



AGTIV[®]

EFFICACY SUMMARIES 2024

AGTIV[®] AVERAGE YIELD INCREASE BY CROP

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



PEA

3.4 bu/ac
6.0%

AGTIV[®] THRIVE™ PEA & LENTIL
27 sites over 12 years, Canada



CHICKPEA

2.9 bu/ac
8.1%

AGTIV[®] THRIVE™ CHICKPEA
5 sites over 6 years, Canada



DRY BEAN

236 lb/ac
8.1%

AGTIV[®] REACH™
15 sites over 10 years, North America



LENTIL

2.7 bu/ac
8.8%

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



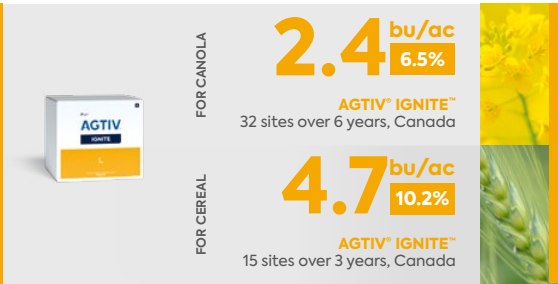
CANOLA & CEREAL

2.4 bu/ac
6.5%

AGTIV[®] IGNITE™
32 sites over 6 years, Canada

4.7 bu/ac
10.2%

AGTIV[®] IGNITE™
15 sites over 3 years, Canada



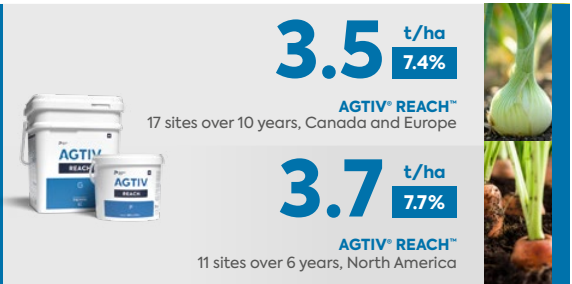
ONION & CARROT

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

3.4 bu/ac
6.9%

AGTIV[®] THRIVE™ SOYBEAN
89 sites over 9 years, Canada and Europe

1.7 bu/ac
2.8%

AGTIV[®] ENRICH™ SOYBEAN
7 third-party trials over 3 years, Canada



POTATO

31.6 cwt/ac
9.1%

AGTIV[®] REACH™ POTATO
1197 sites over 13 years, North America and Europe

+11.3 cwt/ac

AGTIV[®] REACH™ + AGTIV[®] STIMULATE™
14 third-party trials over 3 years, North America



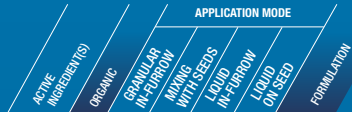
FORAGE

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)	M	R	✓	●	●	●	●	●
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)	M	R	✓	●	●	●	●	●
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)	M	R	✓	●	●	●	●	●
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)	R	✓	●	●	●	●	●	●
AGTIV[®] FUEL™ G PEA & LENTIL	F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Pea, lentil & faba bean: Bag: 4 ha (10 acres) – Tote bag: 80 ha (200 acres)	R	✓	●	●	●	●	●	●
AGTIV[®] FUEL™ L PEA & LENTIL ✦	F: Liquid S: 8 L (8 kg) bag-in-box C: Pea, lentil & faba bean: 32 ha (80 acres) or 6530 kg of seeds (240 bu)	R	✓	●	●	●	●	●	●

SOYBEAN

AGTIV[®] THRIVE™ P SOYBEAN	F: Powder (peat) S: 4.7 kg (10.3 lb) pail C: Soybean: 16 ha (40 acres)	M	R	✓	●	●	●	●	●
AGTIV[®] THRIVE™ G SOYBEAN	F: Granules (peat) S: 18.2 kg (40 lb) bag – 364 kg (800 lb) tote bag C: Soybean: Bag: 4 ha (10 acres) – Tote bag: 80 ha (200 acres)	M	R	*	●	●	●	●	●
AGTIV[®] THRIVE™ SOYBEAN	F: Liquid S: Combo box: 8 L (8 kg) bag-in-box + 2 x 950 ml (2 x 32 fl. oz) bottles C: Soybean: 16 ha (40 acres)	M	R	✓	●	●	●	●	●
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)	R	*	●	●	●	●	●	●
AGTIV[®] FUEL™ L SOYBEAN ✦	F: Liquid S: 8 L (8 kg) bag-in-box C: Soybean: 16 ha (40 acres) or 5680 kg of seeds (250 units)	R	✓	●	●	●	●	●	●
AGTIV[®] ENRICH™ SOYBEAN ✦	F: Liquid S: Combo box: 8 L (8 kg) (<i>Bradyrhizobium</i>) bag-in-box + 300 ml (<i>Bacillus</i>) bottle C: Soybean: 16 ha (40 acres) or 5680 kg of seeds (250 units)	R	B	✓	●	●	●	●	●

CHICKPEA

AGTIV[®] THRIVE™ P CHICKPEA	F: Powder (peat) S: 4.7 kg (10.3 lb) pail C: Chickpea: 16 ha (40 acres)	M	R	✓	●	●	●	●	●
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)	M	R	✓	●	●	●	●	●

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	S	*	●	●	●	●	●	●
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FIELD & SPECIALTY CROPS

AGTIV[®] REACH™ P	F: Powder (peat) S: Case of 4 x 900 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.	M	✓	●	●	●	●	●	●
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.	M	✓	●	●	●	●	●	●
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	M	✓	●	●	●	●	●	●

