

AGTIV®



EFFICACY REPORT 2025
PEA & LENTIL



LENTIL

AVERAGE YIELD INCREASE

AGTIV®
THRIVE™

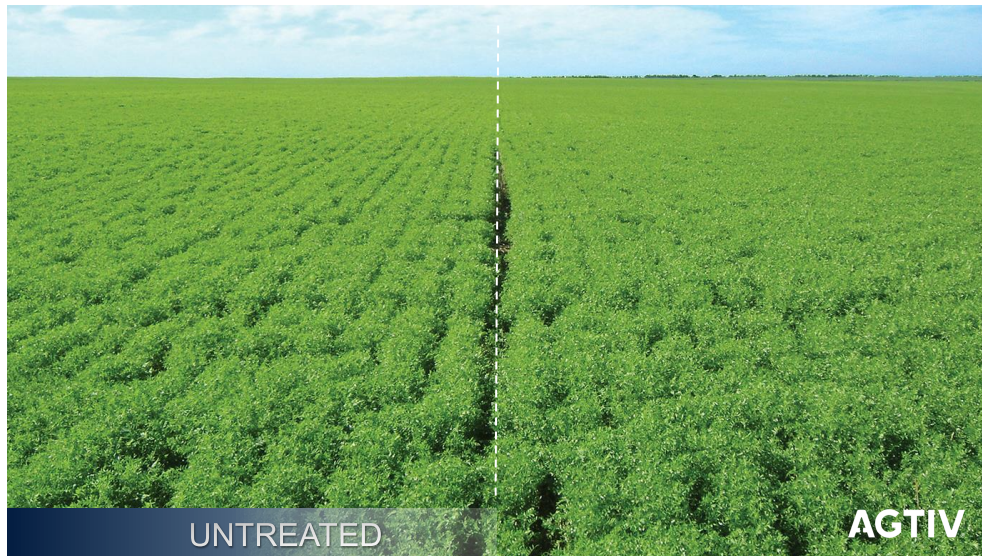
2.7 bu/ac
8.8%

182 kg/ha

66 sites over 14 years
Canada



Lentil split field with AGTIV® THRIVE™ PULSES vs competitor inoculant.
Plant growth and health is enhanced on the right,
and row closure occurs sooner in AGTIV® lentil fields.



Enhanced root development leads to thicker stems,
which help lentils stand better and increases ease of harvest.



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.

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

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

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

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

EFFICACY REPORT
2023 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Ag-Quest Inc

Research site: Taber, AB

Treatments: a) Untreated check;
b) AGTIV® THRIVE™ 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™ 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
2022 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Prairie Ag Research Inc.

Research site: Lethbridge, AB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 8 repetitions, 12 m² plots.

Variety: Impulse

Previous crop: Fallow

Seeding details: Seeded on May 23, with a cone seeder at a rate of 50 kg/ha in a clay loam soil (pH: 7.4, OM: 4%).
Emergence on May 30.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: • Glyphosate: May 20
• Odyssey and Merge: June 30

Harvesting: September 7, 2022

Month	Precipitation (mm)
May	35.8
June	114.5 *
July	57.4
August	31.7 *
TOTAL	239.4

* Plots were irrigated during those months

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	30.1	-
AGTIV® THRIVE™ PEA & LENTIL	32.0	1.9
Competitor inoculant B	31.9	1.8



EFFICACY REPORT
2022 – MYCORRHIZAL & RHIZOBIAL INOCULANT



► PLOT TRIAL

Research partner: Small Plot Inc.

Research site: Vulcan, AB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 6 repetitions, 16 m² plots.

Variety: Impulse

Previous crop: Fallow

Seeding details: Seeded on May 12, 2022, with a plot drill machine at a rate of 89 kg/ha in a loam soil (pH: 7, OM: 3.5%). Emergence on May 30.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	37.1	-
AGTIV® THRIVE™ PEA & LENTIL	38.7	1.6
Competitor inoculant B	38.3	1.2

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 11-51-0-0 sidebanded at seeding

Pesticides: • Odyssey NXT: July 3
• ZIVATA: twice

Harvesting: August 30, 2022

Month	Precipitation (mm)
May	9.8
June	136.8
July	86.0
August	18.1
TOTAL	250.7

EFFICACY REPORT

2022 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Wheatland Conservation Area

Research site: Swift Current, SK

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

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 8 repetitions, 17 m² plots.

