Agronomy

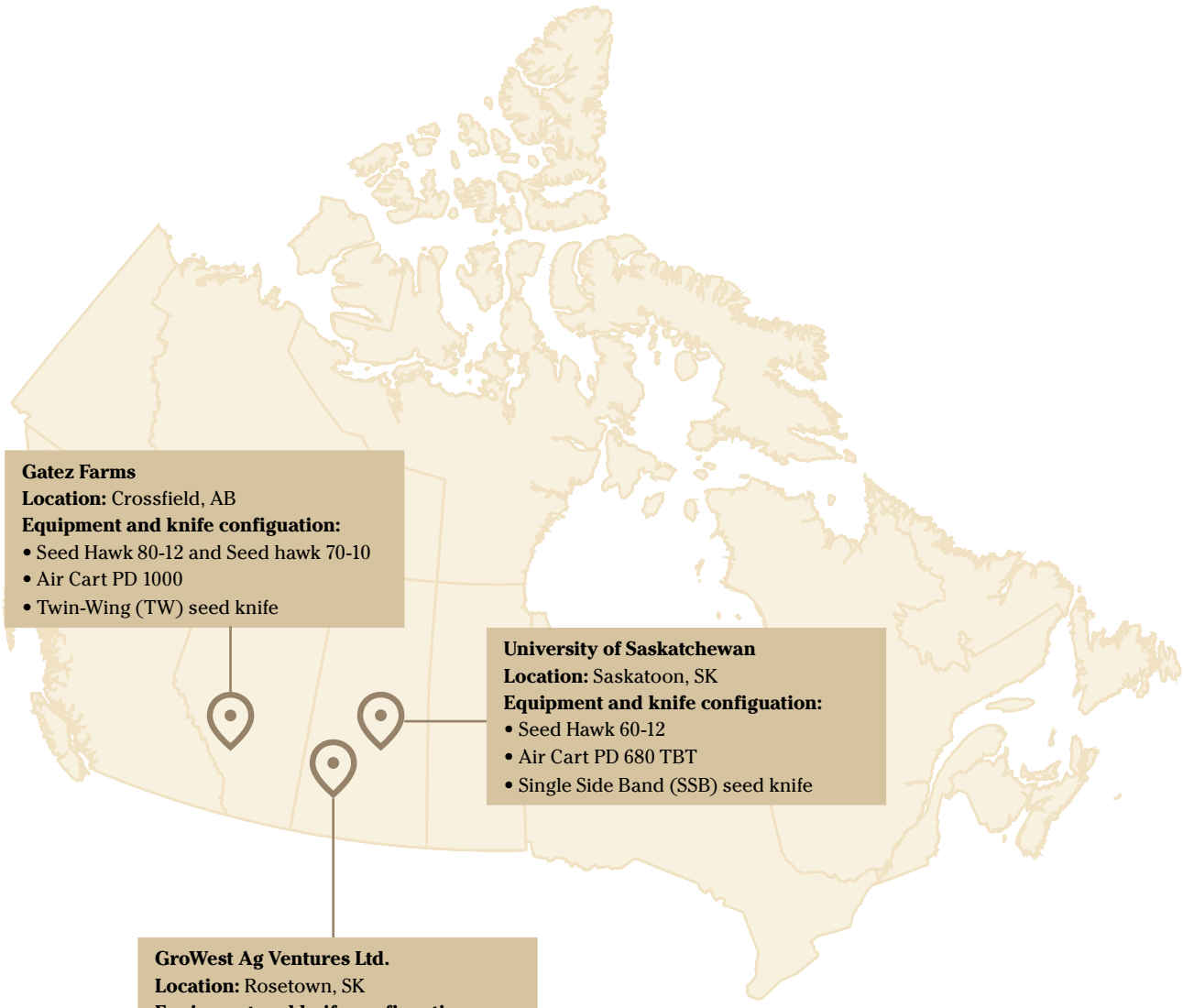
Trials 2025

Väderstad Agronomy Trials 2025

Väderstad's primary focus, from an agronomic perspective, is to deliver outstanding crop emergence and growth through the optimization of product placement.

Through precision product distribution with the Fenix III metering system to precision placement in the soil with the Seed Hawk opener system, the goal is to maximize crop growth potential in the conditions presented during the season.

