



AGTIV[®]



EFFICACY REPORT 2025
SOYBEAN



SOYBEAN

AVERAGE YIELD INCREASE



AGTIV
THRIVE

3.3 bu/ac
6.7%

225 kg/ha

91 sites over 11 years
Canada and Europe

AGTIV
ENRICH

1.8 bu/ac*
3.2%

* vs competitors average

9 third-party sites over 4 years
Canada

Split field with AGTIV® THRIVE™ SOYBEAN vs competitor inoculant.
Enhanced plant growth and health,
and sooner row closure in AGTIV® soybean fields, on the right.



AGTIV® soybean plants have a better developed root system
with more branching and nodules.



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*:

- 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 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 ^{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≤0.5.

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

EFFICACY REPORT

2022 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: South East Research Farm

Research site: Redvers, SK

Treatments: a) Untreated check (no granular product);
b) AGTIV® THRIVE™ SOYBEAN*;
c) Competitor inoculant A*.

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 6 repetitions, 12 m² plots.

Variety: NSC Redvers (seeds pretreated with a commercial rhizobium).

Previous crop: Pea

Seeding details: Seeded on June 8, with a cone seeder at a rate of 80 kg/ha in a loam soil (pH: 7.6, OM: 4.2%).

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 5-22-0 at seeding

Pesticides: Roundup: June 9 and July 6

Harvesting: October 5, 2022

Month	Precipitation (mm)
May	121.0
June	75.0
July	259.0
August	25.2
September	15.0
TOTAL	465.2

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	52.9	-
AGTIV® THRIVE™ SOYBEAN	54.9	2.0
Competitor inoculant A	53.7	0.8



EFFICACY REPORT

2022 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Integrated Crop Management Services

Research site: Portage la Prairie, MB

Treatments: a) Untreated check (no granular product);
b) AGTIV® THRIVE™ SOYBEAN*;
c) Competitor inoculant A*.

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 6 repetitions, 21 m² plots.

Variety: NSC Redvers RR2X (seeds pretreated with a commercial rhizobium).

Previous crop: Wheat

Seeding details: Seeded on June 17, with a cone seeder at a rate of 140 kg/ha in a clay loam soil (pH: 8.2, OM: 6.7%).
Emergence on June 22.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: Roundup WeatherMax:
June 24 & July 14

Harvesting: October 11, 2022

Month	Precipitation (mm)
May	140.7
June	70.3
July	96.3
August	89.0
September	50.3
TOTAL	446.6

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	63.0	-
AGTIV® THRIVE™ SOYBEAN	64.9	1.9
Competitor inoculant A	63.4	0.4



EFFICACY REPORT
2021 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner:	New Era Ag Technologies
Research site:	Swan River, MB
Treatments:	a) Untreated check; b) AGTIV® SOYBEAN • Granular*; c) Competitor inoculant E*.
Experimental design:	Complete Randomized Block Design, 6 repetitions, 20 m ² plots.
Variety:	Syngenta M2
Previous crop:	Wheat
Seeding details:	Seeded on May 18, with a cone seeder at a rate of 70 kg/ha. Seeds pretreated with a commercial rhizobium.

*Products applied according to manufacturers recommended rate.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	11-52-0 (86 kg/ha): May 28
Pesticides:	RT 540: June 15 and July 6
Harvesting:	September 28, 2021

Month	Precipitation (mm)
May	33.0
June	65.9
July	45.5
August	77.1
September	39.0
TOTAL	260.5

Table 1. Summary of yields and protein per treatment

Treatment	Yield ¹ (bu/ac)	Yield increase (bu/ac)	Protein (%)
Untreated check	41.9 ^a	-	29.5
AGTIV® SOYBEAN • Granular	46.3 ^b	4.4	31.7
Competitor inoculant E	43.5 ^b	1.6	31.1

¹ Yields with same letter are not statistically different according to a Tukey HSD test (p≤0.05).

EFFICACY REPORT
2021 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: South East Research Farm

Research site: Redvers, SK

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

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 6 repetitions, 8 m² plots.