Variety: Impulse

Previous crop: Wheat

Seeding details: Seeded on May 6, with a cone seeder at a rate of 67 kg/ha in a sandy loam soil (pH: 6.1, OM: 2.7%).
Emergence on May 27.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 11-52-0 (100 kg/ha): May 6

Pesticides:

- RT540: May 2
- Centurion: June 7
- AMIGO: June 7
- Solo ADV: June 16
- Proline GOLD: July 27
- Reglone: August 8

Harvesting: August 8, 2022

Month	Precipitation (mm)
May	51.2
June	37.7
July	90.4
August	7.5
TOTAL	186.8

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	32.9	-
AGTIV® THRIVE™ PEA & LENTIL	35.0	2.1
Competitor inoculant B	32.6	-



EFFICACY REPORT
2021 – MYCORRHIZAL & RHIZOBIAL INOCULANT



► PLOT TRIAL

Research partner: Prairie Ag Research Inc.

Research site: Lethbridge, AB

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

*Products applied according to manufacturers recommended rate.

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

Variety: Proclaim

Previous crop: Barley

Seeding details: Seeded on May 19, with a cone seeder at a rate of 50 kg/ha.

Table 1. Summary of yields and protein content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Protein content (%)
Untreated check	42.7	-	27.5
AGTIV® PULSES • Granular	46.8	4.1	27.8
Competitor inoculant B	46.4	3.7	27.2

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: • Glyphosate: May 19
• Odyssey: June 28
• Merge: June 28

Harvesting: September 14, 2021

Month	Precipitation (mm)
May	33.1
June	16.5
July	10.3
August	35.6
TOTAL	95.5

EFFICACY REPORT

2021 – MYCORRHIZAL & RHIZOBIAL INOCULANT



► PLOT TRIAL

Research partner: Small Plot Inc.

Research site: Vulcan, AB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 6 repetitions, 16 m² plots.

Variety: Impulse

Previous crop: Wheat

Seeding details: Seeded on May 15, with a plot drilling machine at a rate of 72 kg/ha.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	9.1	-
AGTIV® PULSES • Granular	10.0	0.9
Competitor inoculant B	8.4	-

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 11-51-0-0 sidebanded at seeding

Pesticides: Odyssey NTX: June 13

Harvesting: August 25, 2021

Month	Precipitation (mm)
May	3.8
June	42.4
July	27.6
August	38.6
September	41.1
TOTAL	153.5

EFFICACY REPORT

2019 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Small Plot Inc.

Research site: Vulcan, AB

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

*Products applied according to manufacturers' recommended rate.

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

Variety: Pedigree CDC Proclaim

Previous crop: Canola

Seeding details: Seeded May 14, at 65 lb/ac with a 22.8 cm row spacing. Products were applied in-furrow.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
ALPINE G22™ Liquid	25.0 ^a	1681 ^a
ALPINE G22™ and AGTIV® COMBO • Liquid for PULSES	32.6 ^b	2192 ^b
ALPINE G22™ and Competitor inoculant A	28.8 ^{ab}	1937 ^{ab}
ALPINE G22™ and Competitor inoculant D	28.4 ^{ab}	1910 ^{ab}

¹ Yields followed by different letters are significantly different (LSD Test at p<0.05).
Data from bloc 1 were not analyzed due to a high presence of *Kochia scoparia*.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: ALPINE G22™

Pesticides: One herbicide: June 6

Harvesting: Dessicated September 22;
Combined October 17.

Month	Precipitation (mm)
May	16
June	50
July	16
August	25
TOTAL	107

EFFICACY REPORT

2016 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Wheatland Conservation Area

Research site: Swift Current, SK

Treatments: a) AGTIV® PULSES • Granular applied at 5 lb/ac*;
b) AGTIV® RHIZO • Granular for PULSES applied at 5 lb/ac*;
c) Competitor inoculant A applied at 3.6 lb/ac*;
d) Competitor inoculant B applied at 3.6 lb/ac*;
e) Competitor inoculant C applied at 5.1 lb/ac*.

*Products applied according to manufacturers recommended rate.

