

WARC 2020 Year in Review

December 2020



WARC TEAM

Currently our WARC team consists of Executive Administrator Stacy Hawkins, Research Technician Alex Waldner (covering our General Manager maternity leave), Research Technician Keanna Svendsen-Striga (covering our Research Associate maternity leave) and Seasonal Technician Herb Schell. General Manager Jessica (Weber) Enns has recently left on maternity leave with the exciting arrival of a new baby girl! And Research Associate Kayla Slind will be returning from her maternity leave in the New Year.

Over the summer we had the help of three excellent summer students; Jocelyn Leidl, Breanna Elder, and Cortni Millhouse. Our students worked very hard and were instrumental in the success of our research projects. We greatly appreciate their contributions and wish them luck in their continued studies.



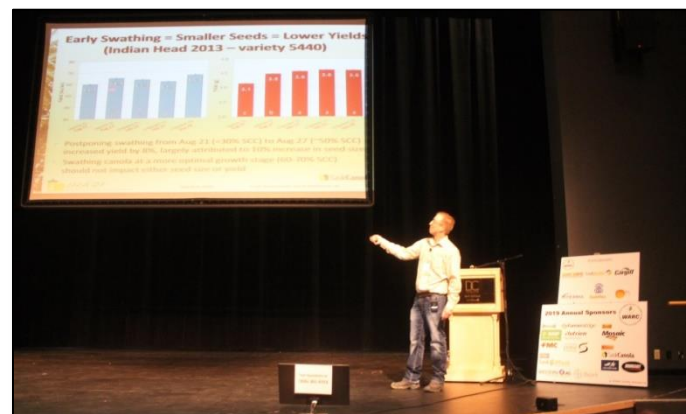
EVENTS

Crop Opportunity

The 2020 Crop Opportunity Meeting was held on March 4th at the Dekker Center in North Battleford. We had 147 people in attendance. We heard from many exciting speakers covering topics such as fertilizer application timings, pre-harvest vs. straight cut canola, crop rotations in Northwest Saskatchewan, harvest weed seed control and 2020 grain market outlooks. We would like to thank everyone who came out to support our event.

Virtual Field Day

Due to Covid, our annual Field Day was moved to an online platform and shared on our website and social media outlets on July 8th. Despite the change in venue, the event was a huge success! Videos were posted highlighting projects such as “Seeding Rates Influencing Fusarium Head Blight Management in Wheat” presented by Erin Campbell, “Increased Wheat Protein with UAN & Dissolved Urea with Foliar and Dribble Band Nozzles” by Mike Hall and “Enhanced Fertilizer Management for Optimizing Yield & Protein in Field Peas” by Sherrilyn Phelps. Plus many more! Thanks to all who have taken the time to view our trials. For anyone wishing to watch these videos they are still posted on our website and social media outlets.



2020 GROWING SEASON

Our 2020 growing season was generally on par with the long-term average. The spring months of April and May started our season off slightly cooler than normal, with average temperatures of -0.9°C and 10.2°C (Table 1). April was the driest month of the year, recording only 7.8 mm of precipitation compared to the long-term average of 24.4 mm. However, the remainder of the year made up for this lack of moisture early on; with the months of May and June being slightly above average and July receiving 60 mm more precipitation than the long-term average. The precipitation dissipated slightly in August, with 22.9 mm less than average. However the season ended with a very average September in terms of moisture and temperature; allowing for an excellent harvest here at WARC. Our team was able to harvest all of our plots by October 6th. Growing degree days for 2020 were lower than the long-term average, with the lowest growing degree days occurring in May, June, and July. Overall, WARC had a great season in 2020 and we were able to conduct some great research projects as a result.

Table 1. Mean monthly temperature, precipitation and growing degree day accumulated from April to September 2020 at Scott, SK.

Year	April	May	June	July	August	Sept.	Avg./Total
----- <i>Temperature (°C)</i> -----							
2020	-0.9	10.2	14.6	17.1	16.0	10.6	11.3
Long-term^z	3.8	10.8	14.8	17.3	16.3	11.2	12.4
----- <i>Precipitation (mm)</i> -----							
2020	7.8	48.3	70.2	129.4	25.8	29.3	310.8
Long-term^z	24.4	38.9	69.7	69.4	48.7	26.5	277.6
----- <i>Growing Degree Days</i> -----							
2020	40.0	159.0	289.0	376.0	342.0	167.0	1373.0
Long-term^z	44.0	170.6	294.5	380.7	350.3	192.3	1432.4

^zLong-term average (1985 - 2014)

RESEARCH UPDATE

WARC conducted a total of 30 research trials in 2020 on canola, wheat, barley, lentils and peas.

Currently the data for these trials is being analyzed and reports will be coming soon. So keep watching our website as we upload reports and factsheets from our 2020 research!

With 2020 coming to an end, we have started planning trials for our 2021 season. We have many exciting trials lined up so far and are looking forward to the New Year.



PROJECT SPOTLIGHT

Seed-placed P with Side-band vs. Midrow N

Objectives:

This trial was conducted to evaluate the effects of different seed placed phosphorus products and rates with midrow vs. sideband nitrogen on seed safety and yield.

