



# AGTIV<sup>®</sup>

**EFFICACY REPORT 2024**

**CANOLA & CEREALS**





# CANOLA

AVERAGE YIELD INCREASE

**AGTIV**  
**IGNITE**

**2.4** bu/ac  
**6.5%**

135 kg/ha  
32 sites over 6 years  
Canada



► 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
<b>Total</b>	<b>32 sites</b>	<b>37.0<sup>a</sup></b>	<b>39.4<sup>b</sup></b>	<b>2.4 bu/ac *</b>

\*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
<b>Total</b>	<b>19 sites</b>	<b>37.8<sup>a</sup></b>	<b>38.7<sup>b</sup></b>	<b>0.9%**</b>

\*\* 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 <sup>®</sup> 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 <sup>®</sup> 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 <sup>®</sup> 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 <sup>®</sup> 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 <sup>®</sup> 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 <sup>®</sup> 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 <sup>®</sup> 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 <sup>®</sup> 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

► 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 m<sup>2</sup> 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
<b>TOTAL</b>	<b>252.6</b>

# 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 m<sup>2</sup> plots.

**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

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

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



# 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 m<sup>2</sup> plots.

**Variety:** InVigor L343PC treated with 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.

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

### 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
<b>TOTAL</b>	<b>308.9</b>



# 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, 9.0m<sup>2</sup> plots.

**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%)

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

## 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
<b>TOTAL</b>	<b>177.4</b>

# 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 m<sup>2</sup> 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
<b>TOTAL</b>	<b>112.7</b>

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 TRIAL

**Research partner:** Integrated Crop Management Services

**Research site:** Saskatoon, SK

**Treatments:** a) Untreated check;  
b) AGTIV<sup>®</sup> IGNITE<sup>™</sup> L\*.

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 30 m<sup>2</sup> plots.

**Variety:** PIONEER P509-L treated with Lumiderm, LumiGen and Helix vibrance.

**Previous crop:** Wheat

**Seeding details:** Seeded on May 26, with a cone seeder at a rate of 7 kg/ha in a clay soil (pH: 8.0, OM: 8.8%).  
Emergence on June 21.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	19.6	-	36.6
AGTIV <sup>®</sup> IGNITE <sup>™</sup> L	21.0	1.4	36.3

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 80-30-10-20 kg/ha: prior to seeding

**Pesticides:**

- Liberty 150: July 4
- Decis 5EC: August 18
- Reglone Ion: September 6

**Harvesting:** September 16, 2022

Month	Precipitation (mm)
May	25.8
June	38.0
July	46.5
August	25.6
September	6.8
<b>TOTAL</b>	<b>142.7</b>

► PLOT TRIAL

**Research partner:** Integrated Crop Management Services

**Research site:** Portage la Prairie, MB

**Treatments:** a) Untreated check;  
b) AGTIV<sup>®</sup> IGNITE<sup>™</sup> L\*.

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 30 m<sup>2</sup> plots.

**Variety:** DEKALB 75-65 RR treated with Prosper Evergol

**Previous crop:** Carrots

**Seeding details:** Seeded on June 17, with a cone planter at a rate of 8.2 kg/ha in a clay soil (pH: 7.7, OM: 6.9%).  
Emergence on June 23.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	29.3	-	30.6
AGTIV <sup>®</sup> IGNITE <sup>™</sup> L	32.8	3.5	35.2

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** None

**Pesticides:**

- Roundup WeatherMax: June 24 and July 14
- Sevin XLR: June 24

**Harvesting:** September 26, 2022

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

► PLOT TRIAL

**Research partner:** Ag-Quest Inc.

**Research site:** Taber, AB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 30 m<sup>2</sup> plots.

**Variety:** DEKALB DKTF96 SC treated with Buteo, Prosper EverGol and Fortenza.

**Previous crop:** Rye

**Seeding details:** Seeded on May 24, with a cone seeder at a rate of 8 kg/ha in a loam soil (pH: 7.8, OM: 2.6%).  
Emergence on June 6.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	28.8	-	32.1
AGTIV® IGNITE™ L	32.7	3.9	32.9

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 0-58-0-17 kg/ha: May 16

**Pesticides:**

- Roundup Transorb: May 18, June 9, 17 & 29
- Decis: June 22, July 6 & 15
- Sevin XLR Plus: June 22, July 6 & 15

**Harvesting:** August 31, 2022

Month	Precipitation (mm)
May	55.1
June	78.2
July	204.3*
August	89.3*
<b>TOTAL</b>	<b>426.9</b>

\* Plots were irrigated during those months

► 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:** Complete Randomized Block Design, 6 repetitions, 34 m<sup>2</sup> plots.