Variety: Watson

Previous crop: Wheat

Seeding details: Seeded on May 29, with a cone seeder at a rate of 75 kg/ha.
Seeds pretreated with a commercial rhizobium.

Table 1. Summary of yields and protein per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Protein (%)
Untreated check	19.1	-	36.9
AGTIV® SOYBEAN • Granular	21.0	1.9	36.4
Competitor inoculant E	20.0	0.9	36.9

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: MAP 11-48-0 (65 kg/ha): at seeding

Pesticides: Glyphosate: June 24

Harvesting: September 17, 2021

Month	Precipitation (mm)
May	52.9
June	70.5
July	19.9
August	55.4
TOTAL	198.7

EFFICACY REPORT
2019 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Ag-Quest inc.

Research site: Elm Creek, MB

Treatments: a) ALPINE G22™ Liquid*;
b) ALPINE G22™ and AGTIV® COMBO • Liquid for SOYBEAN*;
c) ALPINE G22™ and Competitor inoculant A*;
d) ALPINE G22™ and Competitor inoculant D*.

*Products applied according to manufacturer's recommended rate.

Experimental design: 6 replicated plots per treatment in randomized complete block design.

Variety: Gray R2 with *Bradyrhizobium* pre-inoculated on the seed.

Previous crop: Barley

Seeding details: Seeded May 28, 2019, with a 21 cm row spacing.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
ALPINE G22™ Liquid	34.6	2327
ALPINE G22™ and AGTIV® COMBO • Liquid for SOYBEAN	37.1	2495
ALPINE G22™ and Competitor inoculant A	36.9	2482
ALPINE G22™ and Competitor inoculant D	35.9	2414

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: • Roundup WeatherMax: June 14, July 9, and 24
• CORAGEN: August 14

Harvesting: Combined on October 26, 2019.

Month	Precipitation (mm)
May	42.2
June	59.5
July	91.7
August	40.9
September	196.7
TOTAL	431

EFFICACY REPORT

2019 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner:	New Era Ag Research
Research site:	Swan River, MB
Treatments:	a) Untreated; b) AGTIV® SOYBEAN • Granular*; c) Competitor inoculant A applied*; d) Competitor inoculant C applied*.
Experimental design:	6 replicated plots per treatment in randomized complete block design.
Variety:	Syngenta M2 with <i>Bradyrhizobium</i> pre-inoculated on the seed.
Previous crop:	Canola stubble
Seeding details:	Seeded May 24, with a 22.4 cm row spacing and a rate of 190 000 seeds/acre.

*Products applied according to manufacturer's recommended rate.

OPERATIONAL NOTES AND RAIN FALL

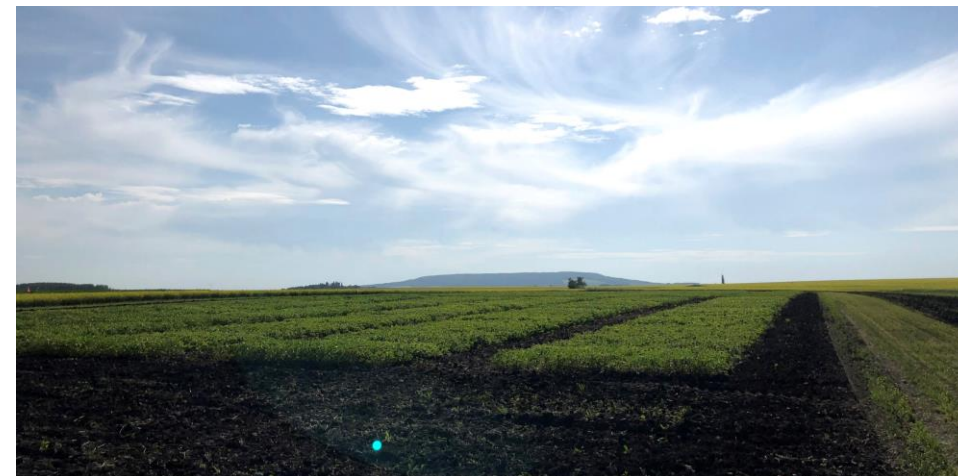
Fertilisation:	0-20-10-0: at season start
Pesticides:	• Glyphosate: June 12, 25, and July 12 • POUNCE: August 12
Harvesting:	October 7, 2019

