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Varieties of Cereal and Oilseed Crops for Alberta

This annual publication provides information on cereal and oilseed variety performance in Alberta and northeastern British Columbia. Important agronomic characteristics and disease tolerance information are provided for varieties of wheat, barley, oat, rye, triticale, flax and canola.

The Alberta Regional Variety Testing program for cereals and flax is co-ordinated by the Alberta Regional Variety Advisory Committee (ARVAC) and Alberta Agriculture and Forestry (AAF). Funding for the program is provided by the following:

- Alberta Agriculture and Forestry
- Alberta Wheat Commission
- Alberta Barley Commission
- Alberta Oat Growers Association
- Alberta Seed Growers
- Alberta Seed Processors
- Prairie Oat Growers Association
- Entry fees for the varieties being tested

Annual variety performance information can help producers with crops decisions.

Data for this publication come from various sources:

- Alberta Agriculture and Forestry
- Agriculture and Agri-Food Canada
- British Columbia Grain Producers
- CPS Canada
- University of Alberta
- Alberta Innovates Technology Futures
- Farming Smarter
- SARDA Ag Research
- Battle River Research Group (BRRG)
- Chinook Applied Research Association (CARA)
- Gateway Research Organization (GRO)
- Lakeland Applied Research Association (LARA)
- Lakeland College
- McKenzie Applied Research Association (MARA)
- Northern Peace Applied Research Association (NPARA)
- Prairie Grain Development Committee
- Canola Council of Canada

The following individuals are the Regional Variety Trial and crop specific co-ordinators:

- Alex Fedko, Regional Variety Trial Co-ordinator
  - Spring wheat, Drs. H. Randhawa, D. Spaner and S. Strydhorst
  - Barley, J. Anderson
  - Oat, Dr. J. Mitchell-Fetch
  - Triticale, Dr. H. Randhawa
  - Winter Wheat, Dr. R. Graf
  - Fall Rye, Dr. J. Larsen
  - Flax, M. Hartman

Sincere thanks are extended to all individuals and organizations who contribute to this publication.

Yield results and reporting

Variety choice should never be based solely on yield performance as it is only one factor that affects net return. The genetic yield potential of a variety is often masked by numerous factors, some of which can be controlled through variety choice and others through astute agronomic management.

Producers are encouraged to consider other characteristics such as maturity, plant height, lodging and disease/pest resistance when deciding which varieties to grow. Long term satisfaction with a variety is often related to non-yield characteristics.

New for 2018

On a trial basis for 2018, the yield data for CWRS wheat are reported in two ways. The first method is the traditional manner that has been used since 2010 (see below). New for 2018 is an alternative method that reports head-to-head comparisons of all varieties on the annual trials within a five-year time frame.

This new method retains low and high yield test categories based on the average yield of the AC Barrie (60 bu/ac), the long-term check. The advantage of this method is that all comparisons within a column are statistically valid, rather than only to the check.

An Overall Yield column is also presented, but in this case, all data are reported resulting in a dataset with varying numbers of comparisons over different years. Thus, for the Overall Yield column, the only valid comparison is back to the common check as has been the case in the traditional method of reporting. Statistical differences among the varieties are also reported for the Overall Yield column. Comments on this new data reporting format are welcome.

Also new for 2018 is the inclusion of "benchmark" varieties. Producers have asked for additional checks in the regional variety trials that reflect more commonly grown varieties. To accommodate this request, two additional varieties are now grown as "benchmark" checks, and these reflect the two most popular varieties for the crop or within a market class during the previous year, based on crop insurance data. These checks will change as the popularity of varieties change.

Traditional yield reporting method

Exercise caution when making yield comparisons among varieties. Variety yield should only be directly compared to the standard reference check. Actual head-to-head yield comparisons between other varieties may not have occurred.

Small plot agronomic trials are expensive to grow, and new varieties are registered every year. It is simply impractical to grow all varieties at the same time.

Following several years of data collection, the yield performance for a particular variety stabilizes relative to the check, and further testing is no longer required. It is for these reasons that the check varieties are grown every year (e.g. AC Barrie for CWRS wheat, AC Metcalfe for barley) and that changes to these checks are infrequent. The "Overall Station Years of Testing" column provides an indication of the unbalanced nature of the dataset.

At least six station-years of yield data collected over two years are required before reporting the figures in this publication. For new varieties, Overall Yield is often the first indication of yield potential relative to the check. As additional data become available, yield performance is also expressed on the basis of environmental productivity (Yield Test Categories of Low, Medium, High and Very High).

Yield rankings among varieties can change substantially due to growing conditions. To reflect these differences, results from a test site that produced high yield in a particular year are placed into the database for "high" yielding environments. The same site may contribute to the "low" yield category in a drought year, when yields are low.

Consistent performance over all Yield Test Categories indicates that a variety has environmental responses similar to the check and may have good yield stability over a wide range of environments.

Scientific studies conducted on variety performance in western Canada have shown that Yield Test Category analysis provides a more reliable indication of yield performance than results organized by geographic region.

The yield comparison tables have several features:

- Overall actual yield of the check (bushels/acre) based on all data available to the testing program is provided along with the number of station years of testing.
- The range in yield for each Yield Test Category is defined.
- Actual yield of the check in each Yield Test Category is reported.
- For varieties with sufficient data, the Overall Yield and performance in each Yield Test Category is expressed relative to the check.
- Significant statistical differences relative to the check are indicated.

Yields that are statistically higher (+) or lower (-) than the check are indicated to aid in the selection process. No symbol after the yield figure indicates that there is no statistical difference from the check.

Pay particular attention to data on new varieties that have not been fully tested. If a large difference from the check is reported but is not significant, it could mean that yields have varied widely and/or there are not enough data to prove a statistical difference. With additional years of testing, the reported yield differences will become more accurate.

To make effective use of the yield comparison tables, producers should set a realistic yield target for the season and determine where it fits within the Low, Medium, High and Very High Yield Test Categories. This approach facilitates matching of variety choice to expected productivity levels and is similar to that used when making decisions on other levels of inputs.

Please note that the actual yield levels indicated are from small plot trials, which may be 15 to 20 per cent higher than yields expected under commercial production.

Maturity ratings

As is the case for yield, growing conditions have a tremendous influence on the date of maturity. For example, a variety of CWRS wheat may mature in 98 days in Lethbridge, but take 103 days in Edmonton. In the same way, a two-day difference in maturity between varieties in southern Alberta may amount to a five-day difference in a more northerly location.

