitor inoculant		
				B	C	E
Bright	2021	Katonda R2	72.2	70.1	70.7	69.3
Portage la Prairie	2022	NCS Redvers RR2X	54.2	57	53	53
Swan River	2022	Syngenta D8X	57.4	56.9	57.6	55.5
Bright	2022	Pioneer 12T94E	52.8	52.8	51.9	52.4
Saint-Marc-sur-Richelieu	2022	Katonda R2	34.4	32.8	32.6	32.5
Alma	2023	Pioneer P08A44E	59.2	53.5		56.4
Rockwood	2023	Dekalb 03-25	105.1	101.1		104
Swan River	2024	S000-D8X	61.2			60.5
Redvers	2024	PV 22s002 RR2X	29			24.7

EFFICACY REPORT

2024 –RHIZOBIAL & BACILLUS INOCULANT

SOYBEAN AGTIV ENRICH

► PLOT TRIAL

Research partner: New Era Ag Technologies Inc

Research site: Swan River, MB

Treatments*: a) Untreated check;
b) AGTIV® ENRICH™ SOYBEAN;
c) Competitor inoculant E.

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 22 m^2 plots

Variety: S000-D8X treated with Vayantis RFC

Previous crop: Soybean

Seeding details: Seeded on May 29 with a cone planter at a rate of 190 000 seed/ac in a sandy loam soil (pH: 7, OM: 4.1%).
Emergence on June 9.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 11-52-0 (38 lb/ac): May 28

Pesticides: RT 540 (0.67 l/ac): June 27 and July 19

Harvesting: September 27, 2024

Month	Precipitation (mm)
May	45.5
June	76.5
July	71.4
August	110.2
September	36.1
TOTAL	**339.7**

Table 1. **Summary of yields per treatment**

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	59.8	-
AGTIV® ENRICH™ SOYBEAN	61.2	1.4
Competitor inoculant E	60.5	0.7

EFFICACY REPORT

2024 – RHIZOBIAL & BACILLUS INOCULANT

SOYBEAN AGTIV ENRICH

► PLOT TRIAL

Research partner: South East Research Foundation

Research site: Redvers, SK

Treatments*: a) Untreated check;
b) AGTIV® ENRICH™ SOYBEAN;
c) Competitor inoculant E.

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 9.3 m^2 plots

Variety: PV 22s002 RR2X treated with Vibrance Maxx RFC

Previous crop: Fallow

Seeding details: Seeded on May 29 with a cone planter at a rate of 200 000 seeds/ac in a loam soil (pH: 8.3, OM: 2.8%).

Table 1. **Summary of yields per treatment**

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	25.9	-
AGTIV® ENRICH™ SOYBEAN	29	3.1
Competitor inoculant E	24.7	-1.2

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 11-52-0 (65 lb/ac) sidebanded at seeding

Pesticides: Roundup 540 (670 ml/ac): June 7

Harvesting: September 29, 2024

Month	Precipitation (mm)
June	156.2
July	13.4
August	39
September	70.6
TOTAL	**279.2**

EFFICACY REPORT

SUMMARY – MYCORRHIZAL INOCULANT

DRY BEAN

AGTIV REACH

► GROWER SPLIT FIELD & PLOT TRIALS

Research partners:
- Growers
- Tall Pines Agricultural Research Ltd

Research sites: Ontario

Treatments*: a) Untreated check;
b) AGTIV® REACH™.

*Products applied according to manufacturers recommended rate.

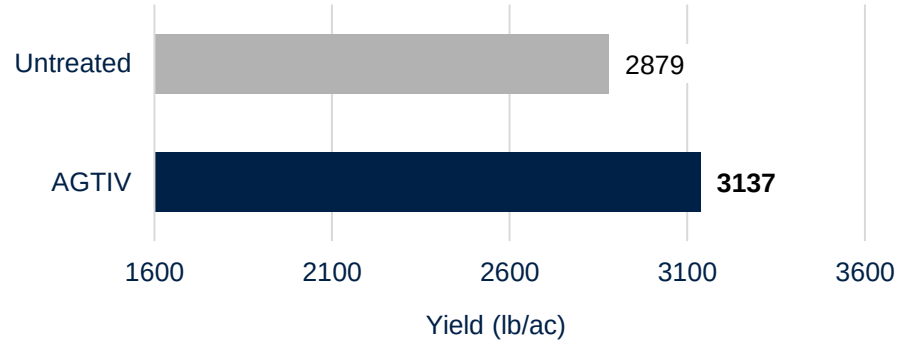
Experimental design:
- 15 grower split fields
- 8 replicated plots per treatment in randomized complete block design

Faster plant development, larger plants and quicker row closure.

Table 1. **Average yield increase with AGTIV® REACH™**

Year	Number of sites	Average increase (lb/ac)	Average increase (kg/ha)	Average increase (%)
2014	2	337	378	13
2015	2	482	542	17.3
2016	5	130	146	5.5
2017	2	146	164	5.1
2020	1	462	518	10.7
2023	3	163	183	6.4
2024	1	589.5	660.6	25.5
Total	**16 sites**	**257.8 lb/ac**	**288.9 kg/ha**	**9%**

Figure 1. **Yields with and without AGTIV® REACH™.**



EFFICACY REPORT

2024 – MYCORRHIZAL INOCULANT

DRY BEAN

AGTIV REACH

► PLOT TRIAL

Research partner: Tall Pines Agricultural Research Ltd

Research site: Rockwood, ON

Treatments*: a) Untreated check;
b) AGTIV® REACH™ P.