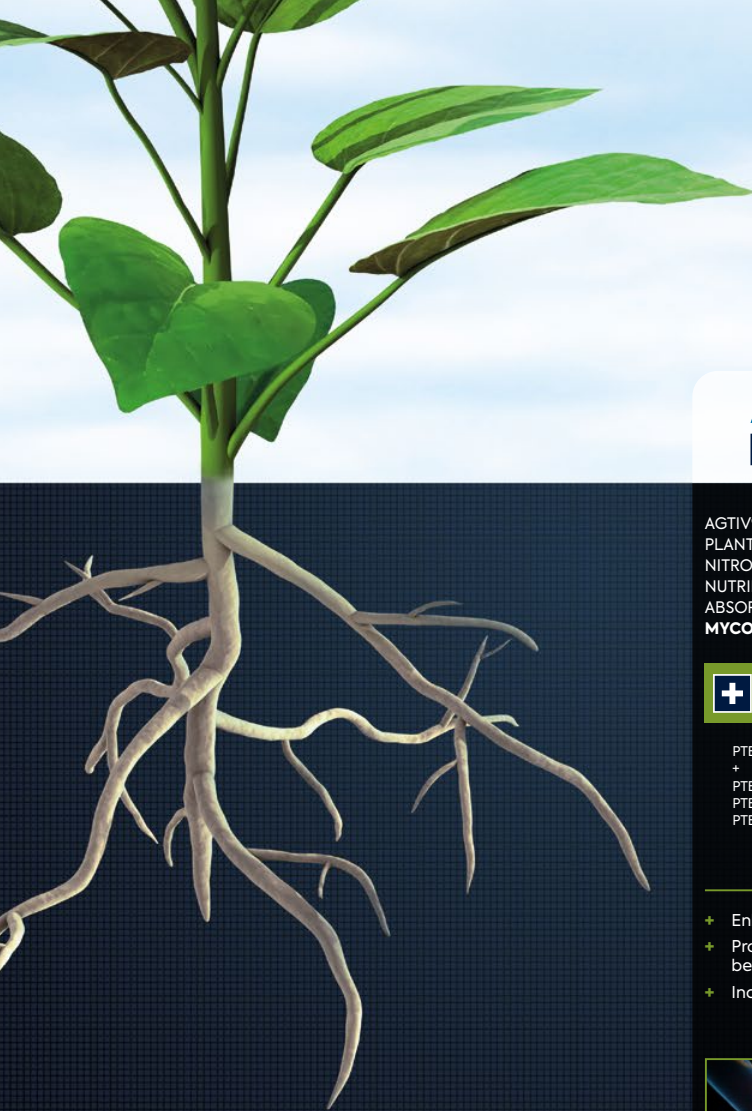
POTATO

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

ACTIVE INGREDIENTS		LEGEND	
M MYCORRHIZAE PTB297 Technology	B BACILLUS PTB180 Technology PTB185 Technology	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.
R RHIZOBIUM PTB160 Technology (pea & lentil) PTB162 Technology (soybean) PTB161 Technology (chickpea)	S SERENDIPITA PTB299 Technology	FORMULATIONS	
		Liquid	Granular
		Powder	

Learn more at PTAGTIV.COM/en/products

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



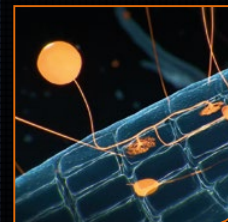
AGTIV® REACH

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



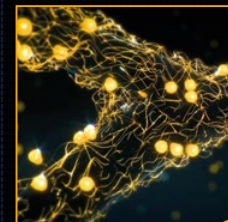
AGTIV® IGNITE

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



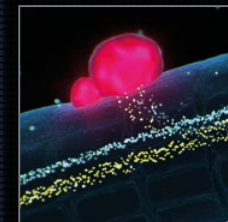
AGTIV® FUEL

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 anobrychidis*

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



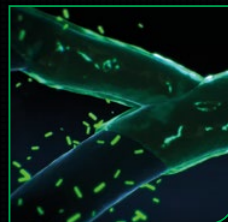
AGTIV® STIMULATE

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

► 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:

- AGTIV® THRIVE™ PEA & LENTIL*;
- Competitor inoculant A*;
- Competitor inoculant B*;
- Competitor inoculant C*;
- 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.

Before 2022:
AGTIV® THRIVE™ PEA & LENTIL was formerly known as AGTIV® PULSES
AGTIV® FUEL™ PEA & LENTIL was formerly known as AGTIV® RHIZO

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	10.0		8.4		
Lethbridge	2022	Impulse	32.0		31.9		
Vulcan	2022	Impulse	38.7		38.3		
Swift Current	2022	Impulse	35.0		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.	1237	901	766		
Swift Current	2016	Small Red Lentils, Imax CL	3367	2910	2762	2533	
Coalhurst	2017	N.A.	1310	1284	1290	1243	
Vulcan	2019	Pedigree CDC Proclaim	2192	1937			1910
Lethbridge	2021	Proclaim	3145		3118		
Vulcan	2021	Impulse	672		564		
Lethbridge	2022	Impulse	2150		2144		
Vulcan	2022	Impulse	2601		2574		
Swift Current	2022	Impulse	2352		2191		
Taber	2023	Impulse	2024		1728		1863

EFFICACY REPORT

2023 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Ag-Quest Inc

Research site: Taber, AB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 22.5m² plots

Variety: CDC Impulse

Previous crop: Winter rye

Seeding details: Seeded on May 26 with a cone seeder at a rate of 50 kg/ha in a clay loam soil (pH:7.5, OM:3%).
Emergence on June 9.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides:

- Rival EC (1.73 l/ha): May 25
- Solo ADV (0.80 l/ha): June 17
- Reglone Ion (2.47 l/ha): September 12 and 18
- Agral 90 (0.5% v/v): September 12 and 18

Harvesting: September 21, 2023

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	26.3	-
AGTIV® THRIVE™ G PEA & LENTIL	30.1	3.8
Competitor inoculant B	25.7	-
Competitor inoculant D	27.7	1.4



Month	Precipitation (mm)	Irrigation (mm)
May	18.2	
June	54.8	127.0
July	8.7	279.4
August	18.8	152.4
TOTAL	100.5	558.8

EFFICACY REPORT

SUMMARY – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT & STRIP TRIALS

Research partners:

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

Research sites:

- Alberta;
- Saskatchewan;
- Manitoba.

Treatments:

- AGTIV® THRIVE™ PEA & LENTIL*;
- Competitor inoculant A*;
- Competitor inoculant B*;
- Competitor inoculant D*.

*Products applied according to manufacturers recommended rate.

Experimental design: 57 replicated plots per treatment in randomized complete block design:

- 6 trials with 6,
- 2 trials with 8,
- 1 trial with 5.

Before 2022:
AGTIV® THRIVE™ was formerly known as AGTIV® PULSES
AGTIV® FUEL™ was formerly known as AGTIV® RHIZO

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	14.0	12.7	12.4	
Saskatoon	2019	AAC Ardill	65.0	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	

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	5958	5793	5342	
Swift Current	2017	Amarillo	941	853	833	
Saskatoon	2019	AAC Ardill	4371	3497		4250
Portage la Prairie	2021	Carver	3037		2775	
Josephburg	2022	Striker	3051		3132	
Saskatoon	2022	ACC Ardill	2446		2406	
Saskatoon	2022	CDC Spectrum	2063		1935	
Swan River	2022	Inca	6149		5853	
Swan River	2023	Inca	3847		3927	

EFFICACY REPORT

2023 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partners: New Era Ag Technologies

Research sites: Swan River, MB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 16.95 m² plots

Variety: Inca treated with Insure Pulse

Previous crop: Wheat

Seeding details: Seeded on May 13 with a direct drill seeder at a rate of 240 lb/ac in a loam soil (pH: 6.9, OM:4.8%).
Emergence on May 24.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 11-52-0 (38 lb/ac): May 13