Month	Precipitation (mm)
May	25.7
June	26.1
July	59.4
August	51.8
September	48.8
TOTAL	211.8

Table 1. Summary of yields and protein per treatment

Treatment	Yield ¹ (bu/ac)	Yield ¹ (kg/ha)	Protein ¹ (%)
Untreated	26.5 ^a	1782 ^a	32.87 ^a
AGTIV® SOYBEAN • Granular	35.7 ^b	2401 ^b	37.59 ^c
Competitor inoculant A	29.9 ^a	2011 ^a	35.27 ^b
Competitor inoculant C	35.7 ^b	2401 ^b	37.87 ^c

¹ Yields and protein contents followed by different letters are significantly different (Tukey's test HSD at p≤0.05).



EFFICACY REPORT
2019 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: South East Research Farm

Research site: Redvers, SK

Treatments: a) Untreated;
b) AGTIV® SOYBEAN • Granular*;
c) Competitor inoculant A*;
d) Competitor inoculant C*.

*Products applied according to manufacturer's recommended rate.

Experimental design: 6 replicated plots per treatment in randomized complete block design.

Variety: NSC Watson RR2Y with *Bradyrhizobium* pre-inoculated on the seed.

Previous crop: Canola

Seeding details: Seeded May 27, at a rate of 210 000 seeds/acre.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: • Glyphosate: June 18
• Viper and UAN: July 1

Harvesting: Combined on October 6, 2019.

Month	Precipitation (mm)
May	18
June	79
July	54
August	88
September	99
TOTAL	338

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
Untreated	13.4	901
AGTIV® SOYBEAN • Granular	16.3	1096
Competitor inoculant A	14.9	1002
Competitor inoculant C	15.8	1063

► PLOT TRIAL

Research partner:	South East Research Farm
Research site:	Redvers, SK
Treatments:	a) AGTIV [®] SOYBEAN • Granular*; b) COMBO AGTIV [®] • Liquid for SOYBEAN*; c) Competitor inoculant A*; d) Competitor inoculant B*.
	*Products applied according to manufacturer's recommended rate.
Experimental design:	8 replicated plots per treatment in randomized complete block design.
Variety:	Dario
Previous crop:	Canola stubble
Seeding details:	Seeded May 28, at 210 000 seeds/ac with 15 cm row spacing. No tillage.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	58 lb/ac of P
Pesticides:	Glyphosate: twice during growth.
Harvesting:	September 27, 2018

Month	Precipitation (mm)
May	13.8
June	44.3
July	19.5
August	17.4
September	27.6
TOTAL	122.6

Table 1. Summary of yields and protein per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)	Protein (%)
AGTIV [®] SOYBEAN • Granular	31.1	2092	32.5
COMBO AGTIV [®] • Liquid for SOYBEAN	28.2	1896	29.0
Competitor inoculant A	25.8	1735	28.5
Competitor inoculant B	29.7	1997	30.8

EFFICACY REPORT
2018 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Integrated Crop Management Services

Research site: Portage La Prairie, MB

Treatments: a) AGTIV® SOYBEAN • Granular*;
b) COMBO AGTIV® • Liquid for SOYBEAN*;
c) Competitor inoculant A*;
d) Competitor inoculant B*.

Experimental design: 8 replicated plots per treatment in randomized complete block design, 24 m² plots.

Variety: Barker

Previous crop: Fallow

Seeding details: Seeded June 6.

*Products applied according to manufacturers recommended rate.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides:

- Round up: July 5
- Thiram: July 10, 17 and 27

Harvesting: Combined on October 19, 2018.