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 8 repetitions, 18 m^2 plots

Variety: HDC Rogue

Previous crop: Winter wheat

Seeding details: Seeded on June 13 with a cone planter at a rate of 63 lb/ac in a sandy loam soil (pH: 7, OM: 2.5%).
Emergence on June 21.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 120-60-90 (589 kg/ha): May 6

Pesticides:
- Dual II Magnum (1.75 l/ha): June 15
- Pursuit (0.21 l/ha): June 15
- Allegro (1 l/ha): July 28 and August 8

Harvesting: October 21, 2024

Month	Precipitation (mm)
June	87.3
July	139.5
August	61.9
September	24.9
TOTAL	**313.6**

Table 1. **Summary of yields per treatment**

Treatment	Yield (lb/ac)	Yield increase (lb/ac)
Untreated check	2 315.1	-
AGTIV® REACH™ P	2 904.6	589.5

EFFICACY REPORT

SUMMARY – MYCORRHIZAL & RHIZOBIAL INOCULANT

CHICKPEA

AGTIV THRIVE

► PLOT TRIALS

Research partners:

- Ag-Quest inc;
- Prairie Ag Research;
- Small Plot Inc;
- Wheatland Conservation Area.

Research sites:

- Alberta;
- Saskatchewan.

Treatments*:

a) AGTIV® THRIVE™ CHICKPEA;
b) Competitor inoculant A;
c) Competitor inoculant B;
d) Competitor inoculant D.

*Products applied according to manufacturers recommended rate.

Experimental design: Total of 40 replicated plots per treatment in randomized complete block design.

Table 1. **Summary of yields (bu/ac) per trial[1]**

Location	Year	Seed variety	AGTIV® THRIVE™ CHICKPEA	Competitor inoculant		
				A	B	D
Lethbridge	2018	Alma	73	71.3	71	
Swift Current	2018	Leader	28	28.8	26.1	
Lethbridge	2022	Clearfield Kabuli	43.1		41.2	
Taber	2022	CDC Pearl	41.7[b]		39.4[ab]	
Vulcan	2023	CDC Orion	6.3			6
Taber	2024	CDC Palmer	39.7			38.8

[1] Yields with the same letter are not statistically different according to a LSD test (p≤05).

EFFICACY REPORT

2024 – MYCORRHIZAL & RHIZOBIAL INOCULANT

CHICKPEA

AGTIV THRIVE

► PLOT TRIAL

Research partner: Ag-Quest inc.

Research site: Taber, AB

Treatments*:
a) Untreated check;
b) AGTIV® THRIVE™;
c) Competitor inoculant D.

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 8 repetitions, 10.5 m^2 plots

Variety: CDC Palmer

Previous crop: Winter rye

Seeding details: Seeded on June 5 with a cone planter at a rate of 180 kg/ha in a coarse sandy loam soil (pH: 8.2, OM: 2.7%). Emergence on June 13.

Table 1. **Summary of yields per treatment**

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	35.7	-
AGTIV® THRIVE™	39.7	4
Competitor inoculant D	38.8	3.1

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides:
- Roundup WeatherMax (1.74 l/ha): May 15
- Authority 480 EC (0.29 l/ha): June 1
- Tough (1.48 l/ha): June 14
- Select (0.19 l/ha): June 14
- Reglone Ion (2.2 l/ha): September 10, 16 & 27

Harvesting: October 3, 2024

Month	Precipitation (mm)	Irrigation (mm)
May	186.4	
June	75.7	12.5
July	100.7	134.7
August	41.8	14.6
September	71.9	
TOTAL	**476.5**	**161.8**

EFFICACY REPORT

SUMMARY – SERENDIPITA INOCULANT

► PLOT & STRIP TRIALS

Research partners:

- Ag-Quest Inc.;
- Integrated Crop Management Services;
- New Era Ag Research and Technologies;
- North Peace Applied Research Association;
- Prairie Ag Research;
- Small Plot Inc.;
- South East Research Farm;
- Wellington Agricultural Research;
- Wheatland Conservation Area.

Research sites:

- Ontario;
- Manitoba;
- Saskatchewan;
- Alberta.

Treatments*:

a) Untreated check;
b) AGTIV® IGNITE™ L.

*Products applied according to manufacturers recommended rate.

Experimental design:

- 158 replicated plots per treatment in complete randomized block design:
  - 13 of 6,
  - 10 of 8;
- 5 split fields.