To take this factor into account, maturity is expressed using a five-category scale: Very Early, Early, Medium, Late and Very Late. To aid producers with this relative scale, the average number of days to maturity for the check is reported. Note that this scale is different for each crop type. For example, an early barley variety will mature much earlier than an early flax variety.

Seed size and plant populations

Seed size within a crop kind will vary from variety to variety, requiring adjustment of seeding volumes to achieve desired plant populations. Some of the tables provide an average 1000 kernel weight (TKW) which can be used as a guide for variety differences.

The best approach is to determine the 1000 kernel weight of the seed to be planted, germination rate, emergence mortality and in the case of fall seeded crops, an estimate of winterkill.

For more information and user-friendly seeding rate calculators that take into account these and other considerations, please see: www.agric.gov.ab.ca/app21/ldcalc

Plant Breeders' Rights

Plant Breeders' Rights (PBR) are a form of intellectual property rights by which plant breeders can protect new varieties in the same way an inventor protects a new invention with a patent.

In 2015, Canada amended the PBR Act to bring it into conformity with UPOV 91. Varieties protected under the previous legislation (UPOV 78) are indicated with the logo, whereas those protected under the new legislation that are shown with a new logo. The use of the ▲ logo indicates that an application for PBR has been accepted.

For more information on Plant Breeders' Rights, please see www.pbrfacts.ca or the Canadian Food Inspection Agency website at www.inspection.gc.ca.

Canola

The Alberta Regional Variety Advisory Committee (ARVAC) does not take any responsibility for accuracy or validity of the canola performance data.

Diseases, seed treatment and seed testing

- Disease ratings are compiled from various data sources in Alberta and other prairie provinces.
- Treat rye and flax seed to control seedling blight; cereal seed for smuts and fusarium; canola seed to control flea beetle, seedling blight and the seed-borne phase of virulent blackleg.
- Wheat with Moderately Susceptible (MS) or Susceptible (S) ratings for common bunt should be treated with a systemic fungicide as low levels of infection will restrict marketability.
- Refer to labels for maximum storage periods of treated seed.
- Treated seed must not be fed to livestock, poultry or wildlife and cannot be sold for feed.
- Leaf spot ratings in the wheat tables are a combination of resistance to tan spot and septoria leaf disease complex.
- Fusarium head blight (FHB), caused by *Fusarium graminearum* and other species, is an increasing problem in Alberta. The relative ranking of crops from most susceptible to least susceptible is durum wheat, common wheat, triticale, barley and oat. Corn is a host of *F. graminearum* and can serve as a source of infection when residue

is left on the ground. FHB infection is highly influenced by the environment and heading date. A resistant (R) tolerance rating for FHB does not equate to immunity. Under severe epidemics, all varieties will sustain damage. All seed should be tested for the presence of FHB and treated with an appropriate seed treatment if required. Producers are advised to choose varieties with the best FHB tolerance whenever possible and always use best management practices to slow the spread of this disease.
- Seed used in the Alberta Regional Variety Testing program comes with a "fusarium-free" certificate, and trials are inspected for FHB during the growing season.

Laboratories participating in the FHB testing program:

- 20/20 Seed Labs Ltd., Nisku, AB: 1-877-420-2099
- BioVision Seed Research Ltd., Edmonton, AB: 1-800-952-5407
- BioVision Seed Research Ltd., Grande Prairie, AB: 1-877-532-8889
- Parkland Laboratories, Red Deer, AB: 403-342-0404
- Precision Seed Testing, Beaverlodge, AB: 780-354-2259
- Seed Check Technologies Inc., Leduc, AB: 780-980-8324

Abbreviations and rating scales

- TKW = Thousand kernel weight
- XX = Insufficient data to describe
- Maturity: VE = Very Early, E = Early, M = Medium, L = Late, VL = Very Late
- Resistance Ratings: VP = Very Poor, P = Poor, F = Fair, G = Good, VG = Very Good, EX = Excellent
- Disease Tolerance Ratings: R = Resistant, MR = Moderately Resistant, I = Intermediate, MS = Moderately Susceptible, S = Susceptible
- Kernel Type (winter wheat): HR = Hard Red, SR = Soft Red, HW = Hard White, SW = Soft White
- Awns (wheat): Y = Yes (bearded), N = No (awnless)
- Awn Type (barley): R = Rough, S = Smooth, SS = Semi-smooth
- Seed Size (flax): S = Small, M = Medium, L = Large
- Protected by previous Plant Breeders' Rights legislation
- Protected under new Plant Breeders' Rights legislation
- ▲ Applied for Plant Breeders' Rights protection

Other variety information

For additional information, including varieties not listed in this publication, please call the Alberta Agriculture and Forestry Ag-Info Centre toll-free at 310-FARM (3276). For other cropping information, refer to the website at www.agriculture.alberta.ca.

Factsheet information and tables prepared, reviewed and approved by:

Alberta Regional Variety Advisory Committee (formerly the Alberta British Columbia Grain Advisory Committee, ABCGAC)