Month	Precipitation (mm)
June	65.1
July	41.1
August	31.8
September	115.3
TOTAL	253.3

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® SOYBEAN • Granular	49.4	3322
COMBO AGTIV® • Liquid for SOYBEAN	47.4	3188
Competitor inoculant A	47.2	3174
Competitor inoculant B	47.8	3215

EFFICACY REPORT
2018 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: New Era Ag Research

Research site: Swan River, MB

Treatments: a) AGTIV® SOYBEAN • Granular applied at 5.1 lb/ac*;
b) Competitor inoculant A applied at 5 lb/ac*;
c) Competitor inoculant B applied at 4.45 lb/ac*;
d) Competitor inoculant C applied at 7.14 lb/ac*.

*Products applied according to manufacturer's recommended rate.

Experimental design: 8 replicated plots per treatment in randomized complete block design.

Variety: Dario

Previous crop: Canola stubble

Seeding details: Seeded May 21, at 200 000 seeds/ac with 25 cm row spacing. No tillage.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: P (30 lb/ac)
K (40 lb/ac)

Pesticides: • Glyphosate: June 6, 25 and July 5
• Proline: July 10
• Round up: September 12
• Heat: September 12

Harvesting: Combined in October 2018.

Month	Precipitation (mm)
May	38.4
June	127.6
July	59.3
August	35.4
September	51.1
TOTAL	311.8

Table 1. Summary of yields and protein per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)	Protein (%)
AGTIV® SOYBEAN • Granular	57.7	3880	34.2
Competitor inoculant A	47.2	3174	31.5
Competitor inoculant B	54.3	3651	33.1
Competitor inoculant C	55.5	3732	33.6

EFFICACY REPORT

2017 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► STRIP TRIAL

Research partner:	Stoney Ridge Ag Services
Research site:	Binscarth, MB
Treatments:	a) AGTIV® SOYBEAN • Granular applied at 5.0 lb/ac; b) Competitor inoculant A applied at 5.0 lb/ac; c) Competitor inoculant B applied at 5.0 lb/ac; d) Competitor inoculant C applied at 5.0 lb/ac.
Experimental design:	2 replicated strips of 1.36 acres per treatment.
Variety:	Pioneer Experimental Ultra-Early variety, treated with Optimize St.
Previous crop:	Canola
Seeding details:	Seeded May 20, at 180 000 seeds/ac at 15 in row spacing using DB60.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	5-23-23-13 (231 lb/ac): fall broadcast and incorporated
Pesticides:	<ul style="list-style-type: none">• Roundup WeatherMax: Preplant application• Express SG: Preplant application• Roundup Transorb HC: Incrop application• Xtendimax: Incrop application• Roundup WeatherMax: second incrop application• Pursuit: second incrop application
Harvesting:	Combined on September 18, 2017. Weighed using J&M Speed Tender.

Table 1. Summary of yields per treatment

Treatment	Yield ¹ (bu/ac)	Yield ¹ (kg/ha)
AGTIV® SOYBEAN • Granular	30.11 ^a	2025 ^a
Competitor inoculant A	27.71 ^b	1864 ^b
Competitor inoculant B	28.99 ^{a,b}	1950 ^{a,b}
Competitor inoculant C	28.46 ^b	1914 ^b

¹ Average yields followed by different letters are significantly different (P < 0.05, 1-way ANOVA + Tukey-Kramer Significance Test)

EFFICACY REPORT
2017 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► STRIP TRIAL

Research partner: Down to Earth + PAMI

Research site: Saskatoon, SK

Treatments: a) AGTIV® SOYBEAN • Granular applied at 5.0 lb/ac + Taurus Advanced Acre² (TAA) + fungicide application;
b) AGTIV® SOYBEAN • Granular applied at 5.0 lb/ac + Taurus Advanced Acre³ (TAA) & no fungicide application;
c) AGTIV® BRADY • Granular for SOYBEAN applied at 4.0 lb/ac + designed fertility¹.

Experimental design: 2 replicated strips for a total of 540 ft² per treatment

Variety: Syngenta, M2 variety, treated with 1.82 ml/kg Optimize St.

Previous crop: Canola / wheat / oats split

Seeding details: Seeded May 20, at 180 000 seeds/ac at 10 inches row spacing using Seed Master plot Drill by Down to Earth.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: Seed placed 2-15-0 -0 lb/ac
Side band 17-20-15-15 lb/ac

Pesticides:

- Viper (400 ml/ac): 2-3 trifoliolate
- UAN (81 ml/ac): 2-3 trifoliolate
- Roundup (0.67 l/ac): 3-4 trifoliolate

Harvesting: Combined on September 18, with a Wintersteiger.
Weighed & moisture averaged by PAMI .