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

Variety: Small Red Lentils, Imax CL

Previous crop: Canola

Seeding details: Seeded at 68 lb/ac to obtain 12 plants/ft² using Fabro plot dill, Atomjet knife openers.

Fertility: 98 lb/ac of 11-52-0 side banded

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides:

- RT 540 (0.67 l/ac): preseed burnoff
- Edge (15 lb/ac): pre-seed
- Odyssey (17.3 g/ac)
- Poast Ultra (190 ml/ac)
- Merge spray solution (0.5 l/100 l)
- Priaxor (180 ml/ac): at 10% flower

Harvesting: Dessicated: Reglone + Ag Surf adjuvant (700 ml/ac + 0.1 l/100 l).
Combined with Wintersteiger.

Month	Precipitation (mm)
April	7
May	129.3
June	85.1
July	115
August	58
September	39
October	58
TOTAL	491.4

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® PULSES • Granular (dual inoculant)	50.1 ^b	3369 ^b
AGTIV® RHIZO • Granular for PULSES (single inoculant)	46.6 ^b	3134 ^b
Competitor inoculant A	43.3 ^{a,b}	2912 ^{a,b}
Competitor inoculant B	41.1 ^a	2764 ^a
Competitor inoculant C	37.7 ^{a2}	2535 ^{a2}

¹ Average yields followed by different letters are significantly different using Duncan's multiple range test at $p \leq 0.1$.

² The difference in yield is significant at $p = 0.012$, compared with AGTIV® PULSES • Granular (dual inoculant).

Data analysis:

As noted by Wheatland Conservation Area, the lower part of the field had damaging effect on all plots of replicate 7 and the first plot of replicate 8, which was the competitor inoculant B treatment. All data from those affected plots were removed from the analysis.

► STRIP TRIAL

Research partner: GMAC's Ag Team

Research site: Brock, SK

Objective: Evaluate the performance of competitor inoculant brands with an emphasis on comparing granular formulations against the competitor inoculant D liquid formulation on lentil.

Treatments: a) AGTIV® PULSES • Granular applied at 5 lb/ac*;
b) Competitor inoculant A granular applied at 3.6 lb/ac*;
c) Competitor inoculant B granular applied at 3.6 lb/ac*;
d) Competitor inoculant C granular applied at 3.6 lb/ac*;
e) Competitor inoculant D liquid applied at 76 ml/bu*;
f) Competitor inoculant D liquid applied at 76 ml/bu + Competitor inoculant B granular applied at 1.8 lb/ac*.

* Products applied according to manufacturer's recommended rate.

Experimental design: Complete randomized design (CRD) with a minimum of two treatment replicates. See field layout.

Seeding details: Seeded on May 9, using the growers' existing machinery.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: In-season herbicide, fungicide, and insecticide, applications were all registered practices and made in accordance with product labels.

Harvesting: August 31, 2015, using the growers' existing machinery. Harvest data was scaled with weigh wagons then recorded.

Month	Precipitation (mm)
May	0.8
June	1.43
July	2.31
TOTAL	4.54

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® PULSES • Granular (dual inoculant)	18.4	1237
Competitor inoculant A	13.4	901
Competitor inoculant B	11.4	767
Competitor inoculant C	11.8	794
Competitor inoculant D	11.3	760
Competitor inoculant D + B	11.1	747

Field layout





PEA

AVERAGE YIELD INCREASE

AGTIV
THRIVE

3.5 bu/ac
6.1%

235 kg/ha
28 sites over 13 years
Canada



Pea split field with AGTIV® THRIVE™ PEA & LENTIL vs competitor inoculant.
Enhanced plant growth and health,
and sooner row closure in AGTIV® pea fields, on the right.



AGTIV® pea plants have a better developed root system
with more branching, which leads to increased plant health and growth.



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*:

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

*Products applied according to manufacturers recommended rate.