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Variety tables

Crop **Page**

CANADA WESTERN RED SPRING WHEAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% AC Barrie): Low < 45 (bu/ac)	Medium 45 – 75 (bu/ac)	High > 70 (bu/ac)	Agronomic Characteristics: Maturity Rating	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to: Lodging	Sprouting	Disease Tolerance: Loose Smut	Bunt	Stripe Rust	Leaf Spot	Fusarium Head Blight
Varieties tested in the 2017 trials (Yield, significant differences and agronomic data only directly comparable to AC Barrie)																		
AC Barrie (bu/ac)		60	42	63	84													
AC Barrie		100	100	100	100	M	14.0	63	37	89	N	G	G	MR	I	S	MS	I
Carberry - check	95	107+	110+	106+	104	L	0	63	39	79	Y	VG	F	MR	R	MR	MS	MR
AAC Cameron VB	42	117+	110+	123+	115+	M	-0.6	62	44	94	Y	G	F	S	R	S	I	I
AAC Redberry	42	108+	108+	109+	106	M	-0.1	63	41	84	Y	G	G	R	I	R	MS	I
AAC Tisdale ▲	28	106+	106	107	106+	M	0.4	63	43	89	Y	F	F	MR	MR	S	MS	MR
AAC Viewfield ▲	42	117+	116+	118+	117+	L	-0.3	63	40	76	Y	VG	G	S	MR	R	I	I
CDC Adamant VB	28	111+	103	118+	110+	M	-0.3	63	40	83	Y	P	F	S	S	MS	MS	I
CDC Bradwell	42	108+	107+	108+	110+	L	-0.3	63	38	84	Y	VG	F	MR	R	MS	MS	I
CDC Go	104	111+	106+	113+	115+	M	0.1	61	42	82	Y	G	VP	MS	I	MS	S	MS
CDC Hughes VB ▲	28	111+	110+	111	112+	M	-0.2	64	44	84	Y	G	G	MR	MS	I	I	I
CDC Landmark VB ▲	28	113+	108	117	113+	M	-0.1	64	44	85	Y	VG	VG	MR	MS	MR	I	I
Stettler	83	112+	115+	110+	112+	M	0	62	38	84	Y	G	G	R	MR	I	MS	MS
SY Slate ▲	42	108+	108	110+	106+	M	0.2	62	41	85	Y	F	P	MS	S	MR	MS	I
SY Sovite	28	104	105	109	101	M	0	62	43	89	Y	F	F	R	MS	R	MR	MR
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to AC Barrie)																		
5604HR CL	76	99	102	98	99	E	-0.7	63	33	87	Y	G	G	MS	I	XX	MS	I
5605HR CL †	43	109+	XX	114+	106+	M	-0.2	64	38	91	Y	G	XX	R	MR	I	MS	MR
AAC Bailey †	58	103	102	104	103	M	-0.6	63	37	92	N	G	G	MS	I	I	I	I
AAC Brandon	41	114+	106	117+	113+	M	-0.2	64	38	81	Y	VG	P	MR	S	MR	I	MR
AAC Connery	42	106+	XX	108	108+	E	0	62	40	81	N	VG	G	MR	I	R	I	MR
AAC Elie	41	115+	107	120+	112+	M	-0.1	64	38	81	Y	G	F	I	I	MR	I	I
AAC Prevail	42	106+	XX	107+	107+	L	-0.6	62	39	96	Y	G	G	S	S	R	MS	I
AAC Redwater	41	103	96	106	104	E	0	64	35	87	Y	G	VG	MS	I	MR	MS	I
AC Intrepid †	107	102	98	103	105+	E	0	62	39	90	N	G	P	I	MR	MR	MS	MS
AC Splendor †	153	95-	93-	96-	98	VE	0.9	61	37	89	N	F	F	I	I	I	I	MS
Cardale	41	105+	100	106+	105	M	-0.3	63	37	84	Y	G	G	I	S	MS	MS	MR
Coleman	43	101	XX	105	98	M	0	64	37	93	Y	F	P	S	S	MR	I	MR
CDC Abound	88	110+	108+	110+	112+	M	-0.1	63	40	82	Y	G	F	I	I	MS	MS	S
CDC VR Morris	41	109+	105	111+	107	M	-1	65	37	84	N	G	P	I	I	XX	I	MR
CDC Plentiful	41	106+	100	108+	106+	M	-0.2	64	35	87	N	VG	P	R	I	MR	I	MR

CANADA WESTERN RED SPRING WHEAT (continued)

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% AC Barrie): Low < 45 (bu/ac)	Medium 45 – 75 (bu/ac)	High > 70 (bu/ac)	Agronomic Characteristics: Maturity Rating	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to: Lodging	Sprouting	Disease Tolerance: Loose Smut	Bunt	Stripe Rust	Leaf Spot	Fusarium Head Blight
CDC Stanley	76	113+	114+	114+	113+	M	-0.8	63	34	87	N	G	G	MR	S	I	I	MS
CDC Titanium VB	41	108+	XX	112+	103	E	0.5	65	41	87	Y	G	P	MS	I	R	MS	MR
CDC Utmost VB	53	112+	115+	112+	111+	M	-0.2	64	36	85	N	G	G	MS	S	I	I	MS
Glenn	61	104	110+	100	104	L	-0.2	65	36	85	Y	VG	F	I	I	MR	I	I
Go Early	42	104	XX	105	104	VE	0.3	61	40	93	Y	G	P	I	MR	I	S	I
Goodeve VB †	96	105+	107+	103	104	M	-0.1	62	36	88	N	VG	G	MR	S	I	MS	S
Muchmore	53	111+	114+	107	111	L	-0.9	63	37	75	Y	VG	G	MR	R	MR	MS	MS
Peace †	53	100	100	97	103	M	0.1	63	37	92	N	G	P	R	R	MR	XX	S
Shaw VB	53	112+	116+	109+	113+	M	-0.9	63	37	92	N	G	G	S	MR	I	MS	MS
Superb	184	112+	110+	112+	115+	L	-0.4	62	42	85	Y	G	F	I	MR	S	S	MS
SY433	44	104	101	104	104	M	-1	64	39	95	Y	G	G	I	S	XX	I	MR
SY479 VB	42	97-	XX	100	95-	M	0.8	62	40	94	Y	VG	VG	MS	R	S	MS	I
SY637	42	103	XX	101	103	L	0.8	62	39	91	Y	G	XX	MS	MR	MR	I	MR
Thorsby	43	106+	XX	110	105	E	-0.5	64	38	89	N	G	F	I	S	R	MS	I
Vesper VB †	45	106+	106	108+	104	M	-1.5	63	37	90	Y	F	F	I	S	S	I	I
WR859 CL †	79	106+	110+	103	107+	M	-0.4	64	34	81	Y	G	G	R	R	I	MS	MR

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Several CWRS varieties will be reclassified to the new CNHR wheat class, effective August 1, 2018. The varieties affected are AC Abbey, AC Cora, AC Eatonia, AC Majestic, AC Michael, AC Minto, Alvena, Alikat, CDC Makwa, CDC Osler, Columbus, Conway, Harvest, Kane, Katepwa, Leader, Lillian, McKenzie, Neepawa, Park, Pasqua, Pembina, Thatcher, Unity VB and 5603HR. For more information see the Canadian Grain Commission website www.grainscanada.gc.ca. The long term average maturity for AC Barrie is 106 days and rated as Medium (M). Fusarium Head Blight (FHB) infection is highly influenced by the environment and heading date. Under high levels of FHB all varieties will sustain damage. Moderately Resistant (MR) and Resistant (R) ratings for FHB do not equate to immunity. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. CDC Adamant VB, CDC Landmark VB and CDC Hughes VB have a solid stem that confers resistance to the wheat stem sawfly. 5604HR CL, 5605HR CL, CDC Abound, CDC Imagine, CDC Thrive and WR589 CL are tolerant to the CLEARFIELD® herbicides Adrenalin SC and Altitude FX. VB - designates a varietal blend to preserve the *Sm1* orange wheat blossom midge tolerance gene. New CWRS registrations: AAC Jatharia VB (BW483), AAC Alida (BW980), CDC Adamant VB (BW488). Insufficient data to describe: AAC Jatharia VB, AAC Alida, and Parata. XX - Insufficient data to describe. † - Flagged for possible removal in 2019.