**Variety:** In Vigor L233P treated with Lumiderm

**Previous crop:** Rye

**Seeding details:** Seeded on June 5, with a cone seeder at a rate of 5.5 kg/ha in a sandy loam soil (pH: 8.3, OM: 2.2%).  
Emergence on June 10.

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 137-36-22-28 kg/ha: prior to seeding

**Pesticides:**

- Liberty: June 17
- AMIGO: July 1
- Centurion: July 1
- Coragen: July 1
- Reglone Ion: September 8

**Harvesting:** September 13, 2022

Month	Precipitation (mm)
May	131.0
June	65.6
July	92.6
August	57.6
September	30.8
<b>TOTAL</b>	<b>377.6</b>

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	46.1	-	37.7
AGTIV® IGNITE™ L	48.0	1.9	37.3

► PLOT TRIAL

**Research partner:** Wellington Agricultural Research

**Research site:** Alma, ON

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 10 m<sup>2</sup> plots.

**Variety:** In Vigor L233P treated with Prosper Evergol

**Previous crop:** Soybean

**Seeding details:** Seeded on May 30, with a cone seeder at a rate of 5.5 kg/ha in a loam soil (pH: 7.5, OM: 3.7%).  
Emergence on June 6.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	20.0	-	36.3
AGTIV® IGNITE™ L	21.4	1.4	36.9

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 160-20-0 kg/ha: May 10

**Pesticides:**

- Liberty: June 21
- Matador: June 21

**Harvesting:** September 17, 2022

Month	Precipitation (mm)
May	76.4
June	46.2
July	29.8
August	69.6
<b>TOTAL</b>	<b>222.0</b>

► PLOT TRIAL

**Research partner:** South East Research Farm

**Research site:** Redvers, SK

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 12 m<sup>2</sup> plots.

**Variety:** InVigor L340 PC treated with Vercoras & Poncho.

**Previous crop:** Pea

**Seeding details:** Seeded on June 1, with a cone seeder at a rate of 9 kg/ha in a loam soil (pH: 7.6, OM: 4.2%).

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	32.2	-	36.6
AGTIV® IGNITE™ L	34.1	1.9	36.5

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 100-25-0-6 (kg/ha): at seeding

**Pesticides:**

- Roundup: June 6
- Voliam: June 23
- Liberty: June 23

**Harvesting:** September 16, 2022

Month	Precipitation (mm)
May	121.0
June	75.0
July	259.0
August	25.2
September	15.0
<b>TOTAL</b>	<b>495.2</b>



► PLOT TRIAL

**Research partner:** New Era Ag Research

**Research site:** Swan River, MB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 30 m<sup>2</sup> plots.

**Variety:** InVigor LL 234 PC treated with Lumiderm & Helix Vibrance.

**Previous crop:** Carrots

**Seeding details:** Seeded on June 5, with a cone seeder at a rate of 6 kg/ha in a clay loam soil (pH: 7.1, OM: 6.2%).

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 100-25-0-6 (kg/ha): at seeding

**Pesticides:**

- ARROW ALL IN: June 19 & 28
- Pounce: June 23 & 28
- Cotegra: July 22

**Harvesting:** September 28, 2022

Month	Precipitation (mm)
May	114.0
June	59.4
July	40.6
August	41.8
September	34.7
<b>TOTAL</b>	<b>290.5</b>

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	60.0	-	30.6
AGTIV® IGNITE™ L	62.2	2.2	35.2

► PLOT TRIAL

**Research partner:** Integrated Crop Management Services

**Research site:** Josephburg, AB

**Treatments:** a) Untreated check;  
b) AGTIV<sup>®</sup> IGNITE<sup>™</sup> L\*.

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 8 repetitions, 24.4 m<sup>2</sup> plots.