Table 2. Treatment list for seed placed phosphorus products and rates with sideband versus midrow nitrogen in Scott, 2020.

Treatment #	P Products	P Rate (lbs/ac)	N Placement	N Rate (lbs/ac)		
1	MES15	25	Sideband	100		
	MAP	25				
2	MES15	75				
	MAP	25				
3	MES15	50				
4	MES15	100				
5	Crystal Green	50				
6	Crystal Green	100				
7	MES15	25			Midrow	100
	MAP	25				
8	MES15	75				
	MAP	25				
9	MES15	50				
10	MES15	100				
11	Crystal Green	50				
12	Crystal Green	100				

Results:

Plant densities were recorded at 2 weeks after emergence (Figure 1). On average, P applied at 100 lbs/ac resulted in lower plant densities at 4.6 plants/ft², compared to P applied at 50 lbs/ac, 5.3 plants/ft². When comparing products used, the highest average plant densities were observed by the Crystal Green treatments at 6.7 plants/ft², followed by MES15 at 4.3 plants/ft², and the lowest plant densities with the combination of MES15 and MAP at 3.8 plants/ft². When N was placed in the midrow it resulted in higher plant densities at 5.5 plants/ft² compared to sideband N at 4.4 plants/ft².

Despite improved plant densities observed by the lower rate of P, 50 lbs/ac on average resulted in 1.2 bu/ac less than 100 lbs/ac. The same trend was observed with P products. The combination of MES15 and MAP resulted in the highest yields at 65.3 bu/ac, followed by MES15 at 64.5 bu/ac, and Crystal Green at 63.5 bu/ac. However, the midrow placement of N resulted in a higher yield, 65 bu/ac, compared to sideband at 63.8 bu/ac.

Overall, the rate and product of P had an impact on plant densities and yields, however, practices that improved plant densities did not necessarily improve yield. When comparing placement of N, midrow resulted in higher plant densities and yield compared to sideband.

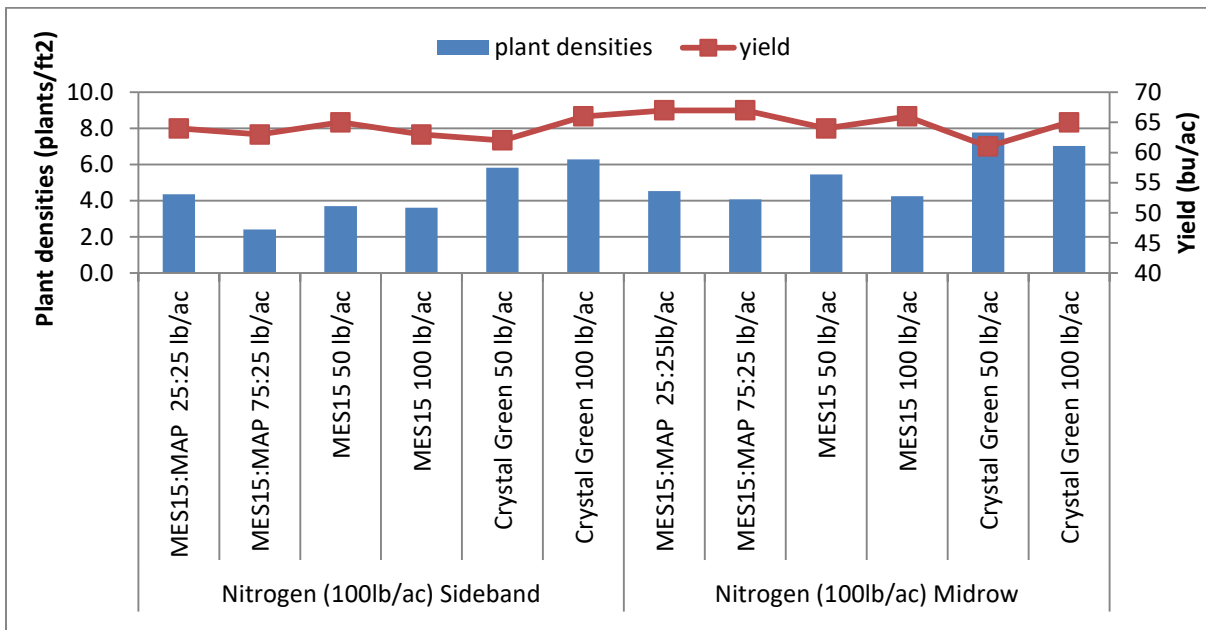


Figure 1. Canola plant densities (plants/ft²) and yield (bu/ac) in response to P products and rates with sideband vs. midrow N at Scott, 2020.

Visit our website for full reports on this project and many more!

UPCOMING EVENTS

WARC will be hosting our annual Crop Opportunity Meeting via webinar on March 3rd, 2021. We have an exciting line-up of speakers so make sure you don't miss this event! For more information visit our website at www.warc.ca.

SPONSORS

WARC would like to thank our sponsors and product donors for supporting us in our research projects and events. Without the generosity of our sponsors and product donations the work we do would not be possible. Thank you for helping us to have a great year in 2020!

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If you have questions, call our office at (306) 247-2001 or email at exec.admin@warc.ca