Month	Precipitation (mm)
TOTAL	100.4

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® SOYBEAN • Granular + TAA + Fungicide	39.1	2630
AGTIV® SOYBEAN • Granular + TAA & No Fungicide	41.1	2764
AGTIV® BRADY • Granular for SOYBEAN + designed fertility	34.9	2347

- 1. Designed Fertility Program:** a calculated fertility program based on soil tests and targeted yield. Target yield for Soybean was 40 bushels/ac
- 2. The Taurus Advanced Acre™:** Using the Designed Fertility Program with the addition of key Taurus solutions.
- 3. The Taurus Advanced Acre™ with no Fungicide:** Using the Designed Fertility Program with the addition of key Taurus solutions without the addition of fungicide.

► PLOT TRIAL

Research partner: Integrated Crop Management Services

Research site: Portage La Prairie, MB

Treatments: a) AGTIV® SOYBEAN • Granular applied at 5 lb/ac*;
b) AGTIV® BRADY • Granular for SOYBEAN applied at 4 lb/ac*;
c) Competitor inoculant A applied at 5.0 lb/ac*;
d) Competitor inoculant B applied at 4.5 lb/ac*;
e) Competitor inoculant C applied at 7 lb/ac*;
f) Competitor inoculant D applied at 0.063 g/1000 seeds*.

*Products applied according to manufacturers recommended rate.

Experimental design: 6 replicated plots per treatment in randomized complete block design.

Variety: Northstar Seeds, Richer

Previous crop: Canola

Seeding details: Seeded June 1 at 165 000 plants/ac with 15 cm row spacing using a cone planter. Conventional tillage before spring.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 0-80-40-20 N-P-K-S (288 lb/ac): before seeding

Pesticides: • Roundup TR 540 (0.7 l/ac): June 26 and July 14
• Cygon: August 8

Harvesting: Combined on October 12, with a Wintersteiger.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® SOYBEAN • Granular	58.3	3921
AGTIV® BRADY • Granular for SOYBEAN	54.6	3672
Competitor inoculant A	54.5	3665
Competitor inoculant B	54.5	3665
Competitor inoculant C	54.7	3679
Competitor inoculant D	54.9	3692

Month	Precipitation (mm)
May	26.8
June	69.9
July	29.4
August	8.8
September	83.8
TOTAL	218.7

EFFICACY REPORT

2017 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner:	New Era research
Research site:	Swan River, MB
Treatments:	a) AGTIV® SOYBEAN • Granular applied at 5.1 lb/ac*; b) Competitor inoculant A applied at 5.0 lb/ac*; c) Competitor inoculant A applied at 10.0 lb/ac*; d) Competitor inoculant C applied at 7.1 lb/ac*; e) Competitor inoculant C applied at 14.3 lb/ac.
	*Products applied according to manufacturers recommended rate.
Experimental design:	8 replicated plots per treatment in randomized complete block design.
Variety:	Prograin, Dario, treated with 2 ml/kg CBMV and 1.82 ml/kg Optimize.
Previous crop:	Canola
Seeding details:	Seeded May 23, at 200 000 seeds/ac at 10 in row spacing using seedhawk air drill.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	7-34-20-0 (102 lb/ac): spring broadcast
Pesticides:	<ul style="list-style-type: none">• Viper (400 ml/ac): 2-3 trifoliate• UAN (81 ml/ac): 2-3 trifoliate• Roundup (0.67 l/ac): 3-4 trifoliate• Guardsman (607 ml/ac): R8
Harvesting:	Combined on October 10 with Hedge 140 plot combine.