Pesticides:

- Arrow-All-In-One (100 ml/ac): June 2
- Coragen (101 ml/ac): June 2
- Viper ADV (400 ml/ac): June 8
- Delaro (356 ml/ac): June 30

Harvesting: August 15, 2023

Month	Precipitation (mm)
May	19.7
June	45.3
July	33.0
August	118.2
TOTAL	216.2

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	53.6	-
AGTIV® THRIVE™ G PEA & LENTIL	57.2	3.6
Competitor inoculant B	58.4	4.8



EFFICACY REPORT

SUMMARY – MYCORRHIZAL & RHIZOBIAL INOCULANT

► 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:

- AGTIV® THRIVE™ SOYBEAN*;
- Competitor inoculant A*;
- Competitor inoculant B*;
- Competitor inoculant C*;
- Competitor inoculant D**;
- 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 trial²

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	35.0 ^{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	29.0 ^{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	21.0					20.0
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≤0.05.

² To obtain kg/ha results, multiply bushels by 60 and then by 1.12085 (n*60*1.12085).

Before 2022:
AGTIV® THRIVE™ was formerly known as AGTIV® PULSES
AGTIV® FUEL™ was formerly known as AGTIV® BRADY

EFFICACY REPORT

SUMMARY – RHIZOBIAL & BACILLUS INOCULANT

► PLOT TRIP TRIALS

Research partners:

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

Research sites:

- Ontario;
- Manitoba;
- Quebec.

Treatments:

- AGTIV® ENRICH™ SOYBEAN*;
- Competitor inoculant B*;
- Competitor inoculant C*;
- Competitor inoculant E*.

*Products applied according to manufacturers recommended rate.

Experimental design: 48 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	57.0	53.0	53.0
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

EFFICACY REPORT

2023 – RHIZOBIAL & BACILLUS INOCULANT

SOYBEAN 

AGTIV
ENRICH

► PLOT TRIAL

Research partners: Wellington Agricultural Research Ltd

Research sites: Alma, ON

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized complete block (RCB), 6 repetitions, 18.04 m² plots

Variety: Pioneer P08A44E

Previous crop: Grain Corn

Seeding details: Seeded on May 26 with a cone seeder at a rate of 400 000 seeds/ha in a loam soil (pH: 7.6, OM: 2.6%).

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)
AGTIV® ENRICH™ SOYBEAN	59.2
Competitor inoculant B	53.5
Competitor inoculant E	56.4

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: Roundup WeatherMAX: June 8

Harvesting: October 4, 2023

Month	Precipitation (mm)
May	38.7
June	79.3
July	168.6
August	115.8
September	40.3
TOTAL	442.7

EFFICACY REPORT

2023 – RHIZOBIAL & BACILLUS INOCULANT



► PLOT TRIALS

Research partner: Tall Pines Agricultural Research Ltd

Research site: Rockwood, ON

Treatments:
 a) AGTIV® ENRICH™ SOYBEAN
 b) Competitor inoculant B
 c) Competitor inoculant E

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized complete block (RCB), 6 repetitions, 12.0 m² plots

Variety: Dekalb 03-25

Previous crop: Corn

Seeding details: Seeded on May 25 with a plot drilling machine at a rate of 200000 seeds/ac in a sandy loam (pH: 7.2 , OM: 3.4 %).
 Emergence on June 4.

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)
AGTIV® ENRICH™ SOYBEAN	105.1
Competitor inoculant B	101.1
Competitor inoculant E	104.0

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 120 – 52 – 60 (516 kg/ha): May 15

Pesticides: Roundup WeatherMAX (2.47 l/ha): June 13
 Roundup WeatherMAX (2.47 l/ha): July 10

Harvesting: October 27, 2023

Month	Precipitation (mm)
May	49.2
June	75.6
July	162.8
August	86.5
September	16.2
October	31.9
TOTAL	422.2

EFFICACY REPORT

2022 – RHIZOBIAL & BACILLUS INOCULANT

► PLOT TRIAL

Research partner: Integrated Crop Management Service (ICMS)

Research site: Portage la Prairie, MB

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: Randomized complete block (RCB), 6 repetitions, 20.0 m² plots

Variety: NSC Redvers R2X

Previous crop: Spring wheat (cover crop tilled under prior to maturity)

Seeding details: Seeded on June 17 with a cone seeder at a rate of 115 kg/ha in a clay loam soil (pH: 8.2, OM: 6.7%).

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: Roundup WeatherMAX (0.33 l/ac):
June 24 and July 14

Harvesting: October 12, 2022

Month	Precipitation (mm)
May	140.7
June	70.3
July	95.2
August	90.1
September	50.3
TOTAL	446.6

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)
AGTIV® ENRICH™ SOYBEAN	54.2
Competitor inoculant B	57.0
Competitor inoculant C	53.0
Competitor inoculant E	53.0



► GROWER SPLIT FIELD TRIALS

Research sites: Ontario

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

*Products applied according to manufacturers recommended rate.

Experimental design: Grower split fields

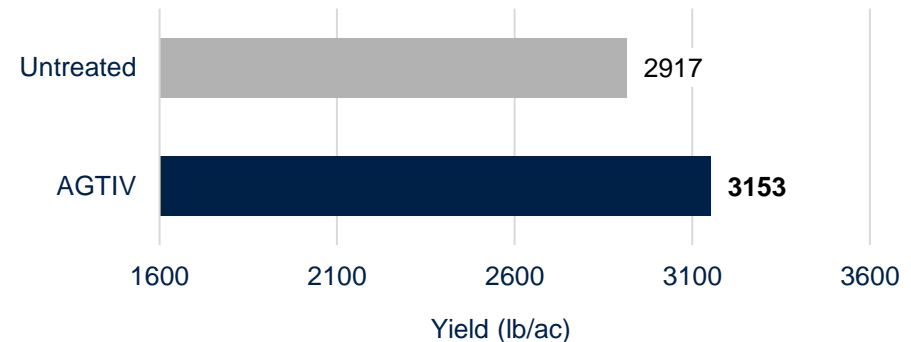


Faster plant development, larger plants and quicker row closure.

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
Total	15 sites	235.8 lb/ac	264.6 kg/ha	8.1%

Figure 1. Average yield with AGTIV® REACH™ in Canada (2014 to 2023).



Before 2022:
AGTIV® REACH™ was formerly known as AGTIV® FIELD CROPS

EFFICACY REPORT

SUMMARY – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIALS

Research partners:

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

Research sites:

- Alberta;
- Saskatchewan.

Treatments:

- AGTIV® THRIVE™ CHICKPEA*;
- Competitor inoculant A*;
- Competitor inoculant B*;
- Competitor inoculant D*.