**Variety:** RR Canola 6086 CR

**Previous crop:** Wheat

**Seeding details:** Seeded on May 31, with a cone drill at a rate of 7 kg/ha.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	23.9	-	39.1
AGTIV <sup>®</sup> IGNITE <sup>™</sup> L	25	1.1	40.2

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** N-P-K 81-41-0 lb/ac

**Pesticides:**

- Round up WeatherMax: June 12
- Heat LQ: September 20

**Harvesting:** Combined on October 7, 2021.

Month	Precipitation (mm)
June	85.3
July	112.1
August	52.5
September	53.7
<b>TOTAL</b>	<b>303.6</b>

► PLOT TRIALS

**Research partner:** New Era Ag Technologies

**Research site:** Swan River, MB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 8 repetitions, 30 m<sup>2</sup> plots.

**Variety:** InVigor LL234PC

**Previous crop:** Wheat

**Seeding details:** Seeded on May 18, with a cone planter at a rate of 4 kg/ha.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	46.9	-	37.8
AGTIV® IGNITE™ L	48.2	1.3	37.8

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:**

- Urea (46-0-0): May 28
- MAP (11-52-0): May 28

**Pesticides:**

- Edge: May 7
- RT 540: May 27
- Pounce: June 13
- Arrow: June 13
- Arrow all-in-one: June 18
- Liberty: June 18
- Guardsman: August 26

**Harvesting:** Combined on September 11, 2021.

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

► PLOT TRIAL

**Research partner:** Integrated Crop Management Services

**Research site:** Portage la Prairie, MB

**Treatments:** a) Untreated check;  
b) AGTIV<sup>®</sup> IGNITE<sup>™</sup> L\*.

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 8 repetitions, 24.4 m<sup>2</sup> plots.

**Variety:** RR Canola CS2100

**Previous crop:** Wheat

**Seeding details:** Seeded on June 2, with a cone drill at a rate of 6 kg/ha.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%) <sup>1</sup>
Untreated check	36.3	-	36.8 <sup>ab</sup>
AGTIV <sup>®</sup> IGNITE <sup>™</sup> L	38.9	2.6	37.1 <sup>a</sup>

<sup>1</sup> Oil content with the same letter are not statistically different according to a Tukey HSD test (p≤0.05).

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** None

**Pesticides:**

- Pounce: June 14, July 7 and August 9
- Roundup Transorb: June 19 and July 9
- Proline 480 SC: July 8

**Harvesting:** Combined on September 10, 2021.

Month	Precipitation (mm)
June	90.0
July	78.4
August	68.3
<b>TOTAL</b>	<b>236.7</b>

► PLOT TRIAL

**Research partner:** Integrated Crop Management Services

**Research site:** Saskatoon, SK

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 8 repetitions, 24.4 m<sup>2</sup> plots.

**Variety:** LL canola P501L

**Previous crop:** Wheat

**Seeding details:** Seeded on May 20, with a cone drill at a rate of 7 kg/ha.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	10.3	-	41.8
AGTIV® IGNITE™ L	12.5	2.2	42.3

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 80-40-10-20: preseeding.

**Pesticides:**

- Centurion: June 21
- Liberty: June 21

**Harvesting:** Combined on August 26, 2021.

Month	Precipitation (mm)
May	35.5
June	41.7
July	17.7
August	28.9
<b>TOTAL</b>	<b>123.8</b>

► PLOT TRIAL

**Research partner:** Ag-Quest inc.

**Research site:** Elm Creek, MB

**Treatments:** a) Untreated check;  
b) AGTIV<sup>®</sup> IGNITE<sup>™</sup> L\*.

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 8 repetitions, 33 m<sup>2</sup> plots.