Table 1. Summary of yields per treatment

Treatment	Yield ¹ (bu/ac)	Yield ¹ (kg/ha)
AGTIV® SOYBEAN • Granular	40.7 ^a	2737 ^a
Competitor inoculant A low rate	35.0 ^{b,c}	2354 ^{b,c}
Competitor inoculant A high rate	36.5 ^b	2455 ^b
Competitor inoculant C low rate	32.5 ^c	2186 ^c
Competitor inoculant C high rate	35.3 ^{b,c}	2374 ^{b,c}

¹ Average yields followed by different letters are significantly different (P < 0.05, Student-Newman-Keuls)

Month	Precipitation (mm)
TOTAL	197.1

EFFICACY REPORT
2016 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Integrated Crop Management Services

Research site: Oakville, MB

Treatments: a) AGTIV® SOYBEAN • Granular applied at 5 lb/ac*;
b) Competitor inoculant A applied at 5 lb/ac*;
c) Competitor inoculant B applied at 4.5 lb/ac*;
d) Competitor inoculant C applied at 7 lb/ac*.

*Products applied according to manufacturers recommended rate.

Experimental design: 5 replicated plots per treatment in randomized complete block design.

Variety: Legend Seeds, Eclipse

Previous crop: Fallow

Seeding details: Seeded at 95 kg/ha with 15 cm row spacing using plot drill and double disc openers. The plot area was cultivated one week before planting.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: Roundup TR 540 (0.66 l/ac): one month after planting

Harvesting: Combined with Wintersteiger plot combine.

Month	Precipitation (mm)
May	58.5
June	90.3
July	86
August	99.9
September	43.6
TOTAL	378.3

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® SOYBEAN • Granular	79.7	5360
Competitor inoculant A	77.8	5232
Competitor inoculant B	77.7	5225
Competitor inoculant C	75.7	5091

► PLOT TRIAL

Research partner: Ag-Quest inc.

Research site: Morden, MB

Treatments: a) AGTIV® SOYBEAN • Granular applied at 5 lb/ac*;
b) Competitor inoculant A applied at 5 lb/ac*;
c) Competitor inoculant B applied at 4.5 lb/ac*.

*Products applied according to manufacturers recommended rate.

Experimental design: 8 replicated plots per treatment in randomized complete block design.

Variety: NORTHSTAR genetics, ANOLA variety

Previous crop: Canola

Seeding details: Seeded on June 2, at 18 cm row spacing and 100 kg/ha

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: Roundup TR 540 (0.61 l/ac)

Harvesting: Combined on September 30, 2015, with Wintersteiger plot combine.

Month	Precipitation (mm)
May	62.8
June	87.1
July	47.0
August	47.3
TOTAL	244.2

Table 1. Summary of yields per treatment

Treatment	Yield ¹ (bu/ac)	Yield ¹ (kg/ha)
AGTIV® SOYBEAN • Granular	31.8 ^a	2139 ^a
Competitor inoculant A	27.8 ^b	1870 ^b
Competitor inoculant B	30.5 ^{a, b}	2051 ^{a, b}

¹Yields followed by different letters are statistically different at alpha 0.05.

► PLOT TRIAL

Research partner: Integrated Crop Management Services

Research site: Portage La Prairie, MB

Treatments: a) AGTIV® SOYBEAN • Granular applied at 5 lb/ac*;
b) Competitor inoculant A applied at 5 lb/ac*;
c) Competitor inoculant B applied at 4.5 lb/ac*.

*Products applied according to manufacturers recommended rate.

Experimental design: 7 replicated plots per treatment in randomized complete block design.

Variety: PRIDE SEEDS genetics, PS 0035 NR2 variety

Previous crop: Canola

Seeding details: Seeded on May 29, at 15.2 cm row spacing and 100 kg/ha.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: Roundup TR 540 (0.61 l/ac)

Harvesting: Combined on October 6, 2015, with Wintersteiger plot combine.