*Products applied according to manufacturers recommended rate.

Experimental design: Total of 32 replicated plots per treatment in randomized complete block design.

Table 1. Summary of yields (bu/ac) per trial¹

Location	Year	Seed variety	AGTIV® THRIVE™ CHICKPEA	Competitor inoculant		
				A	B	D
Lethbridge	2018	Alma	73.0	71.3	71.0	
Swift Current	2018	Leader	28.0	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			6.0

¹ Yields with the same letter are not statistically different according to a LSD test (p<0.05).

Before 2022:
AGTIV® THRIVE™ was formerly known as AGTIV® CHICKPEA
AGTIV® REACH™ was formerly known as AGTIV® FIELD CROPS

EFFICACY REPORT

2023 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partners: Small Plot Inc

Research sites: Vulcan, AB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 8 repetitions, 32.0 m² plots

Variety: CDC Orion

Previous crop: Lentil

Seeding details: Seeded on May 11 with a plot drilling machine at a rate of 215 lb/ac in a loam soil (pH: 7.9, OM: 3.3%).
Emergence on May 30.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 19-40-10-12 kg/ha : May 11

Pesticides: Assure II (0.75 l/ha): July 5

Harvesting: September 2, 2023

Month	Precipitation (mm)
May	4.3
June	43.4
July	37.8
August	31.5
TOTAL	117.0

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	6.1	-
AGTIV® THRIVE™ G CHICKPEA	6.3	0.2
Competitor inoculant D	6.0	-

► PLOT & STRIP TRIALS

Research partners:

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

Research sites:

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

Treatments:

- Untreated check;
- AGTIV® IGNITE™ L*.

*Products applied according to manufacturers recommended rate.

Experimental design:

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

Table 1. Average increase of yield for different years.

Year	Number of sites	Untreated check (bu/ac)	AGTIV® IGNITE L yield (bu/ac)	Yield increase (bu/ac)
2018	1	63.5	68.0	4.5
2019	6	44.6	47.1	2.5
2020	5	37.2	39.6	2.4
2021	8	32.5	35.0	2.5
2022	7	33.6	36.2	2.6
2023	5	36.0	37.7	1.7
Total	32 sites	37.0^a	39.4^b	2.4 bu/ac *

*Summary of means are significantly different following a combined site ANOVA and a Tukey test (p<0.05) p < 0.001

Table 2. Average increase of canola oil content for different years.

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=0.05

EFFICACY REPORT
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
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 (%)	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

2023 – SERENDIPITA INOCULANT

► PLOT TRIAL

Research partners: Integrated Crop Management Services (ICMS)

Research sites: Moon Lake, SK

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

*Products applied according to manufacturers recommended rate.

Experimental design: Latin Square (LS), 6 repetitions, 16.56 m² plots

Variety: InVigor L356PC treated with Helix Vibrance & Lumiderm

Previous crop: Spring wheat

Seeding details: Seeded on June 6 with a cone seeder of 7 kg/ha in a clay soil (pH: 7.9, OM: 7.2%).
Emergence on June 13.

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	23.8	-
AGTIV® IGNITE™ L	24.9	1.1

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 80-30-10-20 actual kg/ha: May 29

Pesticides:

- Amigo (0.5 l/100l): June 28
- Centurion (0.075 l/ac): June 28
- Liberty 150 (1.62 l/ac): June 28
- Decis 5 EC (0.06 l/ac): August 14

Harvesting: September 25, 2023

Month	Precipitation (mm)
June	174.4
July	19.9
August	50.4
September	7.9
TOTAL	252.6

EFFICACY REPORT

2023 – SERENDIPITA INOCULANT

► PLOT TRIAL

Research partners: New Era Ag Technologies Inc

Research sites: Swan River, MB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 33.9 m²plots.

Variety: InVigor L234PC treated with Helix Vibrance and Lumiderm

Previous crop: Wheat

Seeding details: Seeded on May 22, at a rate of 6.2 kg/ha with a cone seeder in a loam soil (pH: 6.9, OM: 4.8%).
 Emergence on May 31.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 102.5-0-0-20 (268 lbs/ac): May 21
 5.3-25-0-0 (48 lbs/ac): May 22

Pesticides:

- Armory 240 (0.69 l/ac): September 12
- Arrow-All-In-One: (100 ml/ac) June 2, (150 ml/ac) June 8
- Cotegra (280 ml/ac): July 6
- Interline (1.35 l/ac): June 19
- Liberty 150 SN (1.35 l/ac) : June 8
- Pounce: (73 ml/ac) June 2, (100 ml/ac) June 8

Harvesting: September 19, 2023

Month	Precipitation (mm)
May	13.8
June	33.5
July	16.1
August	109.9
September	5.1
TOTAL	178.4

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	71.0	-
AGTIV® IGNITE™ L	72.8	1.8



EFFICACY REPORT 2023 – SERENDIPITA INOCULANT

► PLOT TRIAL

Research partners: Integrated Crop Management Services (ICMS)

Research sites: Josephburg, AB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Latin Square (LS), 6 repetitions, 14.64 m² plots.

Variety: InVigor L343PC treated Buteo Start and Helix Vibrance

Previous crop: Spring barley

Seeding details: Seeded on June 13 with a cone seeder of 7 kg/ha in loam soil (pH: 5.8, OM: 8%).
Emergence on July 4.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: Fertilizer blend of 33-8-0 actual kg/ha: June 5

Pesticides:

- Matador (0.83 l/ha): July 7
- Liberty 150 SN (3.33 l/ha): July 8
- Select (0.125 l/ha): July 8
- Amigo (0.1 l/100l): July 8
- Heat LQ (0.11 l/ha): October 5

Harvesting: October 13, 2023

Month	Precipitation (mm)
June	128.8
July	110.0
August	56.3
September	11.8
October	2.0
TOTAL	308.9

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	45.6	-
AGTIV® IGNITE™ L	47.7	2.1

EFFICACY REPORT

2023 – SERENDIPITA INOCULANT

► PLOT TRIAL

Research partners: South East Research Farm

Research sites: Redvers, SK

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 9.0m² plot.