**Variety:** DEKALB DKTF 96 SC

**Previous crop:** Soybean

**Seeding details:** Seeded on May 18, with a cone drill at a rate of 6 kg/ha.

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** Blend of Urea, MAP, MOP and AMS 94-79-90-11: at seeding  
Foliar copper: June 22

**Pesticides:**

- Roundup WeatherMax: May 19, June 10 and 24
- Pounce: June 4, 16 and August 13
- Coragen: June 16
- Reglone: August 31

**Harvesting:** Combined on September 7, 2021.

Month	Precipitation (mm)
May	61.9
June	101.5
July	25.4
August	103.3
<b>TOTAL</b>	<b>292.1</b>

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	36.3	-	35.1
AGTIV <sup>®</sup> IGNITE <sup>™</sup> L	37.4	1.1	37.1

► PLOT TRIAL

**Research partner:** Ag-Quest inc.

**Research site:** Taber, AB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 8 repetitions, 25.2 m<sup>2</sup> plots.

**Variety:** Pioneer 45CS40

**Previous crop:** Wheat

**Seeding details:** Seeded on June 11, with a cone planter at a rate of 6.41 kg/ha.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	37.3	-
AGTIV® IGNITE™ L	38.5	1.2

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 11-52-0 and 20-0-0-24 (116.3 kg/ha and 56.3 kg/ha): June 11

**Pesticides:**

- Roundup WeatherMax: May 24
- Decis: July 17
- Weed Whacker: August 20

**Harvesting:** Combined on September 23, 2020.

Month	Precipitation (mm)
June	80.8
July	23.1
August	18.8
September	47.3
<b>TOTAL</b>	<b>170.0</b>

► PLOT TRIAL

**Research partner:** New Era Ag Technologies

**Research site:** Swan River, MB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 8 repetitions, 30 m<sup>2</sup> plots.

**Variety:** Pioneer 45CS40

**Previous crop:** Soybean

**Seeding details:** Seeded on May 21, with a cone planter at a rate of 6 kg/ha.

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** NH<sub>3</sub>, MAP, potash and AMS (163-30-35-60): fall 2019

**Pesticides:**

- Pounce: June 5 and 16
- Roundup: June 23
- Clethodim: July 10
- Proline: July 17
- Guardsman: September 5

**Harvesting:** Combined on September 22, 2020.

Month	Precipitation (mm)
May	12.0
June	62.8
July	122.7
August	43.2
September	9.9
<b>TOTAL</b>	<b>250.6</b>

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%) <sup>1</sup>
Untreated check	61.2	-	38.7 <sup>a</sup>
AGTIV® IGNITE™ L	64	2.8	40.5 <sup>b</sup>

<sup>1</sup> Oil content with the same letter are not statistically different according to a Tukey HSD test (p≤0.05).



► PLOT TRIAL

**Research partner:** Integrated Crop Management Services

**Research site:** Moon Lake, SK

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 8 repetitions, 30 m<sup>2</sup> plots.

**Variety:** Pioneer 45CS40

**Previous crop:** Field pea

**Seeding details:** Seeded on May 19, with a cone planter at a rate of 7 kg/ha.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%) <sup>1</sup>
Untreated check	16.3	-	41.6 <sup>a</sup>
AGTIV® IGNITE™ L	18.2	1.9	43.6 <sup>b</sup>

<sup>1</sup> Oil content with the same letter are not statistically different according to a Tukey HSD test (p<0.05).

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** Blend of 70-30-0-20: preseeding with the tillage

**Pesticides:** None

**Harvesting:** Combined on August 31, 2020.

Month	Precipitation (mm)
May	42.1
June	106.9
July	52.1
August	16.2
<b>TOTAL</b>	<b>217.3</b>

► PLOT TRIAL

**Research partner:** Integrated Crop Management Services

**Research site:** Josephburg, AB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 8 repetitions, 30 m<sup>2</sup> plots.