Month	Precipitation (mm)
May	76.2
June	52.6
July	176.7
August	64.2
September	18.4
TOTAL	388.1

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® SOYBEAN • Granular	57.3	3853
Competitor inoculant A	55.4	3725
Competitor inoculant B	58.2	3913

EFFICACY REPORT

2017 – MYCORRHIZAL INOCULANT

► PLOT TRIAL

Research partner:	BlackCreek Research
Research site:	Bright, ON
Treatments:	a) Untreated check; b) AGTIV® ON SEED™ mycorrhizal inoculant.
	<small>*Products applied according to manufacturers recommended rate.</small>
Experimental design:	8 replicated plots per treatment in randomized complete block design.
Variety:	ELITE SEED, Katonda R2
Previous crop:	Winter Wheat
Seeding details:	Seeded June 9 at 168 000 plants/ac with 38 cm row spacing using a cone planter.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
Untreated check	41.4 ^a	2782 ^a
AGTIV® ON SEED™ mycorrhizal inoculant	44.0 ^b	2957 ^b

¹ Average yields followed by different letters are significantly different (P < 0.05, Student-Newman-Keuls)

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	None
Pesticides:	<ul style="list-style-type: none">• Boundary Lqd (2.47 l/ha)• Broadstrike Rc (87.5 g/ha): June 10• Classic (36 g/ha): June 29
Harvesting:	Combined on October 19, 2017, with Wintersteiger plot combine.

Month	Precipitation (mm)
May	120.0
June	53.5
July	81.0
August	106.0
September	32.0
TOTAL	392.5

EFFICACY REPORT

2017 – MYCORRHIZAL INOCULANT

► PLOT TRIAL

Research partner:	Independent consultant
Research site:	Saint-Simon (#1), QC
Treatments:	a) Untreated check; b) AGTIV® ON SEED™ mycorrhizal inoculant.
	<small>*Products applied according to manufacturers recommended rate.</small>
Experimental design:	4 replicated plots per treatment in randomized complete block design.
Variety:	ELITE SEED, Auriga
Previous crop:	Corn
Seeding details:	Seeded May 25 at 182 000 plants/ac with 33 cm row spacing using a cone planter. Conventional tillage before spring. Vibro before seeding.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
Untreated check	46.4	3119
AGTIV® ON SEED™ mycorrhizal inoculant	48.8	3280

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	None
Pesticides:	<ul style="list-style-type: none">• Dual II Magnum (1.75 l/ha): May 25• Firstrate (20.8 g/ha): May 25• Pursuit (0.312 l/ha): May 25
Harvesting:	Combined on September 27, 2017 with Delta plot combine.

Month	Precipitation (mm)
May	81.5
June	120.4
July	57.4
August	57.6
September	45.0
TOTAL	361.9

EFFICACY REPORT

2017 – MYCORRHIZAL INOCULANT

► PLOT TRIAL

Research partner:	Independent consultant
Research site:	Saint-Simon (#2), QC
Treatments:	a) Untreated check; b) AGTIV® ON SEED™ mycorrhizal inoculant.
*Products applied according to manufacturers recommended rate.	
Experimental design:	4 replicated plots per treatment in randomized complete block design.
Variety:	ELITE SEED, Auriga
Previous crop:	Corn
Seeding details:	Seeded May 25 at 182 000 plants/ac with 33 cm row spacing using a cone planter. Conventional tillage before spring. Vibro before seeding.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
Untreated check	44.3	2953
AGTIV® ON SEED™ mycorrhizal inoculant	45.9	3058

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	None
Pesticides:	<ul style="list-style-type: none">• Dual II Magnum (1.75 l/ha): May 25• Firstrate (20.8 g/ha): May 25• Pursuit (0.312 l/ha): May 25
Harvesting:	Combined on September 27, 2017, with Delta plot combine.

Month	Precipitation (mm)
May	81.5
June	120.4
July	57.4
August	57.6
September	45.0
TOTAL	361.9

EFFICACY REPORT
SUMMARY – RHIZOBIAL & BACILLUS INOCULANT

► PLOT TRIALS

Research partners:

- BlackCreek 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*:

- 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

► 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 m² 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

► 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 m² 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%).