CANADA WESTERN RED SPRING WHEAT (alternate reporting format)

Yield: Annual Means by Productivity Environment *

Variety	Low Yield Sites (< 60 bu/ac)					High Yield Sites (>= 60 bu/ac)					Overall Yield	Station Years of testing
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017		
AC Barrie (bu/ac)	36	44	46	48	47	75	71	69	78	75	60	363
AC Barrie (check)	100	100	100	100	100	100	100	100	100	100	100	363
Carberry			106	104	113			107	101	109	107+	138
5604HR CL	95					101					99	76
5605HR CL	114	95	105			114	109	108			109+	43
AAC Bailey	106	94				98	104				103	58
AAC Brandon	119	104				114	122				114+	41
AAC Elie	135	105				114	121				115+	41
AAC Redwater	103	97				107	109				103	41
Cardale	113	96				103	108				105+	41
CDC VR Morris	105		115			113		110			109+	41
CDC Plentiful	111	101				108	110				106+	41
CDC Stanley	106					120					113+	76
CDC Titanium VB	112	102	110			107	111	104			108+	41
Coleman	104	92	94			103	104	101			101	43
Katepwa	95	96				98	99				97	278
SY433	108					105					104	44
Thorsby	98	97	103			106	113	109			106+	43
AAC Connery		94	104	107			108	108	108		106+	42
AAC Prevail VB		99	104	106			107	107	109		106+	42
Go Early		97	107	102			105	109	102		104	42
SY479 VB		95	98	99			97	98	97		97-	42
SY637		95	101	98			107	104	103		103	42
AAC Cameron VB			112	113	105			118	118	122	117+	42
AAC Redberry			109	109	107			111	104	108	108+	42
AAC Viewfield ▲			118	116	110			116	117	119	117+	42
CDC Bradwell			104	112	106			105	112	109	108+	42
SY Slate ▲			109	106	109			106	105	113	108+	42
AAC Tisdale ▲				107	103				106	107	106	28
CDC Adamant VB ▲				109	96				110	116	111+	28
CDC Hughes VB ▲				111	107				109	114	111+	28
CDC Landmark VB ▲				110	103				112	119	113+	28
SY Sovite				105	105				102	106	104	28
CDC Go (benchmark)					110					115	111+	104
Stettler (benchmark)					107					112	112+	83
Number of Sites	4	4	5	4	3	11	10	9	10	11		

* Please see the INTRODUCTION for an explanation of this new yield format

CANADA WESTERN HARD WHITE SPRING WHEAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% AC Barrie): Low < 45 (bu/ac)	Medium 45 – 75 (bu/ac)	High > 70 (bu/ac)	Agronomic Characteristics: Maturity Rating	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to: Lodging	Sprouting	Disease Tolerance: Loose Smut	Bunt	Stripe Rust	Leaf Spot	Fusarium Head Blight
Previously tested varieties (Yield and agronomic data only directly comparable to AC Barrie)																		
AC Barrie (bu/ac)		**60**	**42**	**63**	**84**													
AC Barrie		**100**	**100**	**100**	**100**	**M**	**14**	**62**	**38**	**87**	**N**	**G**	**G**	**MR**	**I**	**S**	**MS**	**I**
AAC Iceberg	39	104	96	106	107	M	-0.7	64	39	86	Y	G	P	MS	I	MR	MS	I
CDC Whitewood	43	107+	XX	110	105	M	-0.9	64	38	87	Y	G	G	S	S	I	MS	I
Snowbird	94	101	99	101	101	M	-0.2	62	36	89	N	G	G	MR	MS	MS	S	I
Snowstar	58	102	99	103	102	M	-0.8	64	30	82	N	G	G	MS	S	MS	I	MS
Whitehawk	42	107	112+	108+	106	E	-0.9	63	33	90	N	G	G	I	MS	MS	MS	I

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. The long term average maturity for AC Barrie is 106 days and rated as Medium (M). Fusarium Head Blight (FHB) infection is highly influenced by the environment and heading date. Under high levels of FHB all varieties will sustain damage. Moderately Resistant (MR) and Resistant (R) ratings for FHB do not equate to immunity. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. XX - Insufficient data to describe. † - Flagged for possible removal in 2019.

CANADA PRAIRIE RED SPRING WHEAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% AC Barrie): Low < 65	Medium 65 - 90 (bu/ac)	High > 90 (bu/ac)	Agronomic Characteristics: Maturity Rating	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to: Lodging	Sprouting	Disease Tolerance: Loose Smut	Bunt	Stripe Rust	Leaf Spot	Fusarium Head Blight
Varieties tested in the **2016 trials (Yield, significant differences and agronomic data only directly comparable to AC Barrie)**																		
AC Barrie (bu/ac)		66	42	64	89													
AC Barrie		100	100	100	100	M	13.8	63	40	90	N	G	G	MR	I	S	MS	I
Carberry - check		106+	107+	107+	104+	L	0	63	40	79	Y	VG	F	MR	R	MR	MS	MR
AAC Crossfield	43	122+	119+	124+	122+	M	-1.2	62	42	80	Y	G	XX	MS	I	R	I	I
AAC Entice ▲	30	119+	114+	125+	119+	M	-0.7	62	40	77	Y	G	XX	MS	S	R	MS	I
AAC Goodwin ▲	31	123+	121+	126+	122+	M	-0.4	63	41	83	Y	VG	G	MS	MS	R	I	I
AAC Penhold	58	118+	113+	123+	118+	M	-1	63	45	71	Y	VG	G	I	R	MR	I	MR
CDC Terrain ▲	30	122+	124+	122+	119+	M	-1.4	62	44	88	Y	G	G	MR	MR	R	I	MS
SY Rowyn ▲	30	114+	113+	117+	111+	M	-1	62	36	78	Y	G	F	I	S	MR	I	MR
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to AC Barrie)																		
5700PR *	117	117+	XX	121+	113+	L	-1.9	62	42	75	Y	VG	F	MS	R	MS	MS	MS
AAC Crusader †	40	116+	XX	116+	117+	M	-1.2	60	41	80	Y	G	P	MR	I	XX	MS	I
AAC Foray VB	41	128+	XX	130+	120+	M	-1.7	63	51	85	Y	G	G	MS	I	MR	MS	I
AAC Ryley	37	118+	XX	120+	114+	M	-0.6	60	48	82	Y	G	G	I	R	S	MS	MS
AAC Tenacious VB †	40	107+	XX	109+	101	M	-1.3	62	39	97	Y	P	VG	R	R	MR	MS	R
AC Crystal	278	115+	XX	119+	113+	L	XX	62	42	79	Y	G	P	I	R	S	I	S
SY985 *	51	112+	XX	115+	109+	M	0.1	61	44	78	Y	G	P	R	MR	XX	I	I
SY995	41	118+	XX	119+	113+	M	-1.9	63	45	79	Y	G	P	S	MR	MR	MS	MS