**Variety:** Pioneer 45CS40

**Previous crop:** Barley

**Seeding details:** Seeded on May 25, with a cone planter at a rate of 7 kg/ha.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	47.2	-	34.7
AGTIV® IGNITE™ L	49.5	2.3	36.3

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** Blend of 51-22-26: preseeding with the tillage

**Pesticides:**

- Lontrel: June 12
- Roundup WeatherMax: June 12

**Harvesting:** Combined on October 6, 2020.

Month	Precipitation (mm)
May	93.5
June	121.4
July	121.9
August	68.4
September	4.9
<b>TOTAL</b>	<b>410.1</b>

► PLOT TRIAL

**Research partner:** Integrated Crop Management Services

**Research site:** Saskatoon, SK

**Treatments:** a) Untreated check;  
b) AGTIV<sup>®</sup> IGNITE<sup>™</sup> L\*.

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 30 m<sup>2</sup> plots.

**Variety:** In Vigor L252

**Previous crop:** Wheat

**Seeding details:** Seeded on June 7, with a drill seeder at a rate of 7 kg/ha.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	38.8	-
AGTIV <sup>®</sup> IGNITE <sup>™</sup> L	41.8	3

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** Blend of 70-30-10-20: preseeding with the tillage

**Pesticides:**

- Centurion: July 12
- Liberty 150: July 12
- Matador: September 9

**Harvesting:** Combined on October 21, 2019.

Month	Precipitation (mm)
June	84.8
July	67.6
August	20.3
September	39.5
October	3.0
<b>TOTAL</b>	<b>215.2</b>

► PLOT TRIAL

**Research partner:** Integrated Crop Management Services

**Research site:** Josephburg, AB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 30 m<sup>2</sup> plots.

**Variety:** Dekalb 75-42BL

**Previous crop:** Barley

**Seeding details:** Seeded on June 1, with a cone planter at a rate of 7 kg/ha.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	46.8	-
AGTIV® IGNITE™ L	53.2	6.4

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** Blend of 31-0-10-8: : preseeding with the tillage

**Pesticides:** Roundup WeatherMax: June 26

**Harvesting:** Combined on October 4, 2019.

Month	Precipitation (mm)
May	0
June	0
July	153.7
August	31
September	43.7
<b>TOTAL</b>	<b>228.4</b>

► PLOT TRIAL

**Research partner:** New Era Ag Technologies

**Research site:** Swan River, MB

**Treatments:** a) Untreated check;  
b) AGTIV<sup>®</sup> IGNITE<sup>™</sup> L\*.

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 30 m<sup>2</sup> plots.

**Variety:** InVigor L255PC

**Previous crop:** Canola stubble

**Seeding details:** Seeded on May 21, with a drill planter at a rate of 7 kg/ha.

Table 1. Summary of yields and oil content per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)	Oil content (%)
Untreated check	53.7	-	49.9
AGTIV <sup>®</sup> IGNITE <sup>™</sup> L	55.4	1.7	52.1

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 90-50-0-25: broadcast at seeding.

**Pesticides:**

- Avadex: May 3
- Liberty: June 6 and 27
- Pounce: June 6
- Arrow: June 11 and 27
- Proline: July 12
- Heat: September 6

**Harvesting:** Combined on September 22, 2019.

Month	Precipitation (mm)
May	25.4
June	26.1
July	59.3
August	51.8
September	48.7
<b>TOTAL</b>	<b>211.3</b>

► PLOT TRIAL

**Research partner:** Prairie Ag Research

**Research site:** Taber, AB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 16 m<sup>2</sup> plots.

**Variety:** Pioneer 45M35

**Previous crop:** Wheat

**Seeding details:** Seeded on May 27, with a drill planter at a rate of 5.6 kg/ha.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	25.4	-
AGTIV® IGNITE™ L	27.0	1.6

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** Broadcast of 29-37-0-30

**Pesticides:**

- Roundup WeatherMax: May 20 and July 3
- Pounce: July 3 and August 8

**Harvesting:** Combined on September 25, 2019.

Month	Precipitation (mm)
May	58.7
June	47.0
July	31.3
August	22.8
<b>TOTAL</b>	<b>159.8</b>

► PLOT TRIAL

**Research partner:** Wheatland Conservation Area

**Research site:** Swift Current, SK

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 9 m<sup>2</sup> plots.