Experimental design:

65 replicated plots per treatment in randomized complete block design:

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

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

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

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

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

► PLOT TRIAL

Research partner:	Olds College Centre for Innovation
Research site:	Olds, AB
Treatments*:	a) Untreated check; b) AGTIV® THRIVE™ PEA & LENTIL; c) Competitor inoculant D.
	*Products applied according to manufacturers recommended rate.
Experimental design:	Randomized Complete Block (RCB), 8 repetitions, 12 m ² plots
Variety:	CDC Spectrum
Previous crop:	Barley (hay)
Seeding details:	Seeded on May 28 with a plot drilling machine at a rate of 88 plants/m ² in a loam soil (pH: 7.2, OM: 7.3%). Emergence on June 4.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	12-51-0 (25 kg/ha): May 28
Pesticides:	<ul style="list-style-type: none">Viper ADV (0.404 l/ac): At the 4th internode stageUAN (0.81 l/ac): At the 4th internode stage

Harvesting:	September 9, 2024												
	<table><tr><th>Month</th><th>Precipitation (mm)</th></tr><tr><td>May</td><td>69</td></tr><tr><td>June</td><td>72.8</td></tr><tr><td>July</td><td>21</td></tr><tr><td>August</td><td>70.8</td></tr><tr><td>TOTAL</td><td>233.6</td></tr></table>	Month	Precipitation (mm)	May	69	June	72.8	July	21	August	70.8	TOTAL	233.6
Month	Precipitation (mm)												
May	69												
June	72.8												
July	21												
August	70.8												
TOTAL	233.6												

Table 1. Summary of yields per treatment

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

EFFICACY REPORT
2023 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partners: New Era Ag Technologies

Research sites: Swan River, MB

Treatments: a) Untreated check;
b) AGTIV® THRIVE™ 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™ PEA & LENTIL	57.2	3.6
Competitor inoculant B	58.4	4.8



EFFICACY REPORT
2022 – MYCORRHIZAL & RHIZOBIAL INOCULANT



► PLOT TRIAL

Research partner: Integrated Crop Management Services

Research site: Josephsburg, AB

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

*Products applied according to manufacturers' recommended rate.

Experimental design: Complete Randomized Block Design, 8 repetitions, 15 m² plots.

Variety: Stricker

Previous crop: Fallow

Seeding details: Seeded on June 20, with a cone seeder at a rate of 160 kg/ha in a loam soil (pH: 5.7, OM: 8%).
Emergence on July 3.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: NPKS 80-30-20-20 kg/ha: pre seeding

Pesticides: • Merge: June 1
• Odyssey: June 1
• Roundup WeatherMax: June 1

Harvesting: September 2022

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Protein content (%)
Untreated check	44.1	-	21.3
AGTIV® THRIVE™ PEA & LENTIL	45.4	1.3	22.2
Competitor inoculant B	46.6	2.5	20.9

Month	Precipitation (mm)
June	109.3
July	35
August	34.4
September	10.6
TOTAL	189.3

EFFICACY REPORT
2022 – MYCORRHIZAL & RHIZOBIAL INOCULANT



► PLOT TRIAL

Research partners: Integrated Crop Management Services

Research sites: Saskatoon, SK

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

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 8 repetitions, 15 m² plots.

Variety: ACC Ardill

Previous crop: Wheat

Seeding details: Seeded on May 26, with a cone seeder at a rate of 225 kg/ha in a clay soil (pH: 8, OM: 8.8%).
Emergence on June 15.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Protein content (%)
Untreated check	34.8	-	17.5
AGTIV® THRIVE™ PEA & LENTIL	36.4	1.6	18.0
Competitor inoculant B	35.8	1.0	17.1

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 80-20-10-20 kg/ha NPKS pre seeding + 28% Urea Ammonium Nitrate on July 4

Pesticides: • Viper ADV: July 4
• Reglone Ion: August 31

Harvesting: September 6, 2022

Month	Precipitation (mm)
May	25.8
June	38.0
July	46.5
August	25.6
TOTAL	135.9

EFFICACY REPORT

2022 – MYCORRHIZAL & RHIZOBIAL INOCULANT



► PLOT & STRIP TRIALS

Research partner: Ag-Quest inc.

Research site: Saskatoon, SK

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

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 6 repetitions, 8.2 m² plots.