Variety: L233P treated with Buteo Start & Helix Vibrance

Previous crop: Spring barley

Seeding details: Seeded on June 7 with a cone seeder of 4.2 lb/ac in loam soil (pH: 8.5, OM: 2.8%)

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 89.31-32.82-3.16-14.29 actual kg/ha: June 7

Pesticides: • RT 540 (0.75l/ac): May 19
• Liberty (1.35 l/ac): June 21

Harvesting: September 15, 2023

Month	Precipitation (mm)
May	70.0
June	25.0
July	11.0
August	49.4
September	22.0
TOTAL	177.4

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	32.2	-
AGTIV® IGNITE™ L	33.8	1.6

EFFICACY REPORT 2023 – SERENDIPITA INOCULANT

► PLOT TRIAL

Research partner: Small Plot Inc

Research site: Vulcan, AB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Latin square (LS), 6 repetitions, 32.0 m² plots

Variety: LL variety treated with Buteo Start

Previous crop: Wheat

Seeding details: Seeded on June 7 with a direct drill at a rate of 4.5 kg/ha in a loam soil (pH: 8.1, OM: 2.9%).
Emergence on June 22.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 60-15-15-10 : June 7

Pesticides: No pesticide applied

Harvesting: September 28, 2023

Month	Precipitation (mm)
June	43.4
July	37.8
August	31.5
TOTAL	112.7

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	7.3	-
AGTIV® IGNITE™ L	9.3	2.0

► PLOT TRIALS

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

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

- Treatments:**
- Untreated check;
 - 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 durum wheat 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	39.0	40.6	1.6
2021	Swift Current	11.8	14.4	2.6
2022	Lethbridge	50.2	59.0	8.8
2022	Swift Current	54	55.8	1.8
2022	Vulcan	29.2	31.0	1.8
2022	Taber	27.3	31.8	4.5
2023	Raymond	53.0	56.1	3.1
2023	Lethbridge	32.6	34.6	2.0
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≤0.05).

EFFICACY REPORT 2023 – SERENDIPITA INOCULANT

► PLOT TRIAL

Research partners: Prairie Ag Research

Research sites: Raymond, AB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 12.0 m² plots

Variety: Grainland

Previous crop: Spring barley

Seeding details: Seeded on May 12 with a cone seeder at a rate of 100 kg/ha in a clay loam soil (pH: 7.3, OM: 3.7%).
Emergence on May 19.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: • Glyphosate: May 11
• Pardner: June 19

Harvesting: August 30, 2023

Month	Precipitation (mm)
May	13.2
June	30.1
July	7.8
August	26.2
TOTAL	64.3

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	53.0	-
AGTIV® IGNITE™ L	56.1	3.1



► PLOT TRIAL

Research partners: Murphy & al.

Research sites: Lethbridge, AB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 12.0 m² plots

Variety: Stronghold Cert #1 treated with Raxil Pro

Previous crop: Canola

Seeding details: Seeded on May 31 with a cone seeder at a rate of 110 kg/ha in clay soil (pH: 8.2, OM: 1.6 %).

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	32.6	-
AGTIV® IGNITE™ L	34.6	2.0

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 28-10-11-3 (310 kg/ha): May 31

Pesticides:

- OcTTain XL(450 ml/ac): June 20
- 2,4-D (86 ml/ac): June 20 and July 15
- Dicamba (117 ml/ac): July 15

Harvesting: September 5, 2023

Month	Precipitation (mm)	Irrigation (mm)
May	17.8	19.1
June	36.3	69.9
July	13.3	151.3
August	10.7	50.8
TOTAL	78.1	291.1

► 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	sites	41	46.2	5.2 bu/ac *

► PLOT TRIAL

Research partners: New Era Technologies Inc

Research sites: Swan River, MB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 16.95 m²plots

Variety: AAC Wheatland treated with Raxil Pro

Previous crop: Peas

Seeding details: Seeded on May 11 with an air drill at a rate of 139 lb/ac in a sandy loam soil (pH: 7.0, OM: 4.1%).
 Emergence on May 16.

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	68.1	-
AGTIV® IGNITE™ L	74.7	6.6

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 46-0-0 (259 lb/ac): May 16
 11-52-0 (67 lb/ac): May 16

Pesticides:

- Fortress: May 9
- Stellar XL (405 ml/ac): June 7
- Decis (30 ml/ac): June 7
- Miravis Neo 300SE (303 ml/ac): June 13
- Miravis Ace (405 ml/ac): July 6

Harvesting: September 3, 2023

Month	Precipitation (mm)
May	19.7
June	45.3
July	33.0
August	118.2
September	5.6
TOTAL	221.8

EFFICACY REPORT 2023 – SERENDIPITA INOCULANT

SPRING WHEAT 

AGTIV

IGNITE

► PLOT TRIAL

Research partners:	Ag-Quest Inc
Research sites:	Saskatoon, SK
Treatments:	a) Untreated check b) AGTIV® IGNITE™ L
	*Products applied according to manufacturers recommended rate.
Experimental design:	Randomized Complete Block (RCB), 6 repetitions, 8.74 m ² plots
Variety:	AAC Wheatland treated with Vibrance Quattro
Previous crop:	Oat
Seeding details:	Seeded on May 23 with a cone seeder at a rate of 90 kg/ha in a loam soil (pH: 5.9, OM: 3.8%).

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	13.9	-
AGTIV® IGNITE™ L	17.6	3.7

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: Fertilizer blend of 1-52-0 + 0-0-60 (136 kg/ha)

Pesticides:

- Glyphosate (0.67 l/ac): May 15
- Aim (30 ml/ac): May 15
- Everest 2.0 (24.3 ml/ac): June 7
- Foothills NG (376 ml/ac): June 14
- Coragen Max (83 ml/ac): June 16
- Reglone Ion (84 ml/ac): August 23

Harvesting: September 27, 2023

Month	Precipitation (mm)
May	47.9
June	52.4
July	19.0
August	41.3
September	14.7
TOTAL	175.3

EFFICACY REPORT

SUMMARY – SERENDIPITA INOCULANT

► PLOT & STRIP TRIALS

Research partners:

- Ag-Quest Inc.;
- Wheatland Conservation Area.

Research sites:

- Manitoba;
- Saskatchewan.

Treatments:

- Untreated check;
- 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	104.0	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

EFFICACY REPORT 2023 – SERENDIPITA INOCULANT

► PLOT TRIAL

Research partner: Ag-Quest Inc

Research site: Elm Creek, MB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 18.0 m² plots

Variety: CDC Austenson treated with Sexodane and Lumivia

Previous crop: Soybean

Seeding details: Seeded on May 16 with a cone planter at a rate of 71 lb/ac in a clay loam soil (pH: 7.8, OM: 4.6%).
Emergence on May 17.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 46-0-0 and 11-52- 0; May 9

Pesticides: Infinity

Harvesting: August 25, 2023

Month	Precipitation (mm)
May	38.0
June	49.8
July	20.8
August	31.0
TOTAL	139.6

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	101.9	-
AGTIV® IGNITE™ L	104.0	2.1

EFFICACY REPORT

2023 – SERENDIPITA INOCULANT

► PLOT TRIAL

Research partners: Wheatland Conservation Area

Research sites: Swift Current, SK

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 17.3 m² plots.

