

CWRS WHEAT VARIETY TRIAL

Regional variety trials provide locally-based insight into which crops are most capable of succeeding in the Peace region. Each year, these trials aim to include the most-used local varieties, top producing varieties, and new varieties defined by quality, yield, and/or disease resistance. During field tours, producers are offered the opportunity to observe on-site characteristics such as emergence, height, disease rates, and maturity. Harvest characteristics including yield, test weight, and protein content are compared in the fall.

These CWRS wheat varieties were chosen for the 2024 trial by a survey completed by producers in the County of Northern Lights:

- AAC Brandon
- AAC Viewfield
- AAC Wheatland
- AAC Hodge
- AC Stettler
- CS Tracker



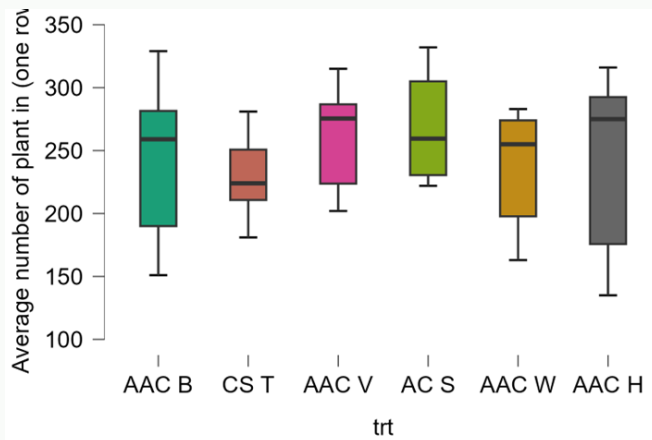
Task	Timeline	Details
Seeding	May 24	108-166 lb/ac 1" depth
Maintenance	May 20 - June 20	Urea 100 lb/ac S15 80 lb/ac Glyphosate (pre-seed) 1 L/ac Fluroxypur 240 mL/ac Clopyralid 84 mL/ac MCPA Ester 281 mL/ac
Harvest	Sept. 19	Straight-cut

Key Points:

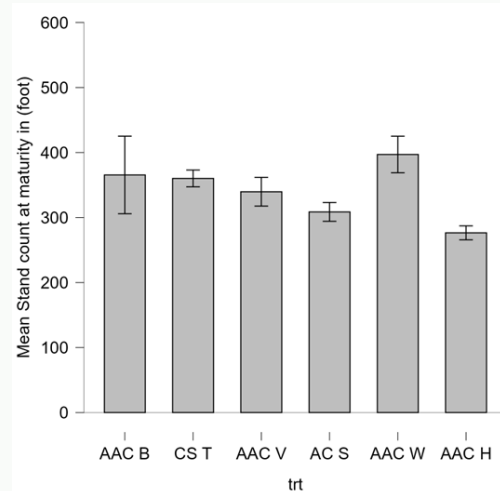
- AAC Hodge was the tallest variety; AAC Viewfield was the shortest
- No significant difference in emergence, stand count at maturity or lodging
- No significant difference in yields or protein content

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Legend: AAC B = AAC Brandon, CS T = CS Tracker, AC Stettler, AAC V = AAC Viewfield , AAC W = AAC Wheatland, AAC H = AAC Hodge VB



Emergence (plants per row) of six CWRS wheat varieties 14 days after seeding.



Stand count (plants per row) of six CWRS wheat varieties 40 days after seeding.

There are no statistically significant differences in Canadian Western Red Spring Wheat (CWRS) varieties emergence rate (p-value of 0.815). Although AC Stettler has the highest mean emergence (269 plants/row) followed by AAC Viewfield (260.83 plants/row), suggesting they may have performed better under the given conditions. In practice, this means that none of the varieties significantly outperforms the others in terms of plant emergence under the conditions tested. So based on emergence alone, there is no strong evidence to favor one variety over the others.