Table 1. **Average increase of yield.**

Year	Number of sites	Untreated check (bu/ac)	AGTIV® IGNITE™ L yield (bu/ac)	Yield increase (bu/ac)
2018	1	63.5	68	4.5
2019	6	44.6	47.1	2.5
2020	5	37.2	39.6	2.4
2021	8	32.5	35	2.5
2022	7	33.6	36.2	2.6
2023	5	36	37.7	1.7
2024	1	33.7	35.6	1.9
Total	**33 sites**	**36.9[a]**	**39.3[b]**	**2.4 bu/ac ***

*Summary of means are significantly different following a combined site ANOVA and a Tukey test (p<05) p < 001

Table 2. **Average increase of canola oil content.**

Year	Number of sites	Untreated check (oil %)	AGTIV® IGNITE™ L (oil %)	Oil increase (%)
2019	3	41.2	42.1	0.9
2020	4	39.2	40.6	1.4
2021	5	38.1	38.5	0.4
2022	7	35.3	36.1	0.8
Total	**19 sites**	**37.8[a]**	**38.7[b]**	**0.9%****

** Summary of means are significantly different following a combined site ANOVA and a Tukey test (p<0.1) p=05

SUMMARY OF YIELD – SERENDIPITA INOCULANT

Table 1. **Summary of canola yield trials for different sites – Ontario**

site	Year	Untreated check yield (bu/ac)	AGTIV® IGNITE™ L yield (bu/ac)	Yield increase (bu/ac)
Alma	2022	20	21.4	1.4

Table 2. **Summary of canola yield trials for different sites – Manitoba**

site	Year	Untreated check yield (bu/ac)	AGTIV® IGNITE™ L yield (bu/ac)	Yield increase (bu/ac)
Elm Creek	2021	36.2	37.2	1
	2022	46.1	48	1.9
Portage la Prairie	2019	78	78	0
	2021	36.3	38.9	2.6
	2022	29.3	32.8	3.5
Sandy Ridge Farms	2021	41.8	44.1	2.3
Swan River	2018	63.5	68	4.5
	2019	53.7	55.4	1.7
	2020	61.2	64	2.8
	2021	46.9	48.2	1.3
	2022	60	62.2	2.2
	2023	71	72.8	1.8

Table 3. **Summary of canola yield trials for different sites – Saskatchewan**

site	Year	Untreated check yield (bu/ac)	AGTIV® IGNITE™ L yield (bu/ac)	Yield increase (bu/ac)
Farm Beechy	2020	24.2	27.8	3.6
Moon Lake	2020	16.3	18.2	1.9
	2023	23.8	24.9	1.1
Redvers	2022	32.2	34.1	1.9
	2023	32.2	33.8	1.6
Saskatoon	2019	38.8	41.8	3
	2021	10.3	12.5	2.2
	2022	19.6	21	1.4
Swift Current	2019	25	27.1	2.1

Table 4. **Summary of canola yield trials for different sites – Alberta**

site	Year	Untreated check yield (bu/ac)	AGTIV® IGNITE™ L yield (bu/ac)	Yield increase (bu/ac)
Josephburg	2019	46.8	53.2	6.4
	2020	47.2	49.5	2.3
	2021	23.9	25	1.1
	2023	45.6	47.7	2.1
Lillico Farms	2021	26.4	31.5	5.1
Manning	2024	33.7	35.6	1.9
Taber	2019	25.4	27	1.6
	2020	37.3	38.5	1.2
	2022	28.2	32.7	4.5
Westline Farms	2021	29.7	32.5	2.8
Vulcan	2023	7.3	9.3	2

EFFICACY REPORT

SUMMARY OF OIL CONTENT – SERENDIPITA INOCULANT

Table 1. **Summary of canola seed oil content trials for different sites – Ontario**

site	Year	Untreated check oil	AGTIV® IGNITE™ L (oil %)	oil increase (%)
Alma	2022	36.3	36.9	0.6

Table 2. **Summary of canola seed oil content trials for different sites – Manitoba**

site	Year	Untreated check oil	AGTIV® IGNITE™ L (oil %)	oil increase (%)
Elm Creek	2021	35.1	37.1	2
	2022	37.7	37.3	-0.4
Portage la Prairie	2019	45.5	45.7	0.2
	2021	36.6	36	-0.6
	2022	30.6	35.2	4.6
Swan River	2019	49.9	52.1	2.2
	2020	38.7	40.5	1.8
	2021	37.8	37.8	0
	2022	37.3	37.7	0.4

Table 3. **Summary of canola seed oil content trials for different sites – Saskatchewan**

site	Year	Untreated check oil	AGTIV® IGNITE™ L (oil %)	oil increase (%)
Moon Lake	2020	41.6	43.1	1.5
Redvers	2022	36.6	36.5	-0.1
Saskatoon	2021	41.8	42.1	0.3
	2022	36.6	36.3	-0.3

Table 4. **Summary of canola seed oil content trials for different sites – Alberta**

site	Year	Untreated check oil	AGTIV® IGNITE™ L (oil %)	Increase (%)
Josephburg	2019	28.1	28.6	0.5
	2020	34.7	36.6	1.9
	2021	39.1	39.7	0.6
Taber	2020	41.7	42.1	0.4
	2022	32.1	32.9	0.8

EFFICACY REPORT

2024 – SERENDIPITA INOCULANT

► PLOT TRIAL

Research partner: North Peace Applied Research Association

Research site: Manning, AB

Treatments*: a) Untreated check;
b) AGTIV® IGNITE™ L.

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 12.8 m^2 plots

Variety: CS2600 CR – T(RR) treated with Helix Saltro and Fortenza

Previous crop: Fallow

Seeding details: Seeded on May 28 with a cone planter at a rate of 7 kg/ha in a heavy clay soil (pH: 4.8, OM: 6.8%).
Emergence on June 14.