Variety: CDC Bow treated with Cruiser Vibrance Quattro

Previous crop: Durum Wheat

Seeding details: Seeded on May 18 with a cone seeder at a rate of 90 lb/ac in a silty loam soil (pH: 6.7, OM: 2.9%).
Emergence on May 26.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 30-15-0-6 (267lb/ac): May 18

Pesticides:

- RT540 (0.67 l/ac): May 12
- Liquid Achieve (200 ml/ac): June 16
- Buctril M (400 ml/ac): June 16
- Carrier (0.5 l/100L): June 16
- Decis (60 ml/ac): July 1

Harvesting: September 19, 2023

Month	Precipitation (mm)
May	48.8
June	33.8
July	76.7
August	47.5
TOTAL	206.8

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	22.8	-
AGTIV® IGNITE™ L	25.6	2.8

► SPLIT TRIALS

Research sites:

- Canada;
- France.

Treatments:

- Untreated check;
- AGTIV® REACH™.

*Products applied according to manufacturers recommended rate.

Experimental design: 45 grower split fields

Before 2022:
AGTIV® REACH™ was formerly known as AGTIV® FIELD CROPS

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%

► GROWER SPLIT FIELDS

Research partners: • 15 farms

Research sites: • Quebec

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

*Products applied according to manufacturers' recommended rate.

Experimental design: Each data point per field consists of an average of 5 samples taken each from the treated and untreated side.

Table 1. Increase in dry weight per cut over two years with AGTIV® mycorrhizal inoculant

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

Table 2. Winter 2016 Alfalfa survival²

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 average²

Year	AGTIV®	Untreated	Difference
2016	3910	3295	615
2017	4190	3691	499
Total	8100^b	6986^a	1 114

Before 2022:
AGTIV® REACH™ was formerly known as AGTIV® FIELD CROPS

¹ Statistically significant at $p \leq 0.05$ using t-test for dependent samples.

² Averages followed by different letters are significantly different ($p \leq 0.05$, t-test for dependent samples).

EFFICACY REPORT

SUMMARY – MYCORRHIZAL INOCULANT

► GROWER SPLIT FIELDS AND TRIALS

- Research sites:**
- Belgium;
 - Canada;
 - France;
 - Germany;
 - Mexico;
 - Switzerland;
 - United States.

- Treatments:**
- Untreated;
 - AGTIV® REACH™ L POTATO*.

*Products applied according to manufacturers recommended rate.

Experimental design: 1197 split fields

Before 2022:
 AGTIV® REACH™ L POTATO was formerly known as AGTIV® POTATO

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	598	3.1	27.6	9.9
United States	67	3.3	29.8	10.8
Mexico	4	2.3	20.0	8.6
Belgium, France & Switzerland	496	4.1	36.3	9.9
Germany	32	4.2	37.4	10.0
Total	1197 sites	3.5 t/ha*	31.6 cwt/ac**	9.1%

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	9.0
2013	70	3.6	31.9	11.2
2014	116	4.5	40.3	12.8
2015	145	4.0	35.3	10.7
2016	243	3.9	34.8	10.5
2017	213	2.7	24.0	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
Total	1197 sites	3.5 t/ha*	31.6 cwt/ac**	9.1%

* Statistically significant at p<0.001 following a T test.

**cwt/ac = 100 lb/ac

EFFICACY REPORT

2023 – MYCORRHIZAL INOCULANT

► PLOT TRIAL

Research partners:	New Marc Research
Research sites:	St-Marc-sur-Richelieu
Treatments:	a) Untreated check; b) AGTIV® REACH™ L POTATO.
	<small>*Products applied according to manufacturers recommended rate.</small>
Experimental design:	Split plot block, 6 repetitions, 21.6 m ² plots
Variety:	Chieftain
Previous crop:	Soybean
Seeding details:	Seeded on May 27 at rate of 1700 kg seeds/ha in a clay loam soil (pH: 7.3, OM: 3.7%).

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	14.5-21.7-12.7 (691 kg/ha): May 26 46-0-0 (217 kg/ha): June 20
Pesticides:	<ul style="list-style-type: none">• Sencor 480 (2.25 l/ha): June 1• Dual II Magnum (1.75 l/ha): June 1• Delegate (240 g/ha): July 8 and 26
Harvesting:	September 4, 2023

Month	Precipitation (mm)
May	51.6
June	111.5
July	218.9
August	126.8
September	42.8
TOTAL	551.6

Table 1. Summary of yields per treatment.

Treatment	Yield (cwt/ac)	Yield increase (cwt/ac)
Untreated check	174.0	-
AGTIV® REACH™ L POTATO	184.0	10.0

EFFICACY REPORT

SUMMARY – MYCORRHIZAL & BACILLUS INOCULANT

POTATO 



► PLOT TRIALS

Research partners:

- AgriTech Inc
- Atlantic Agri Tech;
- New Marc Research;
- Prairie Ag Research;
- Progest inc.;
- Tall Pines Agricultural Research Ltd.;
- Wellington Agricultural Research Ltd.

Research sites:

- Alberta;
- Ontario;
- Prince-Edward Island;
- Quebec.

Treatments:

- AGTIV® REACH™ L POTATO*;
- AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ POTATO*.

*Products applied according to manufacturers recommended rate.

Experimental design:

- Latin square:
- 13 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
Average	14 sites	273.2	284.5	11.3 cwt/ac

*Comparison of the double inoculation vs AGTIV® REACH™ L POTATO

Before 2022:
AGTIV® REACH™ L POTATO was formerly known as AGTIV® POTATO

EFFICACY REPORT

2023 – MYCORRHIZAL & BACILLUS INOCULANT



► PLOT TRIAL

Research partners: AgriTech Inc

Research sites: New Glasgow, PEI

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

*Products applied according to manufacturers recommended rate.

Experimental design: Latin Square (LS), 6 repetitions, 21.6 m² plots.

Variety: Gold Rush treated with Actara

Previous crop: Spring barley

Seeding details: Hand seeded on May 10 at a rate of 1900 kg/ha, in a sandy loam soil (pH: 6.5, OM: 2.4%).
Emergence on June 12.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 15-15-15-2Mg (970 kg/ha): May 10

Pesticides:

- Armory (2.0 l/ha): September 4
- Bravo ZN (2 l/ha): July 28 and August 24
- Dual II Magnum (1.75 l/ha): June 1
- Minecto PRO (556 ml/ha): July 15
- NIS (2 l/1000L): July 15
- Penncozeb DG 75 (2.25 kg/ha): July 6, 14, 23, August 3, 12, September 4
- Phostrol 4.17 SL (5 l/ha): July 23
- Sencor 75 DF (1.5 kg/ha): June 1
- Zampro 4.38 SL (1 l/ha): August 12

Harvesting: October 10, 2023

Month	Precipitation (mm)
May	41.2
June	113.0
July	115.0
August	147.8
TOTAL	417.0

Table 1. Summary of yields per treatment.