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Several CPSR varieties will be reclassified to the CNHR wheat class. AC Foremost, AC Taber, Conquer and Oslo will be reclassified on August 1, 2018 and AC Crystal will be reclassified on August 1, 2019. For more information see the Canadian Grain Commission website www.grainscanada.gc.ca. The long term average maturity for AC Barrie is 106 days and rated as Medium (M). Fusarium Head Blight (FHB) infection is highly influenced by the environment and heading date. Under high levels of FHB all varieties will sustain damage. Moderately Resistant (MR) and Resistant (R) ratings for FHB do not equate to immunity. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. VB - designates a varietal blend to preserve the *Sm1* orange wheat blossom midge tolerance gene. New CPSR registrations: AAC Goodwin (BW968). XX - Insufficient data to describe. * Yield figures based on direct and indirect comparisons with AC Barrie. † - Flagged for possible removal in 2019.

CANADA NORTHERN HARD RED WHEAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% AC Barrie): Low < 55	Medium 55 - 75 (bu/ac)	High > 75 (bu/ac)	Agronomic Characteristics: Maturity Rating	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to: Lodging	Sprouting	Disease Tolerance: Loose Smut	Bunt	Stripe Rust	Leaf Spot	Fusarium Head Blight
Varieties tested in the 2017 trials (Yield, significant differences and agronomic data only directly comparable to AC Barrie)																		
AC Barrie (bu/ac)		**66**	**44**	**60**	**83**													
AC Barrie		**100**	**100**	**100**	**100**	**M**	**13.8**	**63**	**40**	**89**	**N**	**G**	**G**	**MR**	**I**	**S**	**MS**	**I**
Carberry - check		**106+**	**107**	**106+**	**106+**	**L**	**0**	**64**	**40**	**79**	**Y**	**VG**	**F**	**MR**	**R**	**MR**	**MS**	**MR**
AAC Concord ▲	45	110+	112+	105	113+	M	-0.6	62	41	87	N	F	F	I	MR	R	I	MS
Elgin ND	43	118+	122+	118+	116+	M	-0.6	63	38	87	Y	G	XX	XX	S	MR	I	I
Effective August 1, 2018 the following varieties are designated as CANADA NORTHERN HARD RED																		
AC Foremost *	141	119+	116+	123+	117+	L	-1.3	62	42	73	Y	VG	F	I	R	S	MS	S
Conquer VB *	51	121+	XX	123+	120+	M	-0.8	62	45	84	Y	F	P	MS	R	MR	I	MS
Harvest	118	102	98	103	104+	M	-0.1	62	36	84	N	VG	VG	MR	S	MR	MS	S
Lillian	87	104+	111+	100	104	M	0.2	61	37	86	N	F	G	I	MR	R	MR	S
Unity VB †	71	110+	111+	110+	111+	M	-0.7	64	36	89	Y	F	G	MS	R	MS	MS	MS

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Several CWRS and CPSR varieties will be reclassified to this new CNHR class, effective August 1, 2018. The CWRS varieties are AC Abbey, AC Cora, AC Eatonia, AC Majestic, AC Michael, AC Minto, Alvena, Alikat, CDC Makwa, CDC Osler, Columbus, Conway, Harvest, Kane, Katepwa, Leader, Lillian, McKenzie, Neepawa, Park, Pasqua, Pembina, Thatcher, Unity VB and 5603HR. The CPSR varieties are AC Foremost, AC Taber, Conquer and Oslo. AC Crystal will be reclassified on August 1, 2019. For more information see the Canadian Grain Commission website www.grainscanada.gc.ca. The long term average maturity for AC Barrie is 106 days and rated as Medium (M). Fusarium Head Blight (FHB) infection is highly influenced by the environment and heading date. Under high levels of FHB all varieties will sustain damage, Moderately Resistant (MR) and Resistant (R) ratings for FHB do not equate to immunity. AAC Concord has a solid stem that confers resistance to the wheat stem sawfly. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. Insufficient data to describe: Faller, Prosper. XX- Insufficient data to describe. † - Flagged for possible removal in 2019.

CANADA WESTERN SPECIAL PURPOSE WHEAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% AC Barrie): Low < 65	Medium 65 - 90 (bu/ac)	High > 90 (bu/ac)	Agronomic Characteristics: Maturity Rating	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to: Lodging	Sprouting	Disease Tolerance: Loose Smut	Bunt	Stripe Rust	Leaf Spot	Fusarium Head Blight
Varieties tested in the 2017 trials (Yield, significant differences and agronomic data only directly comparable to AC Barrie)																		
AC Barrie (bu/ac)		66	42	66	92													
AC Barrie		100	100	100	100	M	14.2	63	40	90	N	G	G	MR	I	S	MS	I
Carberry - check		106+	107+	107+	103	L	0.1	63	40	79	Y	VG	F	MR	R	MR	MS	MR
AAC Awesome VB ▲	26	140+	141	135+	142+	L	-2.7	62	43	89	Y	G	P	I	I	R	I	I
Alderon	26	137+	125	133+	146+	VL	-2.9	58	41	75	N	VG	F	XX	MS	MR	I	XX
Charing VB ▲	26	143+	134	144+	145+	VL	-2.4	61	41	80	N	VG	G	XX	XX	R	MR	XX
Sparrow VB	26	141+	133+	143+	143+	VL	-2.5	61	41	80	N	VG	G	XX	I	MR	I	XX
Pasteur *	43	140+	139+	141+	139+	VL	-2	63	41	81	N	VG	G	MS	S	MR	I	I
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to AC Barrie)																		
AAC Innova	38	134+	XX	135+	135+	L	-3.2	60	41	82	Y	G	P	S	S	R	I	S
AAC NRG097	41	124+	XX	121+	126+	L	-3	63	47	80	Y	G	F	I	R	S	I	I
CDC NRG003 * †	51	121+	XX	126+	112+	M	-1.9	61	43	80	Y	G	F	MS	R	XX	MS	S
SY087	41	120+	XX	122+	114+	M	-1.4	63	40	82	Y	G	F	MS	MR	MR	I	MR

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. The long term average maturity for AC Barrie is 106 days and rated as Medium (M). Fusarium Head Blight (FHB) infection is highly influenced by the environment and heading date. Under high levels of FHB all varieties will sustain damage. Moderately Resistant (MR) and Resistant (R) ratings for FHB do not equate to immunity. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. * Yield figures based on direct and indirect comparisons with AC Barrie. XX - Insufficient data to describe. † - Flagged for possible removal in 2019.