Table 1. **Summary of yields per treatment**

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	33.7	-
AGTIV® IGNITE™ L	35.6	1.9

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 46-0-0 (120 lb/ac) and 13-33-0 -15 (80 lb/ac) sidebanded at seeding

Pesticides: Glyphosate (1 l/ac): May 28 and July 9

Harvesting: October 3, 2024

Month	Precipitation (mm)
May	51.5
June	75.3
July	103.2
August	45.4
September	26.6
October	18.1
TOTAL	**320.2**

EFFICACY REPORT

SUMMARY – SERENDIPITA ON SEED INOCULANT

DURUM WHEAT

AGTIV IGNITE

► PLOT TRIALS

Research partners:
- Ag-Quest Inc.;
- Murphy & al.;
- Prairie Ag Research;
- Small Plot;
- Wheatland Conservation Area.

Research sites:
- Alberta;
- Saskatchewan.

Treatments*:
a) Untreated check;
b) AGTIV® IGNITE™ L.

*Products applied according to manufacturers recommended rate.

Experimental design:
- 72 replicated plots per treatment in complete randomized block design:
  - 4 of 6,
  - 6 of 8.

Table 1. **Summary of yield trials for different sites**

Year	Sites	Untreated check yield (bu/ac)	AGTIV® IGNITE™ L yield (bu/ac)	Yield increase (bu/ac)
2021	Lethbridge	66.7	73.3	6.6
2021	Vulcan	25.8	28.8	3
2021	Taber	39	40.6	1.6
2021	Swift Current	11.8	14.4	2.6
2022	Lethbridge	50.2	59	8.8
2022	Swift Current	54	55.8	1.8
2022	Vulcan	29.2	31	1.8
2022	Taber	27.3	31.8	4.5
2023	Raymond	53	56.1	3.1
2023	Lethbridge	32.6	34.6	2
Total	**10 sites**	**38.9[a]**	**42.5[b]**	**3.6 bu/ac ***

* Yields with same letter are not statistically different according to a Tukey HSD test (p≤05).

EFFICACY REPORT

SUMMARY – SERENDIPITA INOCULANT

SPRING WHEAT

AGTIV IGNITE

► PLOT TRIALS

Research partners:
- Ag-Quest Inc.;
- New Era Technologies Inc.

Research sites:
- Manitoba;
- Saskatchewan.

Treatments*:

a) Untreated check;
b) AGTIV® IGNITE™ L.

*Products applied according to manufacturers recommended rate.

Experimental design:
- 12 replicated plots per treatment in complete randomized block design:
  - 2 of 6.

Table 1. **Summary of yield trials for different sites**

Year	Sites	Untreated check yield (bu/ac)	AGTIV® IGNITE™ L yield (bu/ac)	Yield increase (bu/ac)
2023	Swan River	68.1	74.7	6.6
2023	Saskatoon	13.9	17.6	3.7
Total	**2 sites**	**41**	**46.2**	**5.2 bu/ac ***

EFFICACY REPORT

SUMMARY – SERENDIPITA INOCULANT

BARLEY AGTIV IGNITE

► PLOT & STRIP TRIALS

Research partners:
- Ag-Quest Inc.;
- Wheatland Conservation Area.

Research sites:
- Manitoba;
- Saskatchewan.

Treatments*:
a) Untreated check;
b) AGTIV® IGNITE™ L.

*Products applied according to manufacturers recommended rate.

Experimental design:
- 12 replicated plots per treatment in complete randomized block design:
  - 2 of 6;
- 1 split field.

Table 1. **Summary of yield trials for different sites**

Year	Sites	Untreated check yield (bu/ac)	AGTIV® IGNITE™ L yield (bu/ac)	Yield increase (bu/ac)
2023	Elm Creek	101.9	104	2.1
2023	Swift Current	22.8	25.6	2.8
2023	Petruic Family farm	59.5	70.7	11.2
Total	**3 sites**	**61.4**	**66.8**	**5.4 bu/ac**

► SPLIT FIELD TRIALS

Research partners: Growers

Research sites:
- Canada;
- Europe.

Treatments*:
a) Untreated check;
b) AGTIV® REACH™.

*Products applied according to manufacturers recommended rate.

Experimental design: 45 split fields.

Table 1. **Average yield increase with AGTIV® REACH™ in Canada and Europe**

Number of sites	Average increase (%)
45	6.4%

Table 2. **Average yield increase with AGTIV® REACH™ in Canada**

Number of sites	Average increase (bu/ac)	Average increase (%)
14	3.5	5.8%

Table 3. **Average yield increase with AGTIV® mycorrhizal inoculant in France and Germany, Europe**