Treatment	Yield (cwt/ac)	Yield increase (cwt/ac)
Untreated check	395.6	-
AGTIV® REACH™ L POTATO	413.1	17.5
AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ L	425.6	30.0

EFFICACY REPORT

2023 – MYCORRHIZAL & BACILLUS INOCULANT



► PLOT TRIAL

Research partners: Prairie Ag Research

Research sites: Raymond, AB

Treatments:

- a) Untreated check;
- b) AGTIV® REACH™ L POTATO;
- c) AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ L;
- d) AGTIV® REACH™ P POTATO;
- e) AGTIV® REACH™ P POTATO + AGTIV® STIMULATE™ L.

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 5 repetitions, 12.0 m² plots

Variety: Norkotah

Previous crop: Spring barley

Seeding details: Seeded on May 9 at rate of 2000 kg/ha in a clay loam soil (pH: 7.3, OM: 3.7%).
Emergence on June 2.

Table 1. Summary of yields per treatment.

Treatment	Yield (cwt/ac)	Yield increase (cwt/ac)
Untreated check	130.8	-
AGTIV® REACH™ L POTATO	138.5	7.7
AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ L	141.1	10.3
AGTIV® REACH™ P POTATO	139.3	8.7
AGTIV® REACH™ P POTATO + AGTIV® STIMULATE™ L	140.3	9.5

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: Roundup WeatherMAX: May 26

Harvesting: September 12, 2023

Month	Precipitation (mm)	Irrigation (mm)
May	13.2	15.0
June	30.1	30.0
July	7.8	45.0
August	26.2	-
TOTAL	77.3	90.0

EFFICACY REPORT

2022 – MYCORRHIZAL & BACILLUS INOCULANT

POTATO 



► PLOT TRIAL

Research partner: New Marc Research

Research site: St-Marc-sur-Richelieu, QC

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 21.6 m² plots

Variety: Chieftain

Previous crop: Spring wheat

Seeding details: Seeded on May 25 at a rate of 2250 kg/ha in a clay soil (pH: 6.3, OM: 4.2%).
Emergence on June 9.

Table 1. Summary of yields per treatment.

Treatment	Yield (cwt/ac)	Yield increase (cwt/ac)
Untreated check	138.4	-
AGTIV® REACH™ L POTATO	145.4	7.0
AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ L	142.2	3.8

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 16.9-22.2-12.7 (675 kg/ha): May 23
46-0-0 (109 kg/ha): June 14

Pesticides:

- Sencor 480 (2.25 l/ha): June 20
- Dual II Magnum (1.75 l/ha): June 20
- Delegate (240 g/ha): July 7

Harvesting: September 6, 2022

Month	Precipitation (mm)
May	110.6
June	121.7
July	130.4
August	114.1
September	133.8
TOTAL	610.6

EFFICACY REPORT

2022 – MYCORRHIZAL & BACILLUS INOCULANT

POTATO 



► PLOT TRIAL

Research partner: Atlantic AgriTech

Research site: Newton, PEI

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 6 repetitions, 24.0 m² plots

Variety: Gold Rush treated with Actara

Previous crop: Turnip

Seeding details: Hand seeded on May 20 at a rate of 1250 kg/ha in a sandy loam soil (pH: 5.4, OM: 2.3%).
Emergence on June 8.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 15-15-15-4S-2Mg (1000 kg/ha): May 19

- Pesticides:**
- Lorox DF (3 l/ha): June 12
 - Sencor 75DF (1.7 l/ha): June 12
 - Coragen (350 ml/ha): July 17
 - Penncozeb (2.24 kg/ha): July 17 + once a week from July 27 until August 19
 - Reglone Ion (2.47 l/ha): September 3

Harvesting: September 20, 2022

Month	Precipitation (mm)
May	51.2
June	78.0
July	60.0
August	130.6
September	130.6
TOTAL	478.6

Table 1. Summary of yields per treatment.

Treatment	Yield (cwt/ac)	Yield increase (cwt/ac)
Untreated check	232.2	-
AGTIV® REACH™ L POTATO	235.9	3.7
AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ L	237.8	5.6

EFFICACY REPORT

2022 – MYCORRHIZAL & BACILLUS INOCULANT

POTATO 



► PLOT TRIAL

Research partner: Tall Pines Agricultural Research Ltd

Research site: Rockwood, ON

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

*Products applied according to manufacturers recommended rate.

Experimental design: Latin Square (LS), 6 repetitions, 12.0 m² plots

Variety: Chieftain

Previous crop: Soybean

Seeding details: Seeded on June 15 at a rate of 18000 seeds/ac in a sandy loam soil (pH: 7.2, OM: 3.4%).
Emergence on July 5.

Table 1. Summary of yields per treatment.

Treatment	Yield (cwt/ac)	Yield increase (cwt/ac)
Untreated check	395.1	-
AGTIV® REACH™ L POTATO	402.5	7.4
AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ L	429.0	33.9

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 120-70-90 (620 kh/ha): May 5

Pesticides:

- Lorox (2.3 l/ha): June 22
- Dual II Magnum (2.25 l/ha): June 22
- Coragen (0.2 l/ha): July 17 and August 8
- Bravo ZN (2.4 l/ha): August 5

Harvesting: October 27, 2022

Month	Precipitation (mm)
June	42.8
July	24.0
August	90.0
September	24.2
October	62.3
TOTAL	243.3

EFFICACY REPORT

2022 – MYCORRHIZAL & BACILLUS INOCULANT

POTATO 

AGTIV

REACH

+

AGTIV

STIMULATE

► PLOT TRIAL

Research partner: Atlantic AgriTech

Research site: Newton, PEI

Treatments:

- Untreated check;
- AGTIV® REACH™ L POTATO;
- AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ L.

*Products applied according to manufacturers recommended rate.

Experimental design: Latin square (LS), 6 repetitions, 24.0 m² plots

Variety: EVA treated with Actara

Previous crop: Turnip

Seeding details: Hand seeded on May 20 at a rate of 1250 kg/ha in a sandy loam soil (pH: 5.4, OM: 2.3%). Emergence on June 8.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 15-15-15-4S-2Mg (1000 kg/ha): May 19

Pesticides:

- Lorox DF (3 l/ha): June 12
- Sencor 75DF (1.7 l/ha): June 12
- Penncozeb (2.24 kg/ha): July 7, 17 and 27, then once a week until August 19
- Coragen (350 ml/ha): July 17
- Reglone Ion (2.47 l/ha): August 20

Harvesting: October 8, 2022

Month	Precipitation (mm)
May	51.2
June	78.0
July	60.0
August	130.6
September	130.6
TOTAL	478.6

Table 1. Summary of yields per treatment.