**Variety:** In Vigor L233P

**Previous crop:** Wheat

**Seeding details:** Seeded on May 28, with a cone seeder at a rate of 6.7 kg/ha.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	25.0	-
AGTIV® IGNITE™ L	27.1	2.1

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** Broadcast of 29-37-0-30: May 27

**Pesticides:** Roundup WeatherMax: June 25

**Harvesting:** Combined on September 25, 2019.

Month	Precipitation (mm)
May	13.3
June	156.0
July	11.1
August	42.6
September	92.1
<b>TOTAL</b>	<b>315.1</b>

► PLOT TRIAL

**Research partner:** New Era Ag Technologies

**Research site:** Swan River, MB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete randomized block design, 8 repetitions, 15 m<sup>2</sup> plots.

**Variety:** In Vigor L140P

**Previous crop:** Canola stubble

**Seeding details:** Seeded on June 4, with a drill planter at a rate of 5.6 kg/ha.

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** Midrow band 20-58-5-8 and broadcast 125-0-35-25.

**Pesticides:** None

**Harvesting:** Combined on October 4, 2018.

Month	Precipitation (mm)
June	127.6
July	59.3
August	35.4
September	51.1
<b>TOTAL</b>	<b>273.4</b>

Table 1. Summary of yields per treatment

Treatment	Yield <sup>1</sup> (bu/ac)	Yield increase (bu/ac)
Untreated check	63.5 <sup>b</sup>	-
AGTIV® IGNITE™ L	68.0 <sup>a</sup>	4.5

<sup>1</sup> Yield mean with the same letter are not statistically different according to a Tukey HSD test (p≤0.05).





# CEREALS

AVERAGE YIELD INCREASE

**AGTIV<sup>®</sup>**  
**IGNITE**

**9.3%**

**DURUM WHEAT**

10 sites over 3 years  
Canada

**AGTIV<sup>®</sup>**  
**IGNITE**

**12.7%**

**SPRING WHEAT**

2 sites over 1 year  
Canada

**AGTIV<sup>®</sup>**  
**IGNITE**

**8.8%**

**BARLEY**

3 sites over 1 year  
Canada



# EFFICACY REPORT

## SUMMARY – SERENDIPITA ON SEED INOCULANT

### ► 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
<b>Total</b>	<b>10 sites</b>	<b>38.9<sup>a</sup></b>	<b>42.5<sup>b</sup></b>	<b>3.6 bu/ac *</b>

\* Yields with same letter are not statistically different according to a Tukey HSD test ( $p \leq 0.05$ ).

# 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 m<sup>2</sup> 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
<b>TOTAL</b>	<b>64.3</b>

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 m<sup>2</sup> 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
<b>TOTAL</b>	<b>78.1</b>	<b>291.1</b>

► PLOT TRIAL

**Research partner:** Prairie Ag Research

**Research site:** Lethbridge, AB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete randomized block design, 6 repetitions, 12 m<sup>2</sup> plots.

**Variety:** Grainland

**Previous crop:** Fallow

**Seeding details:** Seeded on May 23, with a cone seeder at a rate of 100 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  
• Infinity: June 30

**Harvesting:** September 14, 2022

Month	Precipitation (mm)
May	17.5
June	140.5 *
July	204.3 *
August	84.9 *
September	9.7
<b>TOTAL</b>	<b>456.9</b>

\* Plots were irrigated during those months.

Table 1. Summary of yields per treatment

Treatment	Yield <sup>1</sup> (bu/ac)	Yield increase (bu/ac)
Untreated check	50.2 <sup>b</sup>	-
AGTIV® IGNITE™ L	59.0 <sup>a</sup>	8.8

<sup>1</sup> Yield mean with the same letter are not statistically different according to a Tukey HSD test (p≤0.05).

► PLOT TRIAL

**Research partner:** Wheatland Conservation Area

**Research site:** Swift Current, SK

**Treatments:** a) Untreated check;  
b) AGTIV<sup>®</sup> IGNITE<sup>™</sup> L\*.

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete randomized block design, 8 repetitions, 17 m<sup>2</sup> plots.