Number of sites	Average increase (bu/ac)	Average increase (%)
31	8.3	6.5%

EFFICACY REPORT

SUMMARY – MYCORRHIZAL INOCULANT

BARLEY

AGTIV REACH

► SPLIT FIELD DEMOS

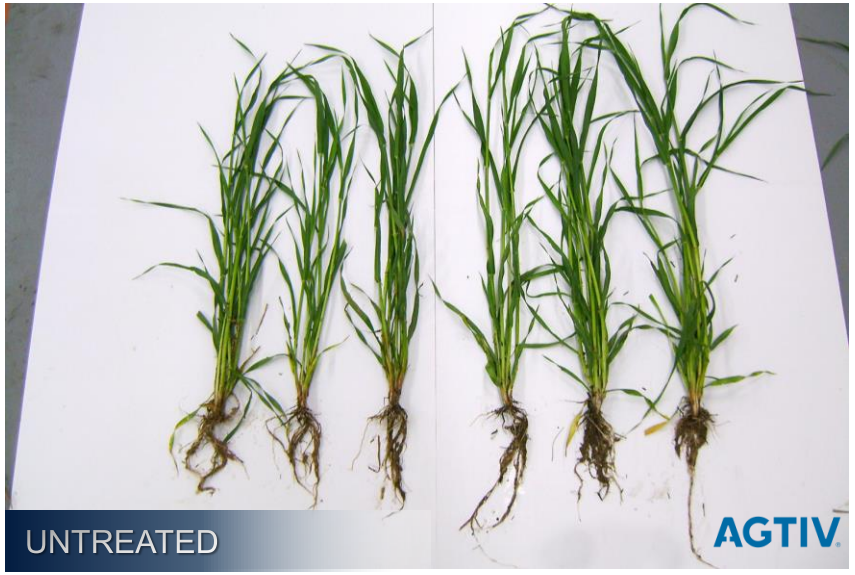
Research partners: Growers

Research sites:
- Canada;
- Europe.

Treatments*: a) Untreated;
b) AGTIV® REACH™.

*Products applied according to manufacturers recommended rate.

Experimental design: Split fields

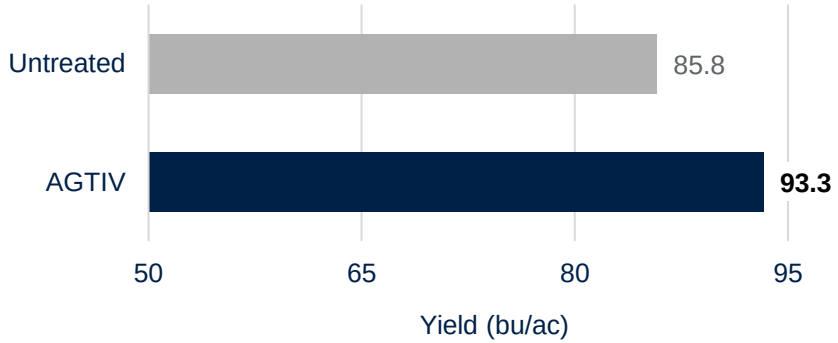


Barley plants have an increased root mass on the right with AGTIV®, which leads to enhanced plant health and growth.

Table 1. **Average yield increase with AGTIV® REACH™**

Number of sites	Average increase (bu/ac)	Average increase (kg/ha)	Average increase (%)
28	7.5	394.4	8.7%

Figure 1. **Average yield increase with AGTIV® mycorrhizal inoculant in Canada and Europe (28 sites, 2012 to 2017).**



EFFICACY REPORT

SUMMARY – MYCORRHIZAL INOCULANT

FORAGES AGTIV REACH

► SPLIT FIELDS DEMO

Research partners: Growers

Research sites: Quebec

Treatments*:
a) Untreated;
b) AGTIV® REACH™.

*Products applied according to manufacturers recommended rate.

Experimental design:
15 split fields
An average of 5 samples were taken from each side of each split field.

Table 1. **Increase in dry weight per cut over two years with AGTIV® REACH™**

Cut	Yield increase 2016 season	Yield increase 2017 season
1st	17.5%	23.8%
2nd	20.8%	5.9%
3rd	12.7%	10.6%
Average	**18.7%**[1]	**13.5%**[1]

Table 2. **Winter 2016 Alfalfa survival**[2]

Treatment	Survival winter 2016
Untreated	86.4% [a]
AGTIV®	92.2% [b]
Decrease loss	**+42.8%**

Table 3. **Two-year summary of Alfalfa dry weight yield average**[2]

Year	AGTIV®	Untreated	Difference
2016	3 910	3 295	615
2017	4 190	3 691	499
Total	**8 100**[b]	**6 986**[a]	**1 114**

[1] Statistically significant at p⩽05 using t-test for dependent samples.
[2] Averages followed by different letters are significantly different (p⩽05, t-test for dependent samples).

EFFICACY REPORT

SUMMARY – MYCORRHIZAL INOCULANT

POTATO AGTIV REACH

► GROWER SPLIT FIELDS AND TRIALS

Research sites:

- Belgium;
- Canada;
- France;
- Germany;
- Mexico;
- Switzerland;
- United States.

Treatments*:

a) Untreated;
b) AGTIV® REACH™ L POTATO.

*Products applied according to manufacturers recommended rate.

