



RESEARCH

BRRG 2019 at a Glance

Who we are?

Battle river research group is a non-profit organization that provides scientifically valuable, unbiased regional research data for the agriculture community of central Alberta that enables our clients to make informed decisions. We collaborate in our research projects with the agriculture communities of Alberta.

We are a team of dedicated, professional, and qualified staff who work efficiently to generate quality research data for the local agricultural community. The board of directors governs the organization with a majority of local producers



EXTENSION

Our goals are;

- * To generate scientifically, authentic research data.
- * To transfer Knowledge with local producer
- * To research, test and encourage innovative sustainable farming practices to manage the soil, water and crops productivity.

Our motto is Research, Demonstrate, and Encourage



ENVIRONMENT



Agriculture and
Agri-Food Canada



Crop Research Program 2019

Total Individual Research Plots 1213 Total Research Trials 30

No.	CEREAL SITE: BRRG	Trts	Reps	Plots
1	CWRS & CWHWS-RVT Wheat	36	3	108
2	CWSP & CWSWS_RVT Wheat	7	3	21
3	CPSR & CNHR-RVT Wheat	8	3	24
4	Durum-RVT Wheat	12	3	36
5	Barley-RVT	19	3	57
6	Barley-ABC	12	4	48
7	Triticale-RVT	4	3	12
8	Oats-RVT	11	3	33
9	Wheat: Seeding Date 1	6	4	24
10	Wheat: Seeding Date 2	6	4	24
11	Crop Land Wheat	4	4	16
12	PowerRichWheat	4	4	16
13	AgXplore Wheat	9	4	36
14	Can. Humalite wheat	8	6	48
15	Winter Wheat: ROB	12	3	36
	CANOLA/Pea SITE: BRRG			
16	Faba Bean-RVT	4	4	16
17	Yellow Pea-RVT	16	4	64
18	Green Pea-RVT	8	4	32
19	PowerRich_Peas	4	4	16
20	CropLand_Peas	3	4	12
21	FLAX_RVT	7	4	28
22	AgXplore Canola	9	4	36
23	PowerRich_Canola	5	4	20
24	CropLand_Canola	4	4	16
25	Canola Seeding Rate Demo	11	2	22
26	Canola U of A	2	4	8
	STETTLER BOTHA			
27	SILAGES: Barley	15	4	60
28	SILAGES: Oats	9	4	36
29	SILAGES: Triticale	8	4	32
30	SILAGES: Pulse Mixture	9	4	36





Ultra Early seeding April 13, 2019



Ultra-Early Seeded Spring Wheat in East Central Alberta

By
Khalil Ahmed, PhD, P. Ag.

The shorter growing season of spring wheat usually results in limited grain yield in Alberta. Early seeding can be a strategy to help producers lessen the impact of the short growing season on spring wheat. However, the decision of seeding is entirely weather-dependent, such as how early farmers can seed while avoiding the risk of spring frost and operational limitations. Previous research reported that the ultra-early planting of spring wheat at soil temperatures of 2 to 6 °C has the potential to increase yield, improve grain quality, and result in earlier maturity. It may have the extra potential advantages, such as the reduction in herbicides use and diseases with a greater window of harvesting (Collier et al., 2020).