**Variety:** Alloy

**Previous crop:** Wheat

**Seeding details:** Seeded on May 18, with a cone seeder at a rate of 123 kg/ha in a sandy loam soil (pH: 6.1, OM: 2.7%).

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 30-15-0-6 (374 kg/ha): sidebanded on June 8.

**Pesticides:**

- RT540: May 2
- Achieve: June 8

**Harvesting:** August 16, 2022

Month	Precipitation (mm)
May	51.2
June	37.7
July	90.4
August	7.5
<b>TOTAL</b>	<b>186.8</b>

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	54.0	-
AGTIV <sup>®</sup> IGNITE <sup>™</sup> L	55.8	1.8

► PLOT TRIAL

**Research partner:** Small Plot

**Research site:** Vulcan, AB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete randomized block design, 8 repetitions, 16 m<sup>2</sup> plots.

**Variety:** Spitfire

**Previous crop:** Rye

**Seeding details:** Seeded on May 16, with a plot drill machine at a rate of 130 kg/ha in a clay loam soil (pH: 7.6, OM: 3%).  
Emergence on May 28.

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	29.2	-
AGTIV® IGNITE™ L	31.0	1.8

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 60-15-15-6 kg/ha: sidebanded on May 16.

**Pesticides:**

- Epic: June 25
- Stellar XL: June 25
- ZIVATA: June 25

**Harvesting:** August 30, 2022

Month	Precipitation (mm)
May	9.8
June	136.8
July	86.0
August	18.1
<b>TOTAL</b>	<b>250.7</b>

► PLOT TRIAL

**Research partner:** Ag-Quest inc.

**Research site:** Vulcan, AB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete Randomized Block Design, 6 repetitions, 22.5 m<sup>2</sup> plots.

**Variety:** Strongfield

**Previous crop:** Rye

**Seeding details:** Seeded on May 17, 2022, with a cone seeder at a rate of 117 kg/ha in a sandy loam soil (pH: 7.8, OM: 2.6%). Emergence on May 20.

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	27.3	-
AGTIV® IGNITE™ L	31.8	4.5

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 5-20-5 kg/ha prior to seeding

**Pesticides:**

- Roundup Transorb: May 18
- Achieve liquid: June 19 and July 6
- Infinity: July 6

**Harvesting:** August 30, 2022

Month	Precipitation (mm)
May	16.1
June	78.2
July	204.3*
August	89.3*
<b>TOTAL</b>	<b>387.9</b>

\* Plots were irrigated during those months.



► PLOT TRIAL

**Research partner:** Prairie Ag Research

**Research site:** Lethbridge, AB

**Treatments:** a) Untreated check;  
b) AGTIV<sup>®</sup> IGNITE<sup>™</sup> L\*.

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete randomized block design, 8 repetitions, 12 m<sup>2</sup> plots.

**Variety:** Grainland

**Previous crop:** Barley

**Seeding details:** Seeded on May 31, with a cone seeder at a rate of 100 kg/ha in a clay loam soil (pH: 7.4, OM: 2.9%).  
Emergence on June 7.

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** None

**Pesticides:**

- Glyphosate: May 31
- Achieve: June 28
- Infinity: June 28
- Turbocharge: June 28

**Harvesting:** September 14, 2021

Month	Precipitation (mm)
May	33.1
June	76.5
July	70.3
August	35.6
<b>TOTAL</b>	<b>215.5</b>

Table 1. Summary of yields and protein per treatment

Treatment	Yield <sup>1</sup> (bu/ac)	Yield increase (bu/ac)	Protein (%)
Untreated check	66.7 <sup>b</sup>	-	19.2
AGTIV <sup>®</sup> IGNITE <sup>™</sup> L	73.3 <sup>a</sup>	6.6	20.3

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

► PLOT TRIAL

**Research partner:** Small Plot

**Research site:** Vulcan, AB

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete randomized block design, 8 repetitions, 32 m<sup>2</sup> plots.