Experimental design:

1 199 split fields

Table 1. **Average increase of marketable yield* with AGTIV® REACH™ L POTATO**

Territory	Number of sites	Yield increase (t/ha)	Yield increase (cwt/ac)	Yield increase (%)
Canada	600	3.1	27.6	9.2
United States	67	3.3	29.8	10.8
Mexico	4	2.3	20	8.6
Belgium, France & Switzerland	496	4.1	36.3	9.9
Germany	32	4.2	37.4	10
Total	**1 199 sites**	**3.6 t/ha***	**31.6 cwt/ac****	**9.2%**

Table 2. **Average increase of marketable yield* with AGTIV® REACH™ L POTATO**

Year	Number of sites	Yield increase (t/ha)	Yield increase (cwt/ac)	Yield increase (%)
2011	32	2.6	23.3	6.6
2012	33	3.2	28.5	9
2013	70	3.6	31.9	11.2
2014	116	4.5	40.3	12.8
2015	145	4	35.3	10.7
2016	243	3.9	34.8	10.5
2017	213	2.7	24	7.7
2018	113	3.4	30.2	11.2
2019	117	3.5	31.1	8.6
2020	49	2.9	25.6	9.8
2021	41	4.1	36.4	10.2
2022	12	3.4	29.2	7.8
2023	13	2.7	23.9	8
2024	2	2.1	18.7	8.7
Total	**1 199 sites**	**3.6 t/ha***	**31.6 cwt/ac****	**9.2%**

* Statistically significant at p<001 following a T test.
**cwt/ac = 100 lb/ac

EFFICACY REPORT

SUMMARY – MYCORRHIZAL & BACILLUS INOCULANT

POTATO

AGTIV REACH + AGTIV STIMULATE

► PLOT TRIALS

Research partners:
- AgriTech Inc
- Atlantic Agri Tech;
- Integrated Crop Management Services (ICMS);
- New Marc Research;
- Prairie Ag Research;
- Progest inc.;
- Tall Pines Agricultural Research Ltd.;
- Wellington Agricultural Research Ltd.

Research sites:
- Alberta;
- Manitoba;
- Ontario;
- Prince-Edward Island;
- Quebec.

Treatments*:

a) AGTIV® REACH™ L POTATO;
b) AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ POTATO.

*Products applied according to manufacturers recommended rate.

Experimental design:
- Randomized Complete Block:
  - 1 trial of 6 repetitions;
- Latin squares:
  - 14 trials of 6 repetitions,
  - 1 trial of 5 repetitions.

Table 1. **Average increase of marketable yield* in cwt/ac per trial**

Year	Sites	AGTIV® REACH™	AGTIV® REACH™ and AGTIV® STIMULATE™	Yield increase*
2021	Sainte-Croix	320.3	319.3	-1
2021	Saint-Marc	107.8	112.8	5
2021	New Glasgow	242.1	247.4	5.3
2021	Rockwood	279.7	322.3	42.6
2021	Elmira	320.7	343.9	23.2
2022	Saint-Marc	145.4	142.2	-3.2
2022	Newton	235.9	237.8	1.9
2022	Newton	92.5	109.3	16.8
2022	Rockwood	402.5	429	26.5
2023	New Glasgow	413.1	425.6	12.5
2023	Raymond	138.5	141.1	2.6
2023	Underhills Farm	361.8	360	-1.8
2023	Newton	282.4	291.2	8.8
2023	Newton	482.7	502.3	19.6
2024	Portage la Prairie	238	235.7	-2.3
2024	Raymond	228	236.3	8.3
Average	**16 sites**	**268.2[a]**	**278.5[b]**	**10.3 cwt/ac**

*Comparison of the double inoculation vs AGTIV® REACH™ L POTATO
[a,b]Yields with different letters are statistically different according (Tukey HSD test ($p<0.05$)).

EFFICACY REPORT

2024 – MYCORRHIZAL & BACILLUS INOCULANT

POTATO

AGTIV REACH + AGTIV STIMULATE

► PLOT TRIAL

Research partner: Integrated Crop Management Services (ICMS)

Research site: Portage la Prairie, MB

Treatments*:
a) Untreated check;
b) AGTIV® REACH™ L POTATO;
c) AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ L POTATO.

*Products applied according to manufacturers recommended rate.

Experimental design: Latin Square (LS), 6 repetitions, 21.96 m^2 plots

Variety: E3 - Norland

Previous crop: Fallow

Seeding details: Seeded on June 15 with a potato planter at a rate of 2 290 kg/ha in a silty clay loam soil (pH: 7.7, OM: 7.5%). Emergence on June 30.

Table 1. **Summary of yields per treatment**

Treatment	Yield (cwt/ac)	Yield increase (cwt/ac)
Untreated check	220.1	-
AGTIV® REACH™ L POTATO	238	17.9
AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ L POTATO	235.7	15.6

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 179-34-22.4-22.4 kg/ha NPKS: May 29

Pesticides:
- Prism (6 g/ac) and Agral (0.2% V/V): July 8
- Pounce (072 l/ac): July 10
- Silencer (05 l/ac), Poast Ultra (0.45 l/ac) and Merge (1% V/V): July 19
- Minecto Pro (0.271 l/ac): July 23 and August 30
- Bravo Zn (1 l/ac) and Quadris (0.5 l/ac): August 27

Harvesting: October 9, 2024

Month	Precipitation (mm)
May	512.9
June	109.4
July	67.4
August	48.8
September	39.9
TOTAL	**778.4**

EFFICACY REPORT

2024 – MYCORRHIZAL & BACILLUS INOCULANT

POTATO

AGTIV REACH + AGTIV STIMULATE

► PLOT TRIAL

Research partner: Prairie Ag Research Inc

Research site: Raymond, AB

Treatments*:
a) Untreated check;
b) AGTIV® REACH™ P POTATO;
c) AGTIV® REACH™ P POTATO + AGTIV® STIMULATE™ L POTATO.