Variety: CDC Spectrum

Previous crop: Oats

Seeding details: Seeded on May 27, 2022, with a cone seeder and a techno till drill opener at a rate of 160 kg/ha in a loam soil (pH: 5.8, OM: 3.5%).
Emergence on June 3.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	27.2	-
AGTIV® THRIVE™ PEA & LENTIL	30.7	3.5
Competitor inoculant B	28.8	1.6

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 11-52-0 side banded (72 kg/ha)

Pesticides:

- Aim EC: May 11
- Roundup WeatherMax: May 11
- Centurion: June 8
- Basagran Forté: June 21, July 4 & 12
- Assure II: June 21, July 4 & 12
- Matador herbicide: August 6
- Reglone Ion: August 16

Harvesting: August 24, 2022

Month	Precipitation (mm)
May	27.3
June	37.1
July	41.3
August	15.8
TOTAL	121.5

► PLOT TRIAL

Research partner: New Era Ag Research

Research site: Swan River, MB

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

Experimental design: Complete Randomized Block Design, 6 repetitions, 15 m² plots.

Variety: Inca

Previous crop: Canola

Seeding details: Seeded on May 24, with a cone seeder at a rate of 286 kg/ha in a clay loam soil (pH: 6.5, OM: 5.3%).
Emergence on June 3.

*Products applied according to manufacturers recommended rate.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: MAP 11-52-0 on May 25 (47 kg/ha)

Pesticides:

- Coragen: June 9
- Pounce: June 9
- Viper ADV: June 22
- Priaxor: July 18
- Guardsman : August 25

Harvesting: August 31, 2022

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

Table 1. Summary of yields per treatment

Treatment	Yield ¹ (bu/ac)	Yield increase (bu/ac)
Untreated check	85.3 ^b	-
AGTIV® THRIVE™ PEA & LENTIL	91.5 ^a	6.2
Competitor inoculant B	87.1 ^b	1.8

¹ Yields with same letter are not statistically different according to a Tukey HSD test (p≤0.1).

EFFICACY REPORT
2021 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Integrated Crop Management Services

Research site: Portage la Prairie, MB

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

*Products applied according to manufacturers recommended rate.

Experimental design: Complete Randomized Block Design, 6 repetitions, 24.4 m² plots.

Variety: Carver

Previous crop: Wheat

Seeding details: Seeded on June 3, with a cone seeder at a rate of 200 kg/ha.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Protein content (%)
Untreated check	41.6	-	17.8
AGTIV® PULSES • Granular	45.2	3.6	18.4
Competitor inoculant B	41.3	-	17.8

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: • Viper ADV: June 25
• Basagran Forte: July 14
• Assure II: July 14
• Cygon: July 27

Harvesting: September 1, 2021

Month	Precipitation (mm)
June	90.0
July	78.4
August	68.3
TOTAL	236.7

► PLOT TRIAL

Research partner:	Integrated Crop Management Services
Research site:	Saskatoon, SK
Treatments:	a) ALPINE G22™ Liquid*; b) ALPINE G22™ and AGTIV® COMBO • Liquid for PULSES*; c) ALPINE G22™ and Competitor inoculant A*; d) ALPINE G22™ and Competitor inoculant D*.
	*Products applied according to manufacturers recommended rate.
Experimental design:	6 replicated plots per treatment in randomized complete block design.
Variety:	AAC Ardill
Previous crop:	Wheat
Seeding details:	Seeded with a cone seeder June 1 at 201 lb/ac with a 15.2 cm row spacing. Products were applied in-furrow.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
ALPINE G22™ Liquid	56.0	3766
ALPINE G22™ and AGTIV® COMBO • Liquid for PULSES	65.0	4371
ALPINE G22™ and Competitor inoculant A	52.3	3517
ALPINE G22™ and Competitor inoculant D	63.2	4250

OPERATIONAL NOTES AND RAIN FALL

Fertilisation:	Urea 28% (0.8 lb/ac): July 12
Pesticides:	• Viper: July 12 • Centurion: July 29 • Matador: July 8 and 13

Month	Precipitation (mm)
June	84.8
July	67.6
August	20.3
September	39.5
TOTAL	212.2

Harvesting:	Combined with a Small Plot Combine on October 11, 2019.
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EFFICACY REPORT
2017 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► STRIP TRIAL

Research partner: Down to Earth + PAMI

Research site: Saskatoon, SK

Treatments: a) AGTIV® PULSES • Granular applied at 5.0 lb/ac + Taurus Advanced Acre™* (TAA) + fungicide application;
b) AGTIV® RHIZO • Granular for PULSES in granular form applied at 4.0 lb/ac + Designed Fertility Program**.