The Väderstad agronomy trials in 2025 focused on optimization of seeding rates in various crops as well as comparison of crop performance with different row spacings using the Seed Hawk drill. Plant stand is a very important component of yield potential and determining ideal seeding rates during planting operations is a crucial step towards achieving greater return on investment and risk management on the farm.



Väderstad and GroWest Ag Ventures

Lentils seeding rate agronomy trial with Seed Hawk Air Seeders

GroWest Ag Ventures Ltd.
Location: Rosetown, SK
Equipment and knife configuation:
• Seed Hawk 80-12
• Air Cart PD 980
• Single Side Band (SSB) seed knife
Rates: 12 seeds/ft2 (47 lbs/ac), 18 seeds/ft2 (70 lbs/ac) and 24 seeds/ft2 (94 lbs/ac)

The trials were conducted by GroWest Ag Ventures Ltd. in conjunction with J and J Winny Holdings east of Rosetown SK. Lentils are characterized by reduced competitiveness against weeds and limited herbicide options which places increased importance on precision plant stand as a means of cultural weed control. Conversely, lentils are susceptible to disease infection in wet conditions. The ideal plant stand strikes a balance between being thick enough to shade weeds and prevent their growth, allowing moisture to escape and reduce disease development and avoiding interplant competition.

Trials seeding, May 6.

Early growth showing even plant spacing, May 28.

Lentils shading volunteer canola, Jul 2.

A dry start in May gave way to substantial rainfall through the rest of the season which facilitated excellent crop growth as well as weed development. The difference between seeding rates in terms of cultural weed control became apparent as the season continued.

Lentils 24 seeds/ft2 on left, 12 seeds/ft2 on right, Jul 30.

Lentils12 seeds/ft2 on left, 18 seeds/ft2 on right, Jul 30.

Results

Seeding Rate (seeds/ft2)	Seeding Rate (lbs/ac)	Spring Survivability (%)	Yield (bu/ac)
12	47	99.3	44.82
18	**70**	**94.8**	**53.23**
24	94	86.1	47.64

The results indicate that a seeding rate of 18 seeds/ft2 produces the ideal plant stand for the conditions seen in 2025 and a clear advantage over the other two rates. Precise metering and placement of seed at this rate provided the optimal plant stand to maximize yield potential.

Väderstad and Gatez Farms

Canola and Wheat row spacing agronomy trial with Seed Hawk Air Seeders

Gatez Farms
Location: Crossfield, AB
Equipment and knife configuation:
- Seed Hawk 80-12 and Seed Hawk 70-10
- Air Cart PD 1000
- Twing-Wing (TW) seed knife

Rates: Canola 7.7 and 7.6 seeds (F1 Field), 7.4 seeds/ft2 (P3 Field); Wheat 20 and 27 seeds/ft2

The Row Spacing Trials were a collaboration between Väderstad, Gatez Farms, Crop Intelligence and TLC Agronomics, focusing on crop performance using different row spacings with the Twin-Wing (TW) knife. Cultural weed control has taken on greater importance with increasing herbicide resistance and narrower row spacing to prevent weed growth is an option. The purpose of the trials is to determine crop performance using different row spacings in both canola and wheat as well as using different seeding rates in wheat. Crop Intelligence provided weather stations and soil sensors to measure moisture levels in one of the canola trials fields as well as the wheat trials field.

Trials seeding, May 12.

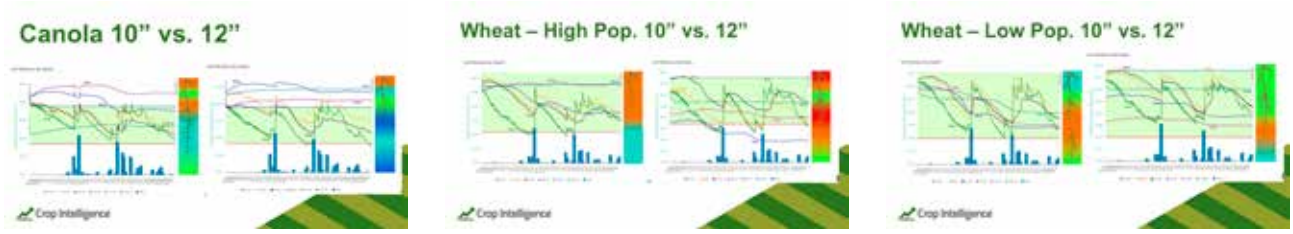
Crop Intelligence moisture sensors, June 3.