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

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

EFFICACY REPORT
2023 – RHIZOBIAL & BACILLUS INOCULANT

► 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 TRIAL

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 m ² 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



EFFICACY REPORT
2022 – RHIZOBIAL & BACILLUS INOCULANT

► PLOT TRIAL

Research partner:	New Marc Research
Research site:	Saint-Marc-sur-Richelieu, QC
Treatments:	a) AGTIV® ENRICH™ SOYBEAN*; b) Competitor inoculant B*; c) Competitor inoculant C*; d) Competitor inoculant E*.
	<small>*Products applied according to manufacturers recommended rate.</small>
Experimental design:	Complete Randomized Block Design, 6 repetitions, 18 m ² plots.
Variety:	Katonda R2
Previous crop:	Corn
Seeding details:	Seeded on May 26, with a CP cone planter at a rate of 60 kg/ha in a clay soil (pH: 7.4, OM: 3.7%). Emergence on June 8.

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

Treatment	Yield (bu/ac)
AGTIV® ENRICH™ SOYBEAN	34.4
Competitor inoculant B	32.8
Competitor inoculant C	32.6
Competitor inoculant E	32.5

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	None
Pesticides:	Credit Xtreme: June 26
Harvesting:	October 17, 2022

Month	Precipitation (mm)
May	75.5
June	123.7
July	98.3
August	140.0
September	156.9
TOTAL	594.4

EFFICACY REPORT
2022 – RHIZOBIAL & BACILLUS INOCULANT

► PLOT TRIAL

Research partner:	New Era Ag Research
Research site:	Swan River, 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:	Complete Randomized Block Design, 6 repetitions, 24 m ² plots.
Variety:	Syngenta D8X
Previous crop:	Canola
Seeding details:	Seeded on May 27, with a CP cone planter at a rate of 68 kg/ha in a clay loam soil (pH: 6.5, OM: 5.3%). Emergence on June 6.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)
AGTIV® ENRICH™ SOYBEAN	57.4
Competitor inoculant B	56.4
Competitor inoculant C	57.6
Competitor inoculant E	55.5

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	MAP 4-20-24: May 26
Pesticides:	• Viper ADV: June 28 • RT540: June 28 and July 7
Harvesting:	October 3, 2022

Month	Precipitation (mm)
May	14.5
June	80.0
July	32.3
August	48.8
September	58.9
TOTAL	234.5

► PLOT TRIAL

Research partner: BlackCreek Research

Research site: Bright, ON

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: Complete Randomized Block Design, 6 repetitions, 24 m² plots.

Variety: Pioneer 12T94E

Previous crop: Corn

Seeding details: Seeded on May 30, with a CP cone planter at a rate of 58 kg/ha in a sandy loam soil (pH: 7.5, OM: 3.2%).
Emergence on June 5.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)
AGTIV® ENRICH™ SOYBEAN	52.8
Competitor inoculant B	52.8
Competitor inoculant C	51.9
Competitor Inoculant E	52.4

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 4-20-24-6 of NPKS on May 27 prior to final cultivator pass

Pesticides: • Boundary LQD: May 31
• Roundup Transorb: July 7

Harvesting: October 5, 2022

Month	Precipitation (mm)
May	82.0
June	56.8
July	48.2
August	83.6
Septembre	52.6
TOTAL	323.2

EFFICACY REPORT
2021 – RHIZOBIAL & BACILLUS INOCULANT

► PLOT TRIAL

Research partner: BlackCreek Research

Research site: Bright, ON

Treatments: a) AGTIV® ENRICH™ *;
b) Competitor Inoculant B*;
c) Competitor Inoculant C*;
d) Competitor Inoculant E*.

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 8 repetitions, 24 m² plots.

Variety: Katonda R2

Previous crop: Corn

Seeding details: Seeded on May 19, with a cone seeder at a rate of 60 kg/ha.
Seeds pretreated with a commercial rhizobium.

Table 1. Summary of yields and protein per treatment

Treatment	Yield (bu/ac)	Protein content (%)
AGTIV® ENRICH™	72.2	35.3
Competitor B	70.1	35.5
Competitor C	70.7	34.9
Competitor E	69.3	35.1

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: • Boundary LQD: May 22
• Roundup Transorb: June 23

Harvesting: September 29, 2021

Month	Precipitation (mm)
May	26.4
June	86.3
July	84.6
August	121.0
Septembre	162.4
TOTAL	480.7

EFFICACY REPORT 2025

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