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions,12 m^2 plots

Variety: Norkotah

Previous crop: Barley

Seeding details: Seeded on May 29 with a potato planter at a rate of 2 500 kg/ha in a clay loam soil (pH: 7.7, OM: 3.4%).
Emergence on June 21.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 20-10-10-15 (100 kg/ha): April 6

Pesticides: Glyphosate: June 14

Harvesting: September 16, 2024

Month	Precipitation (mm)
May	175
June	57.1
July	19.4
August	52.5
TOTAL	**304**

Table 1. **Summary of yields per treatment**

Treatment	Yield (cwt/ac)	Yield increase (cwt/ac)
Untreated check	208.5	-
AGTIV® REACH™ P POTATO	228	19.5
AGTIV® REACH™ P POTATO + AGTIV® STIMULATE™ L POTATO	236.3	27.8

EFFICACY REPORT

SUMMARY – MYCORRHIZAL INOCULANT

SWEET CORN

AGTIV REACH

► PLOT TRIALS

Research partners:
- BlackCreek Research;
- Sandy Knolls Research Inc.

Research sites: Ontario

Treatments*:
a) Untreated check;
b) AGTIV® REACH™.

*Products applied according to manufacturers recommended rate.

Experimental design: 2 randomized Complete Block (RCB), 8 repetitions each.

Table 1. **Summary of yields (lb/ac) per trial**

Location	Year	Seed variety	Untreated check	AGTIV® REACH™	Yield increase
Vienna, ON	2023	Fast Lane SE	3 022.6	3 274.8	252.2
Bright, ON	2023	Fast Lane SE	12 618	13 347	729

EFFICACY REPORT

2023 – MYCORRHIZAL INOCULANT

SWEET CORN

AGTIV REACH

► PLOT TRIAL

Research partner: BlackCreek Research

Research site: Bright, ON

Treatments*: a) Untreated check;
b) AGTIV® REACH™ Encrusting.

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 8 repetitions, 18 m^2 plots

Variety: Fast Lane SE treated with Dividend Extreme and Vibrance Cinco

Previous crop: Soybean

Seeding details: Seeded on May 11 with a cone planter at a rate 27 000 seeds/ acre in a sandy loam soil (pH: 6.8, OM: 3.5%). Emergence on May 22.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 24.3-10.8-14.6 -2.2S-1Mg (725 lb/ac): pre plant incorporate

Pesticides: Primextra II Magnum (4 l/ha) and Callisto (0.3 l/ha): May 16

Harvesting: August 11, 2023

Month	Precipitation (mm)
May	47
June	92.8
July	227
August	130.2
TOTAL	**497**

Table 1. **Summary of yields per treatment**

Treatment	Yield (lb/ac)	Yield increase (lb/ac)
Untreated check	12 618	-
AGTIV® REACH™ Encrusting	13 347	729

EFFICACY REPORT

2023 – MYCORRHIZAL INOCULANT

SWEET CORN

AGTIV REACH

► PLOT TRIAL

Research partner: Sandy Knolls Research Inc

Research site: Vienna, ON

Treatments*: a) Untreated check;
b) AGTIV® REACH™ Encrusting.

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 8 repetitions, 18 m^2 plots

Variety: Fast Lane SE treated with Dividend Extreme and Vibrance Cinco

Previous crop: Fallow

Seeding details: Seeded on July 20 with a finger pickup planter at a rate of 32 000 seeds/ac in loamy sand soil (pH: 7.5, OM: 1.4%). Emergence on July 24.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:
- 0-0-60 (150 lb/ac) and 46-0-0 (450 lb/ac): May 8
- Corn Starter (250 lb/ac): July 20

Pesticides: None

Harvesting: October 2, 2023

Month	Precipitation (mm)
July	192.2
August	117.8
September	32.6
TOTAL	**342.6**

Table 1. **Summary of yields per treatment**

Treatment	Yield (lb/ac)	Yield increase (lb/ac)
Untreated check	3 022.6	-
AGTIV® REACH™ Encrusting	3 274.5	251.9

EFFICACY REPORT

SUMMARY – MYCORRHIZAL INOCULANT

GREEN BEAN

AGTIV REACH

► SPLIT FIELDS DEMO

Research partners: Growers

Research sites: France

Treatments*: a) Untreated;
b) AGTIV® REACH™.

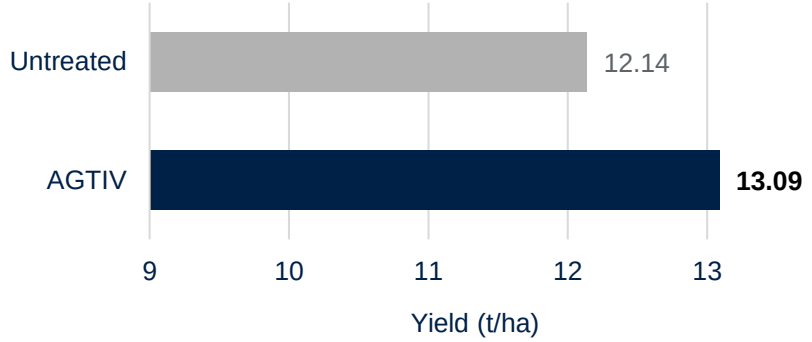
*Products applied according to manufacturers recommended rate.