Conditions in the Crossfield area were dry to begin the crop year and persisted until mid-June when substantial rainfall took place. The month of July was characterized by high precipitation levels that produced excellent crop development through to harvest.

F1 canola trials and wheat trials, June 4.

Wheat trials 27 seeds/ft2 12" spacing on left, 20 seeds/ft2 10" spacing, July 4.

F1 Canola field, 12 inch on left, 10 inch on right, July 4.



Crop Intelligence moisture graphs comparing moisture usage.

Results

Canola Trials Data			
Field	**Row Spacing (in)**	**Spring Survivability (%)**	**Yield (bu/ac)**
F1	**12**	**70.1**	**76.5**
F1	10	82.3	75.1
P3	12	93.3	66.4
P3	10	90	64.6

Wheat Trials Data			
Row Spacing (in.)	**Seeding Rate (seeds/ft2)**	**Seeding Rate (lbs/ac)**	**Yield (bu/ac)**
12	20	77	82.6
12	27	104	80.2
10	**20**	**77**	**84.5**
10	27	104	82.7

The canola trials results indicate a yield advantage with 12" spacing, likely due to the increased space required for leafy, bushy canola plants to maximize potential. In the wheat trials the 10" spacing showed a greater yield response with the better canopy closure resulting from narrower row spacing. Additionally, the lower seeding rate showed a yield advantage by reducing inter-plant competition for resources.

Väderstad and University of Saskatchewn

Canola and Wheat seeding rate agronomy trial with Seed Hawk Air Seeders

University of Saskatchewan
Location: Saskatoon, SK
Equipment and knife configuation:
• Seed Hawk 60-12
• Air Cart PD 680 TBT
• Single Side Band (SSB) seed knife
Rates: 5, 7 and 9 seeds/ft2 (canola); 20, 27 and 35 seeds/ft2 (wheat)

The purpose of these trials is to examine the optimization of seeding rates in both wheat and canola using the Seed Hawk drill. Seed and fertilizer are substantial expenses on the farm every year and it is important to maximize crop growth using precision metering and placement to optimize plant stand as much as possible. This is accomplished through evenness of spacing between plants in the row and consistent product depth.

Trials seeding, May 13.

Dry conditions that persisted at the time of seeding gave way to substantial moisture beginning in June and lasting through much of the growing season. While the canola trials did not display noticeable difference in maturity through the different seeding rates, the lower seeding rates of the wheat trials took longer to mature with the formation of tillers throughout the early part of the season and especially once rainfall totals increased.

Wheat trials 20 seeds on left, 35 seeds on right, June 26.

Canola trials, July 18.

Wheat trials 27 seeds/ft2 on left, 20 seeds/ft2 on right, Aug 15.

Caption is U of S canola trials harvest, Sept 25.

Results

Canola Trials Data			
Seeding Rate (seeds/ft2)	**Seeding Rate (lbs/ac)**	**Spring Survivability (%)**	**Yield (bu/ac)**
5	**2**	**70.4**	**61.2**
7	2.8	68.5	60.4
9	3.5	61.8	60.4

Wheat Trials Data			
Seeding Rate (seeds/ft2)	**Seeding Rate (lbs/ac)**	**Wheat Heads per ft2**	**Yield (bu/ac)**
20	**68**	**57.2**	**60.7**
27	91.9	48.6	59.3
35	119.1	47.3	59.2

As indicated in the other trials in 2025, both the canola and wheat trials show a yield increase with the lower seeding rates. Even with robust soil moisture during the growing season, by using precision metering and soil placement both crops showed greater yield responses by reducing inter-plant competition.

Wrap-Up

The crop trials in 2025 achieved the goal of exploring different seeding rates and row spacings, examining their performance in the conditions experienced during the season. Through our agronomy trials program, Väderstad Seed Hawk continues to explore the optimization of plant stands in various crops. Delivering optimization of plant growth allows for more consistent crop performance in the various conditions that may be experienced in a crop year which in turn allows for greater certainty in managing a farm operation.

Reliable and durable farm machinery

1
Year
Warranty

*Entire machine comes with 12 month or 25,000 acres warranty from Warranty Start Date.**

3
Year
Warranty

*Frame structure comes with 36 month or 25,000 acres warranty from Warranty Start Date.**

** Warranty valid period is whichever limit occurs first.*

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