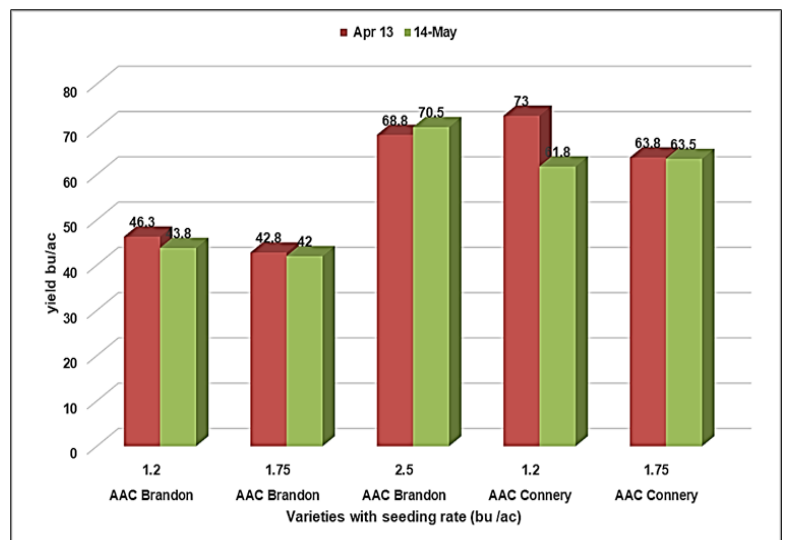


Figure 1: Grain yield(bu/ac) comparison among seeding dates and seeding rates

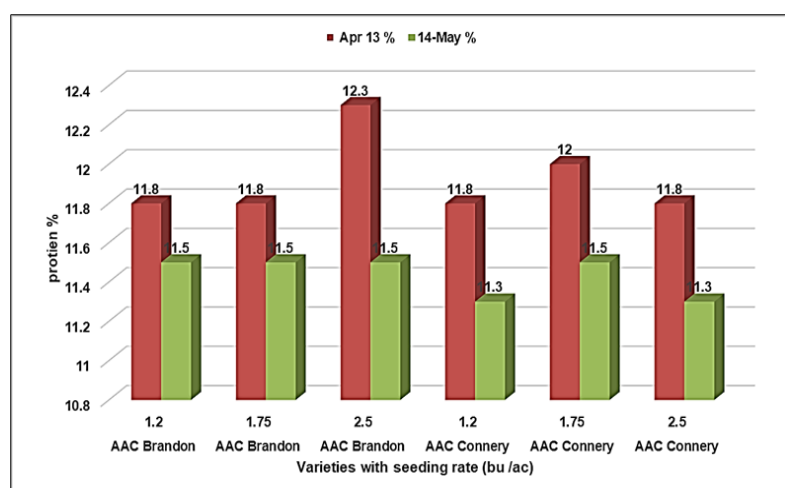


Figure 2: Protein %comparison among seeding dates and seeding rates

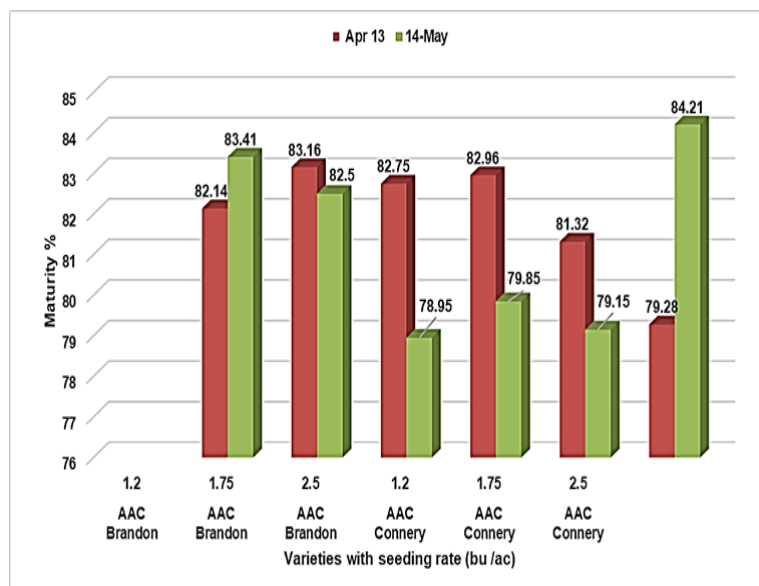


Figure 3: Maturity % comparison among seeding dates and seeding rates

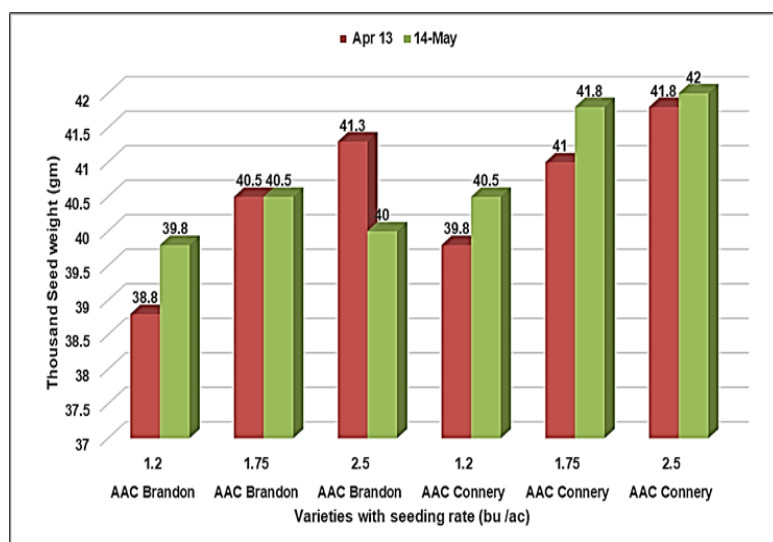


Figure 4: Thousand Kernel weight (gm) comparison among seeding dates and seeding rates

Last spring, a research project was initiated to find out the benefits of ultra-early planting of spring wheat in east-central Alberta. The experimental site was established in Forestburg, AB, by the Battle river research group. Two early-maturing spring wheat varieties (AAC Brandon, AAC Connery) were assessed for the impacts of three seeding rates (1.2, 1.75, 2.5 bu/ac) and two seeding dates (April 13, 2019, and May 14, 2019). The soil temperatures were recorded 4°C and 7°C in April and

There were undetermined differences that were observed on the yield quantities with-in seeding dates and seeding rates; however, the AAC Connery yielded more than AAC Brandon. A similar outcome was recorded for maturity and protein content, as shown in the figures (Figures 1, 2, and 3). The wheat protein content and TKW were higher in early seeding dates (April 13, 2019) with the combination of the highest seeding rate of (2.5 bu/ac). The grain yield and maturity were not significantly different within seeding dates and rates.