Experimental design: 2 replicated strips for a total of 610 ft² per treatment.

Variety: Meadow

Previous crop: Canola / oats split

Seeding details: Seeded May 20, at 3 bu/ac at 10 in row spacing using Seed Master plot Drill by Down to Earth.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® PULSES • Granular (dual inoculant) + TAA* + Fungicide	48.1	3235
AGTIV® RHIZO • Granular for PULSES (single inoculant) + Designed Fertility Program**	35.8	2408

OPERATIONAL NOTES AND RAIN FALL

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

Month	Precipitation (mm)
TOTAL	100.4

Pesticides: • Viper (400 ml/ac): 5 node Stage
• UAN (81 ml/ac): 5 node Stage

Harvesting: Combined on August 25, with a Wintersteiger and weighed & moisture averaged by PAMI.

* The Taurus Advanced Acre™: Using the Designed Fertility Program with the addition of key Taurus solutions.
** Designed Fertility Program: a calculated fertility program based on soil tests and targeted yield. Target yield for Peas was 60 bu/ac

► PLOT TRIAL

Research partner: Wheatland Conservation Area

Research site: Swift Current, SK

Treatments: a) AGTIV® PULSES • Granular applied at 5 lb/ac*;
b) AGTIV® RHIZO • Granular for PULSES applied at 4 lb/ac*;
c) Competitor inoculant A applied at 3.6 lb/ac*;
d) Competitor inoculant B applied at 3.6 lb/ac*;
e) Competitor inoculant C applied at 4.0 lb/ac*;
f) Competitor inoculant E applied at 5.0 lb/ac*.

*Products applied according to manufacturers recommended rate.

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

Variety: Amarillo, seeded at 200 lb/ac.

Previous crop: Canola

Seeding details: Seeded May 24, at 9 in row spacing using Fabro plot drill.
Preseed burnoff with Clean Start at 1 l/ac and Aim at 30 ml/ac.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: 98 lb/ac of 11-52-0 sidebanded

Pesticides: • Viper ADV (400 ml/ac)
• Poast Ultra (190 ml/ac)
• UAN (810 ml/ac)

Harvesting: Combined on August 17, with Wintersteiger plot combine.

Month	Precipitation (mm)
May	32.1
June	35
July	4
August	28
September	3
TOTAL	102.1

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® PULSES • Granular (dual inoculant)	14.0	942
AGTIV® RHIZO • Granular for PULSES (single inoculant)	13.1	881
Competitor inoculant A	12.7	854
Competitor inoculant B	12.4	834
Competitor inoculant C	13.2	888
Competitor inoculant E	12.3	827

EFFICACY REPORT
2015 – MYCORRHIZAL & RHIZOBIAL INOCULANT

► PLOT TRIAL

Research partner: Integrated Crop Management Services

Research site: Fort Saskatchewan, AB

Treatments: a) AGTIV® PULSES • Granular applied at 5 lb/ac*;
b) Competitor inoculant A applied at 3.3 lb/ac*;
c) Competitor inoculant B applied at 3.3 lb/ac*.

*Products applied according to manufacturers recommended rate.

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

Variety: Meadows

Previous crop: Canola

Seeding details: Seeded on May 21, at 15.2 cm row spacing.

OPERATIONAL NOTES AND RAIN FALL

Fertilisation: None

Pesticides: In season maintenance:
• Odyssey (17 g/ac – 35%)
• Equinox (67 ml/ac)
• Edge (0.5%)

Harvesting: Combined with Wintersteiger Elite plot combine on Sept 25, 2015.

Month	Precipitation (mm)
May	37.3
June	59.7
July	108.6
August	10.3
September	71.1
TOTAL	287

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® PULSES • Granular (dual inoculant)	88.6	5958
Competitor inoculant A	86.2	5797
Competitor inoculant B	79.5	5347

Table 2. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield (kg/ha)
AGTIV® PULSES • Granular (dual inoculant)	88.6	5958
Competitor inoculant A	86.2	5797
Competitor inoculant B ¹	85.8	5770

¹ One replication from the competitor inoculant B treatment yielded very low and has a negative impact on the treatment average. The data below represents the average of the competitor inoculant B treatment without the very low yielding rep for a total of four reps for the competitor inoculant B average yield.

EFFICACY REPORT 2025

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