CANADA WESTERN SOFT WHITE SPRING WHEAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% AC Andrew): Low < 65 (bu/ac)	Medium 65 - 100 (bu/ac)	High > 100 (bu/ac)	Agronomic Characteristics: Maturity Rating	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to: Lodging	Shattering	Sprouting	Disease Tolerance: Loose Smut	Bunt	Stripe Rust	Leaf Spot	Fusarium Head Blight
Varieties tested in the 2017 trials (Yield, statistical differences and agronomic data only directly comparable to AC Andrew)																			
AC Andrew (bu/ac)		**85**	**54**	**86**	**123**														
AC Andrew *		**100**	**100**	**100**	**100**	**L**	**11.0**	**62**	**40**	**80**	**Y**	**VG**	**VG**	**P**	**S**	**S**	**I**	**MS**	**I**
AAC Indus VB	39	104	96	108	105	VL	-0.2	61	42	87	Y	VG	VG	P	S	MS	R	MS	MS
Sadash VB	61	107+	110+	106+	104	L	-0.1	63	39	81	Y	VG	VG	P	I	S	R	I	S
Previously tested varieties (Yield, statistical differences and agronomic data only directly comparable to AC Andrew)																			
AAC Chiffon VB	39	104+	106	105+	101	L	-0.4	62	46	88	Y	G	VG	P	S	S	MR	I	S
AC Meena †	51	97-	101	97-	95-	L	0	62	37	80	Y	G	G	F	MS	MS	MR	S	S

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. AC Andrew yields about 35% more than AC Barrie. In addition to traditional markets, SWS wheat varieties may have demand as a feedstock for ethanol production. *Maturity, resistance to lodging and sprouting are compared with AC Barrie. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. New CWSWS registrations: AAC Paramount (SWS433). Insufficient data to describe: AAC Paramount. * Yield figures based on direct and indirect comparisons with AC Andrew. † - Flagged for possible removal in 2019.

CANADA WESTERN AMBER DURUM WHEAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% Strongfield): Low < 45 (bu/ac)	Medium 45 - 70 (bu/ac)	High > 70 (bu/ac)	Agronomic Characteristics: Maturity Rating	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Resistance to: Lodging	Sprouting	Disease Tolerance: Loose Smut	Bunt	Stripe Rust	Leaf Spot	Fusarium Head Blight
Varieties tested in the **2017 trials (Yield, significant differences and agronomic data only directly comparable to Strongfield)**																	
Strongfield (bu/ac)		64	35	60	93												
Strongfield		100	100	100	100	M	14.3	63	45	84	F	F	S	I	MR	MS	S
AAC Congress ▲	23	104	109	100	104	M	-0.3	63	44	81	F	P	MR	R	R	MS	MS
Brigade	77	103+	105	103	101	L	-0.6	63	47	87	G	F	MS	R	MR	I	MS
CDC Alloy ▲	14	102	XX	97	99	M	0.2	63	44	85	F	F	I	R	R	MS	MS
CDC Dynamic ▲	14	97	XX	99	93-	M	0.6	62	44	82	F	F	I	R	MR	I	MS
Transcend	43	101	102	103	99	M	XX	63	45	87	F	F	S	R	R	I	MS
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to Strongfield)																	
AAC Cabri	25	94-	98	93-	XX	M	0.1	62	45	86	G	P	MR	R	R	I	MS
AAC Current	30	99	104	98	XX	M	0	62	44	85	F	F	MS	MR	MR	I	MS
AAC Durafield †	22	99	XX	99	XX	M	-1	64	46	76	F	F	S	R	MR	I	S
AAC Marchwell VB	32	99	107	96	98	M	-0.1	63	46	83	F	F	MR	R	R	MS	MS
AAC Raymore	34	97	99	98	94	M	0.8	62	47	82	F	F	MS	MR	MR	I	S
AAC Spitfire	25	97	100	96	XX	M	-0.4	61	46	82	G	P	MS	R	R	MS	S
AC Navigator	65	95-	102	93-	93-	M	XX	63	45	77	G	G	S	R	R	S	S
CDC Carbide VB ▲	25	100	104	100	XX	M	0	62	45	85	G	P	MS	R	R	MS	MS
CDC Desire ▲	34	102	106	101	101	E	0	62	44	83	F	G	MS	R	MR	I	S
CDC Fortitude	32	102	102	102	103	M	-0.6	63	45	81	G	F	MS	R	R	MS	MS
CDC Verona	46	102	103	103	99	M	XX	62	46	82	G	F	MS	R	R	MS	MS
CDC Vivid ▲	34	100	104	99	98	M	0.1	62	45	83	G	F	I	R	MR	I	S
Enterprise †	48	101	104	100	102	M	XX	63	44	83	G	F	MS	I	R	I	MS

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Generally, durum wheat is best adapted to southern Alberta. Outside of this area, durum tends to be late maturing and often subject to quality loss. The long term average maturity for Strongfield is 105 days and is rated as Medium (M). Strongfield yields about 10% higher than AC Barrie in areas of best adaptation. Durum varieties are generally more susceptible to Fusarium Head Blight than CWRS wheat varieties. AAC Cabri, AAC Raymore and CDC Fortitude have a solid stem that confers resistance to the wheat stem sawfly. VB - designates a varietal blend to preserve the *Sm1* orange wheat blossom midge tolerance gene. New registrations: AAC Succeed VB (DT871). Insufficient data to describe: AAC Succeed. XX - Insufficient data to describe. † - Flagged for possible removal in 2019.