Experimental design: Split fields

Table 1. **Summary of yields per trial**

Variety	Untreated		AGTIV® mycorrhizal inoculant		Increase (%) AGTIV® vs untreated
	(lb/ac)	(t/ha)	(lb/ac)	(t/ha)	
Stanley	13 561	15.16	14 810	16.56	9.2
Costal	11 865	13.31	12 668	14.24	7
Bamaco	15 167	16.98	16 594	18.57	9.4
Compass	8 297	9.27	9 635	10.8	16.5
Paloma	9 546	10.73	9 367	10.47	-2.4
Linex	6 512	7.33	6 959	7.83	6.8
Average	**10 825**	**12.14**	**11 672**	**139**	**7.8%**

Figure 1. **Yield increase with AGTIV® mycorrhizal inoculant.**



EFFICACY REPORT

SUMMARY – MYCORRHIZAL & RHIZOBIAL INOCULANT

GREEN PEA

AGTIV THRIVE

► SPLIT FIELDS DEMO

Research partners: Growers

Research sites:
- Ontario;
- Quebec.

Treatments*: a) Untreated;
b) AGTIV® THRIVE™.

*Products applied according to manufacturers recommended rate.

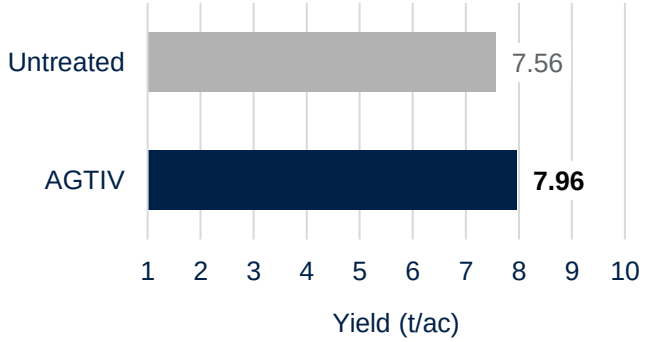
Experimental design: Split fields

Plant growth and health is enhanced on the right, and the leaf area is increased with AGTIV®.

Table 1. **Summary of yields per trial**

Year	Number of sites	Average increase (t/ac)	Average increase (t/ha)	Average increase (%)
2015	4	0.31	0.77	23.3
2016	7	08	0.20	3.5
2017	1	0.12	0.30	3.7
Total	**12 sites**	**0.16 t/ac**	**0.40 t/ha**	**5.3%**

Figure 1. **Average yield increase**



EFFICACY REPORT

SUMMARY – MYCORRHIZAL INOCULANT

PEPPER

AGTIV REACH

► GROWER SPLIT FIELDS

Research partners: Growers

Research sites:
- Ontario;
- Quebec.

Treatments*: a) Untreated;
b) AGTIV® REACH™.

*Products applied according to manufacturers recommended rate.

Experimental design: Split fields

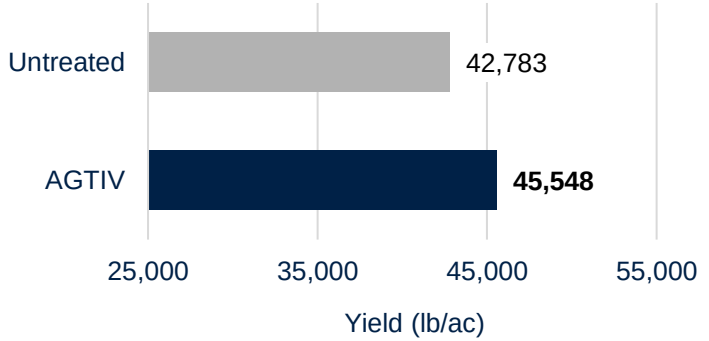
More developed root system, more leaves and bigger fruits with AGTIV®.

Table 1. **Summary of yields per trial**

Year	Number of sites	Average increase		
		(lb/ac)	(t/ha)	(%)
2002	2	*	*	5.1
2015	2	2 840	3.18	10
2016	1	2 617	2.93	3.7
Total	**5 sites**	**2 766 lb/ac ****	**3.10 t/ha ****	**6.8%**

* Plot trial data for 2002: average increase of 95 g/plant.
** The 2766 lb/ac average refers only to 2015-2016 data.

Figure 1. **Average yield increase**



CELEBRATING DECADES OF **INNOVATION** AND **VALUE**

40
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

EFFICACY SUMMARIES 2025

CONTACT OUR DEDICATED TEAM TODAY.
WE CARE ABOUT YOUR SUCCESS!

PEOPLE AND TECHNOLOGIES MAKING A DIFFERENCE

At Premier Tech, we are all about making a difference by connecting People and Technologies for more than 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.

PREMIER TECH

PT Growers and Consumers

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

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

V20250221