**Variety:** Spitfire

**Previous crop:** Oats

**Seeding details:** Seeded on May 16, with a plot drill machine at a rate of 115 kg/ha in a loam soil (pH: 7.5, OM: 3%). Emergence on May 20.

Table 1. Summary of yields per treatment.

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	25.8	-
AGTIV® IGNITE™ L	28.8	3.0

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 70-20-20-20 kg/ha sidebanded at seeding.

**Pesticides:** ZIVATA: July 25

**Harvesting:** August 30, 2021

Month	Precipitation (mm)
May	167
June	109
July	152
August	163
<b>TOTAL</b>	<b>591</b>

► PLOT TRIAL

**Research partner:** Ag-Quest inc.  
**Research site:** Taber, AB  
**Treatments:** a) Untreated check;  
b) AGTIV® IGNITE™ L\*.

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete randomized block design, 8 repetitions, 22.5 m<sup>2</sup> plots.

**Variety:** Strongfield

**Previous crop:** Rye

**Seeding details:** Seeded on June 6, with a cone seeder at a rate of 130 kg/ha in a loam soil (pH: 7.8, OM: 2.2%).  
Emergence on June 20.

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** None

**Pesticides:**

- Achieve: July 2
- Infinity: July 2
- Axial Herbicide: July 16

**Harvesting:** September 3, 2021.

Month	Precipitation (mm)
May	24.8
June	89.9
July	78.5
August	53.7
<b>TOTAL</b>	<b>246.9</b>

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	39	-
AGTIV® IGNITE™ L	40.6	1.6

► PLOT TRIAL

**Research partner:** Wheatland Conservation Area

**Research site:** Swift Current, SK

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:** Complete randomized block design, 8 repetitions, 18 m<sup>2</sup> plots.

**Variety:** Transcend

**Previous crop:** Barley

**Seeding details:** Seeded on May 28, with a cone seeder at a rate of 130 kg/ha in a sandy loam soil (pH: 6.5, OM: 2.7%).  
 Emergence on June 11.

Table 1. Summary of yields per treatment

Treatment	Yield (bu/ac)	Yield increase (bu/ac)
Untreated check	11.8	-
AGTIV® IGNITE™ L	14.4	2.6

OPERATIONAL NOTES AND RAIN FALL

**Fertilisation:** 30-15-06-6 sidebanded at seeding (374 kg/ha)

**Pesticides:**

- Aim EC: May 4
- RT540: May 4
- Achieve: June 17
- Buctril: June 17

**Harvesting:** August 27, 2021

Month	Precipitation (mm)
May	44.1
June	74.5
July	51.9
August	43.2
<b>TOTAL</b>	<b>213.7</b>

# EFFICACY REPORT

## SUMMARY – SERENDIPITA INOCULANT

SPRING WHEAT 

**AGTIV**

**IGNITE**

### ► PLOT TRIALS

**Research partners:**

- Ag-Quest Inc.;
- New Era Technologies Inc.

**Research sites:**

- Manitoba;
- Saskatchewan.

**Treatments:**

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

\*Products applied according to manufacturers recommended rate.

**Experimental design:**

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

Table 1. Summary of yield trials for different sites

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

► 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 m<sup>2</sup> plots

**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
<b>TOTAL</b>	<b>221.8</b>

► 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<sup>2</sup> 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
<b>TOTAL</b>	<b>175.3</b>

# EFFICACY REPORT

## SUMMARY – SERENDIPITA INOCULANT

### ► PLOT & STRIP TRIALS

**Research partners:**

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

**Research sites:**

- Manitoba;
- Saskatchewan.

**Treatments:**

- a) Untreated check;
- b) AGTIV<sup>®</sup> IGNITE<sup>™</sup> 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 <sup>®</sup> IGNITE <sup>™</sup> 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
<b>Total</b>	<b>3 sites</b>	<b>61.4</b>	<b>66.8</b>	<b>5.4 bu/ac</b>



# 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 m<sup>2</sup> 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
<b>TOTAL</b>	<b>139.6</b>

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 m<sup>2</sup> 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.

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

### 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
<b>TOTAL</b>	<b>206.8</b>

# EFFICACY REPORT 2024

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