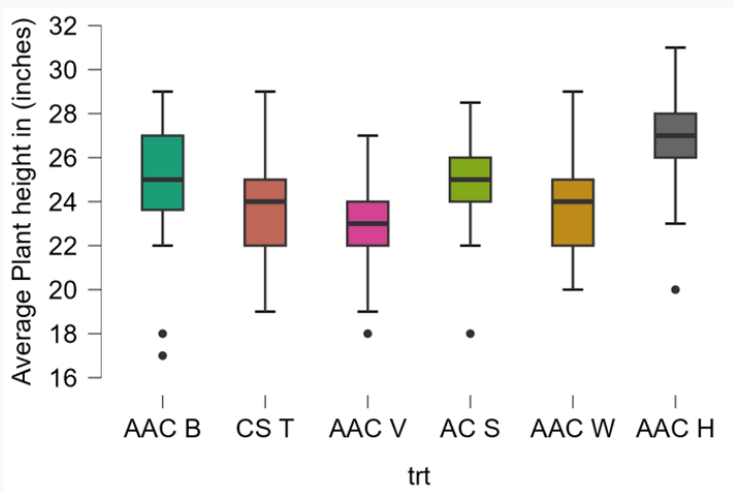
A stand count analysis of CWRS wheat varieties at maturity (p-value of 0.093) indicates there are no statistically significant differences for the varieties being compared. Although AAC Wheatland had the highest stand count (397 plants/row) and AAC Hodge VB had the lowest (276.5 plants/row), these differences are not statistically significant when the LSD value and the p-value are considered. This means none of the varieties significantly outperforms the others in terms of plant stand count under the conditions tested.

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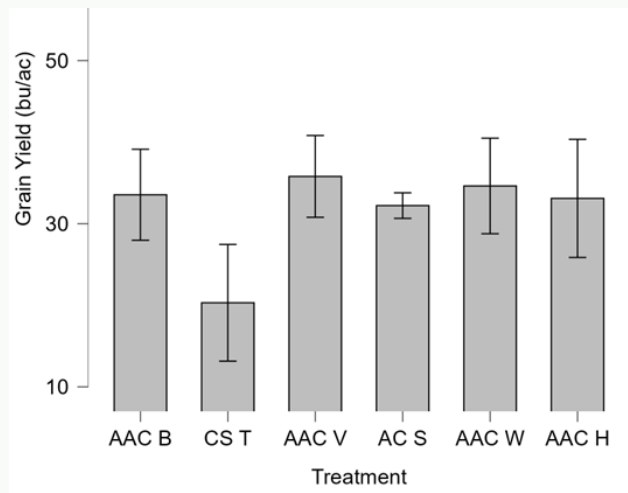
Legend: AAC B = AAC Brandon, CS T = CS Tracker, AC Stettler, AAC V = AAC Viewfield , AAC W = AAC Wheatland, AAC H = AAC Hodge VB

There are significant differences in plant heights among the Canada Western Red Spring (CWRS) wheat varieties at maturity (p-value <0.001). A Post Hoc Tukey test identifies that AAC Hodge VB demonstrates the tallest plant height, approaching 30 inches followed by AAC Brandon. AAC Viewfield could potentially offer benefits like weed suppression or higher straw yield but poses a lodging risk in environments prone to high wind or rains late in the growing season. AAC Viewfield displays the shortest plants, with heights around 22 inches which could be advantageous in situations requiring lower lodging risks or easier mechanical harvest.

For the CWRS wheat varieties tested, yields ranged from 35 to 42 bu/ac but there were no statistically significant differences (p = 0.46). Using descriptive trends, an insight into yield performance indicates that AC Stettler and AAC Viewfield exhibit slightly higher yields compared to AAC Hodge VB, being the lowest. Furthermore, there were no significant differences in grain protein content (p = 0.47).



Plant height (inches) of six CWRS wheat varieties 40 days after seeding.



Grain yield (bu/ac) of six CWRS wheat varieties at harvest.