The one-year results are not enough to draw conclusions from; therefore, the experiment will be continued for two more years before any solid recommendations can be made for the region.

Thanks to the Alberta Wheat Commission and Canadian Agriculture Partnership for funding this project.

References

Collier GRS, Spaner DM, Graf RJ, and Beres BL (2020) The Integration of Spring and Winter Wheat Genetics with Agronomy for Ultra-Early Planting into Cold Soils. *Front. Plant Sci.* 11: 89. doi: 10.3389/fpls.2020.00089

Extension Events 2019



- 1 Spring Production Information Meeting Alliance
- 2 Soil Health and Cover Crops
- 3 Farm Succession Planning Farm Information Session
- 4 Raptor Perch Workshop
- 5 BRRG, AGM
- 6 Regenerative Grazing & Cell Design with Steve Kenyon
- 7 BRRG Field Day
- 8 Grazing with Jim Gerrish
- 9 Shelterbelt & Eco-buffers Agro forestry Systems for profits
- 10 Mental Health in Agriculture
- 11 Calvin clinic
- 12 Newsletter Program
- 13 Feed Analysis Program for Producers
- 14 CCIA Tag Input

Environment Program 2019

1. Three Operation Pollinator sites.
2. Pest Monitoring and wheat midge survey
3. 20 EFP(Environmental farm Plan)
4. Two Soil Health Projects
5. BRRG Shelterbelt events



BRRG Board Of Directors



1988 to 2019 we
conducted
research on 165
locations of
Central Alberta.



Thank you for Your Support!