MALTING BARLEY

Variety	2 or 6 row	Awn Type	Overall Station Years of Testing	Overall Yield	Yield Category (% AC Metcalfe): Low < 75 (bu/ac)	Medium 75 - 100 (bu/ac)	High 100 - 125 (bu/ac)	V. High > 125 (bu/ac)	Agronomic Characteristics: Maturity Rating	Test Weight (lb/bu)	TKW (g)	Height (cm)	Resistance to Lodging	Disease Tolerance: Loose Smut	Other Smuts	Root Rot	Scald	Net Blotch: Spot form	Net form	Fusarium Head Blight
Varieties tested in the 2017 trials (Yield, significant differences and agronomic data only directly comparable to AC Metcalfe)																				
AC Metcalfe (bu/ac)				100	59	88	110	137												
AC Metcalfe	2	R		100	100	100	100	100	M	52	46	79	F	R	I	I	S	I	S	I
AAC Connect ▲	2	R	27	103+	XX	XX	106	104+	M	50	49	77	G	S	R	MS	S	MR	I	MR
AAC Synergy	2	R	54	114+	121+	112+	114+	113+	M	51	48	76	F	S	I	I	S	R	MR	MS
CDC Fraser ▲	2	R	39	109+	XX	114	110+	108+	M	51	49	76	G	R	MR	MS	MS	MR	MR	MR
Lowe ▲	2	R	27	110+	XX	XX	115+	105+	L	51	48	84	F	R	R	XX	MR	MR	I	MR
Sirish ▲	2	R	27	111+	XX	XX	108	114+	M	51	48	67	G	S	R	XX	MR	MS	MS	MS
TR13606 ▲	2	R	27	109+	XX	XX	107	109+	M	51	46	79	G	R	R	XX	MS	MR	I	I
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to AC Metcalfe)																				
Bentley	2	R	77	105+	109	102	105+	106+	M	52	47	81	G	MS	MR	MR	S	R	MS	MS
CDC Bow	2	R	42	104+	XX	106	105	104	M	51	48	77	VG	S	I	MS	MS	MR	S	MS
CDC Clear (hulless)	2	R	43	95-	XX	92-	100	XX	L	62	47	85	G	R	R	I	S	R	MS	MR
CDC Copeland	2	R	137	103+	96	101	106+	104+	M	51	47	81	F	MS	I	I	S	I	I	I
CDC Kindersley	2	R	47	104+	XX	102	104	104+	E	53	43	78	G	S	R	I	S	MR	MS	I
CDC Meredith	2	R	65	107+	102	108+	108+	107+	L	51	46	76	F	R	MR	MR	S	R	S	I
CDC PlatinumStar ▲	2	R	42	106+	XX	108	107+	102	M	53	49	82	F	R	R	S	S	MR	I	MR
CDC PolarStar	2	R	43	101	XX	103	105+	97	M	52	44	79	G	S	R	MS	S	MR	S	MR
Cerveza	2	R	49	109+	XX	109+	108+	109+	M	51	46	74	F	R	R	I	S	MR	MS	I
Harrington †	2	R	284	93-	96-	94-	93-	91-	M	51	44	78	F	MS	MS	I	S	MS	S	MR
Major	2	R	72	107+	104	108+	107+	106+	M	51	45	73	G	R	MR	I	MS	MR	I	I
Merit 57 †	2	R	87	109+	110+	108+	109+	111+	VL	51	44	79	F	MS	S	I	MS	MR	MS	MS
Newdale	2	R	94	105+	106	104+	105+	106+	M	52	46	73	F	S	MR	MR	MS	MR	I	I
LEGACY	6	SS	122	99	93	95-	102	103	M	49	39	82	G	I	MR	MR	S	MR	S	MS
Tradition †	6	SS	121	98	90-	95-	101	103	E	50	40	81	G	S	MR	MR	S	I	S	S

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. The long term average maturity for AC Metcalfe is 95 days and is rated as Medium (M). Varieties rated Intermediate (I) to Susceptible (S) for smuts should be treated with a systemic seed treatment to reduce the potential for infection. The Canadian Malting Barley Technical Centre (CMBTC) evaluates and recommends malting barley varieties for industry acceptance. Please refer to the 2017-2018 CMBTC Recommended Malt Barley Variety List for more information. CDC Clear is a hulless malting variety. New registrations:AAC Connect (TR12225), CDC GoldStar (TR13812), Lowe (TR13609), Sirish (TR14928). † - Flagged for possible removal in 2019.

FEED AND FOOD BARLEY

Variety	2 or 6 row	Awn Type	Overall Station Years of Testing	Overall Yield	Yield Category (% AC Metcalfe): Low < 75 (bu/ac)	Medium 75 - 100 (bu/ac)	High 100 - 125 (bu/ac)	V. High > 125 (bu/ac)	Agronomic Characteristics: Maturity Rating	Test Weight (lb/bu)	TKW (g)	Height (cm)	Resistance to Lodging	Disease Tolerance: Loose Smut	Other Smuts	Root Rot	Scald	Net Blotch: Spot form	Net Blotch: Net form	Fusarium Head Blight
GENERAL PURPOSE																				
Varieties tested in the 2017 trials (Yield, significant differences and agronomic data only directly comparable to AC Metcalfe)																				
AC Metcalfe (bu/ac)				100	59	88	110	137												
AC Metcalfe	2	R		100	100	100	100	100	M	52	46	79	F	R	I	I	S	I	S	I
Altorado	2	R	39	112+	XX	117	109+	114+	M	52	48	74	G	MR	MR	MR	S	MR	S	I
CDC Austenson	2	R	77	112+	110	112+	110+	115+	L	53	47	78	G	S	R	I	S	R	MS	I
Champion	2	R	178	112+	120+	111+	111+	111+	M	53	49	76	G	S	R	MR	S	I	S	I
Claymore	2	R	54	113+	106	113+	110+	118+	L	51	47	77	G	S	R	I	S	I	S	I
Oreana	2	R	54	111+	105	108+	115+	114+	L	53	50	66	VG	S	R	I	S	MR	S	S
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to AC Metcalfe)																				
Brahma	2	R	87	111+	112+	109+	113+	111+	M	53	47	74	G	MS	R	MR	S	I	I	I
Busby	2	R	45	104+	107	103	106	103	M	53	49	78	G	S	MR	S	I	MR	MS	I
CDC Coalition	2	R	57	110+	107	112+	108+	109+	L	53	47	74	G	R	R	I	S	MR	S	I
CDC Cowboy	2	R	75	95-	107	94-	93-	96-	L	52	55	103	F	MS	MR	I	MS	MR	I	MR
CDC Maverick	2	S	43	95-	XX	90-	97	96	M	54	55	98	F	S	R	I	MS	MR	I	MR
CDC Trey	2	R	106	103+	101	105+	101	105+	M	52	50	80	G	MS	R	MR	MS	R	I	I
Canmore	2	R	40	107+	XX	104	111+	108+	M	52	49	73	G	R	R	I	MR	MR	MS	I
CONLON	2	S	63	94-	97	93-	93-	96-	VE	52	52	80	G	I	I	MR	S	MR	I	MR
Gadsby	2	R	45	112+	XX	114+	114+	108+	M	53	51	83	F	R	R	I	R	MR	MS	I
Ponoka †	2	R	120	108+	101	107+	110+	109+	L	51	46	80	G	R	R	I	MR	MR	MS	I
Seebe †	2	R	229	101	97	100	102	100	VL	52	50	86	G	S	R	I	MR	MS	S	MR
XENA †	2	R	271	112+	111+	109+	114+	112+	M	52	49	77	G	MS	MS	MR	S	I	S	MR
AC Harper †	6	SS	166	103+	95	96-	102	111+	M	48	40	80	G	MS	I	I	I	I	I	MS
AC Ranger	6	S	48	107+	101	99	118+	107+	L	49	43	74	F	MS	I	MR	MS	MR	I	S
AC Rosser †	6	S	166	108+	101	102	109+	113+	M	48	41	82	G	MS	R	MR	S	MR	I	S
Amisk	6	SS	40	105+	XX	105	104	108+	M	49	46	69	VG	S	MS	MS	I	MR	I	S
Chigwell	6	S	43	104	XX	98	106	111+	M	49	41	76	G	MS	MR	MS	MR	MR	I	S
Muskwa †	6	S	44	105+	XX	103	105	110+	M	50	42	73	G	MS	R	MS	MR	MR	MS	S
Sundre	6	S	72	110+	100	105	112+	117+	L	51	43	86	G	MS	R	MS	R	I	MS	S
Trochu	6	S	136	107+	101	102	109+	112+	M	49	41	78	G	MS	MR	MR	I	MR	S	I
Vivar	6	R	175	109+	97	105+	109+	115+	M	49	44	73	VG	I	R	MR	I	MR	R	S
HULLESS																				
Varieties tested in the 2017 trials (Yield, significant differences and agronomic data only directly comparable to AC Metcalfe)																				
CDC Ascent ▲	2	R	27	95-	XX	102	92	94-	M	60	44	81	G	MR	MR	I	MS	MR	S	MR
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to AC Metcalfe)																				
CDC Carter †	2	R	45	97-	97	99	94-	XX	M	62	39	77	VG	R	R	S	MS	MR	I	I
CDC McGwire †	2	R	107	93-	88-	93-	99	XX	M	61	39	80	VG	MS	MR	MR	I	MR	I	MR
Falcon	6	S	181	83-	72-	83-	91-	89	E	58	35	68	VG	MS	MR	I	I	I	I	S
Tyto †	6	S	72	81-	79-	84-	96	96	M	55	40	73	VG	S	R	I	MS	I	S	MS