Treatment	Yield (cwt/ac)	Yield increase (cwt/ac)
Untreated check	92.3	-
AGTIV® REACH™ L POTATO	92.5	0.2
AGTIV® REACH™ L POTATO + AGTIV® STIMULATE™ L	109.3	17.0



► 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	3022.6	3274.8	252.2
Bright, ON	2023	Fast Lane SE	12618.0	13347.0	729.0

EFFICACY REPORT

2023 – MYCORRHIZAL INOCULANT

► PLOT TRIAL

Research partner: Sandy Knolls Research Inc.

Research site: Vienna, ON

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

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 8 repetitions, 18.0 m² plots

Variety: Fast Lane SE treated with Dividend Xtreme + Vibrance Cinco

Previous crop: Fallow

Seeding details: Seeded on July 20 with a finger pickup style planter at a rate of 32 000 seeds/ac in a 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): May 8
46-0-0 (450 lb/ac): May 8
Corn Starter (250 lb/ac): July 20

Pesticides: None

Harvesting: October 2, 2023

Month	Precipitation (mm)
May	21.8
June	81.2
July	192.2
August	117.8
September	32.6
TOTAL	445.6

Table 1. Summary of yields per treatment.

Treatment	Yield (lb/ac)	Yield increase (lb/ac)
Untreated check	3022.6	-
AGTIV® REACH™	3274.8	252.2

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™

*Products applied according to manufacturers recommended rate.

Experimental design: Randomized Complete Block (RCB), 8 repetitions, 18.0 m² plots

Variety: Fast Lane SE treated with Dividend Xtreme + Vibrance Cinco

Previous crop: Soybean

Seeding details: Seeded on May 11 with a cone seeder at a rate of 10.8 kg/ha 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): May 8

Pesticides: • Primextra II Magnum (4.0 l/ha): May 16
• 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

* Plots were irrigated during those months

Table 1. Summary of yields per treatment.

Treatment	Yield (lb/ac)	Yield increase (lb/ac)
Untreated check	12618.0	-
AGTIV® REACH™	13347.0	729.0

► GROWER SPLIT FIELDS

Research partners: • Growers

Research sites: • France

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

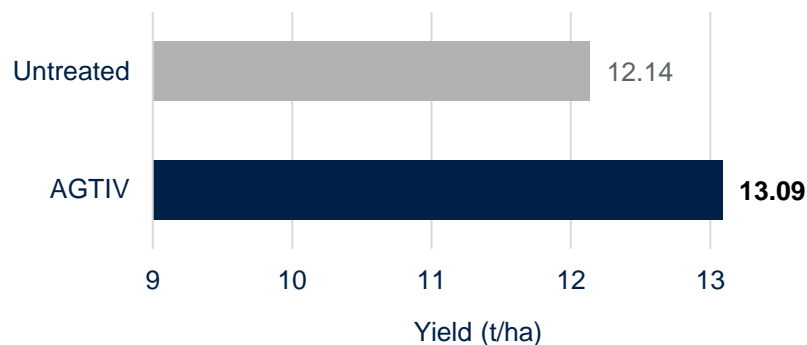
*Products applied according to manufacturers' recommended rate.

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	7.0
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	13.09	7.8 %

Figure 1. Yield increase with AGTIV® mycorrhizal inoculant.



Before 2022:
AGTIV® REACH™ was formerly known as AGTIV® SPECIALTY CROPS

EFFICACY REPORT

SUMMARY – MYCORRHIZAL & RHIZOBIAL INOCULANT

► GROWER SPLIT FIELDS

Research partners: • Growers

Research sites: • Ontario;
• Quebec.

Treatments: a) Untreated;
b) AGTIV® THRIVE™ P PEA & LENTIL.

*Products applied according to manufacturers recommended rate.

Experimental design: Split fields

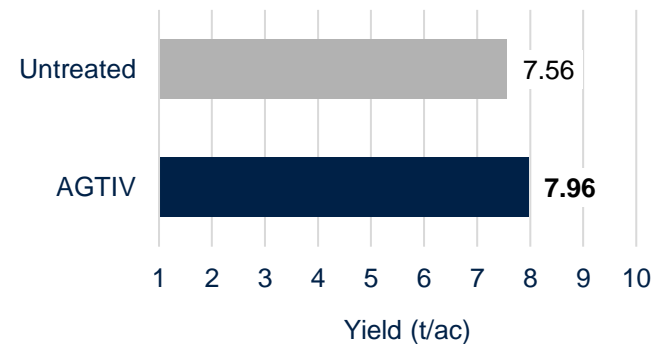


Plant growth and health is enhanced on the right, and the leaf area is increased with AGTIV®.

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	0.08	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



Before 2022:
AGTIV® THRIVE™ was formerly known as AGTIV® PULSES

EFFICACY REPORT

SUMMARY – MYCORRHIZAL INOCULANT

► 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



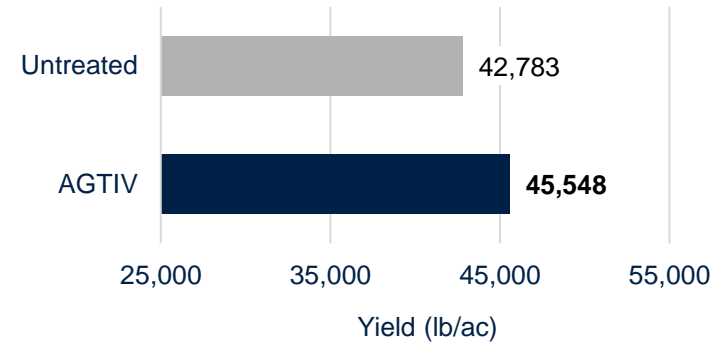
More developed root system, more leaves and bigger fruits with AGTIV®.

Table 1. Summary of yields per trial.

Year	Number of sites	Average increase		
		(lb/ac)	(t/ha)	(%)
2002	2	*	*	5.1
2015	2	2840	3.18	10.0
2016	1	2617	2.93	3.7
Total	5 sites	2766 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



Before 2022:
AGTIV® REACH™ was formerly known as AGTIV® SPECIALTY CROPS

► PLOT TRIALS

Research site: Saint-Eustache, QC

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

*Products applied according to manufacturers recommended rate.

Experimental design: 3 fields. 3 plots of 7 plants per field.
New strawberry establishment.

Table 1. Strawberry yields (number of fruits/plot) per treatment

Treatment	Ripe fruits	Marketable fruits	Unmarketable fruits
Untreated	16.0	13.6	2.4
AGTIV® REACH™	18.4	17.1	1.3
% difference AGTIV® vs untreated	+ 15%	+ 26%	- 47%



Larger and bigger plants with AGTIV® on the right.

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](https://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 2024

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



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.



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