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. The long term average maturity for AC Metcalfe is 95 days and is rated as Medium (M). Varieties rated Intermediate (I) to Susceptible (S) for smuts should be treated with a systemic seed treatment to reduce the potential for infection. Hulless varieties leave the hull in the field and thus grain yields comparable to hulled varieties are 9-12% lower. Handling of hulless varieties should be minimized to avoid seed damage. CDC Carter, CDC McGwire, Falcon and Tyto are normal starch barleys suitable for food use. New registrations: CDC Ascent (HB13324). † - Flagged for possible removal in 2019.

SPRING TRITICALE

Variety	Overall Station Years of Testing	Overall Yield	Yield Category: Low < 70 (bu/ac)	Medium 70 - 100 (bu/ac)	High 100-130 (bu/ac)	V. High > 130 (bu/ac)	Agronomic Characteristics: Maturity Rating	Test Weight (lb/bu)	TKW (g)	Height (cm)	Resistance to: Lodging	Shattering	Sprouting	Disease Tolerance: Ergot	Stripe Rust	Bunt	Fusarium Head Blight
Varieties tested in the 2017 trials (Yield, significant differences and agronomic data only directly comparable to Brevis)																	
Brevis (bu/ac)		102	61	90	124	158											
Brevis		100	100	100	100	100	M	60	46	92	G	G	F	MR	MR	R	I
AAC Delight ▲	21	95-	XX	XX	98	94	M	57	55	96	G	G	XX	MR	R	R	I
Previously tested varieties: 2011 - 2013 (Yield and agronomic data only directly comparable to Brevis)																	
Sunray	35	90-	93-	91-	XX	91-	M	57	45	94	VG	G	F	MR	MR	R	MS
Taza	35	88-	91-	89-	XX	90-	M	58	47	100	G	G	F	I	MR	R	S
Previously tested varieties: 2001 - 2013 (Yield and agronomic data only directly comparable to AC Ultima)																	
AC Ultima (bu/ac)		82	54	85	117	146											
AC Ultima		100	100	100	100	100	E	57	45	96	G	G	F	MS	MR	R	I
Bumper †	41	104	114+	100	99	96	E	59	45	90	VG	G	F	XX	MR	R	MS
Bunker	49	90-	88-	92-	92-	xx	VL	57	48	107	F	G	F	XX	MR	R	I
Pronghorn	120	101	100	101	103	102	M	55	43	98	G	G	F	I	MR	R	MR
Taza	48	98	98	100	93-	XX	M	57	47	99	G	G	F	I	MR	R	S
Tyndal	55	101	104	99	98	96	L	57	44	97	G	G	P	XX	MR	R	MS

Remarks: Triticale is late maturing compared to CWRS wheat (approximately five days later). AC Ultima yields about 30% more than AC Barrie (CWRS wheat) in areas of adaptation. AAC Delight, Bunker, Taza, and Tyndal have heads with reduced-awns which may be beneficial when harvested as forage or silage. New registration: AAC Delight (T225). XX - Insufficient data to describe. † - Flagged for possible removal in 2019.

OAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% CDC Dancer): Low < 70 (bu/ac)	Medium 70 - 100 (bu/ac)	High 100 - 130 (bu/ac)	V. High > 130 (bu/ac)	Agronomic Characteristics: Maturity Rating	Test Weight (lb/bu)	TKW (g)	Height (cm)	Resistance to Lodging	Tolerance to Smuts
MILLING												
Varieties tested in the 2017 trials (Yield, significant differences and agronomic data only directly comparable to CDC Dancer)												
CDC Dancer (bu/ac)		**96**	**49**	**84**	**111**	**148**						
CDC Dancer		**100**	**100**	**100**	**100**	**100**	**E**	**41**	**37**	**95**	**G**	**R**
AC Morgan	73	113+	113+	110+	114+	115+	M	40	41	91	VG	I
Akina	30	109+	XX	103	114+	111+	M	40	39	90	VG	R
CDC Ruffian	38	110+	108	109	116+	108	M	40	39	93	G	R
Kara	20	108	XX	101	112	110	M	41	41	95	VG	MR
Kyron ▲	20	115+	XX	108	121+	117+	M	41	40	98	VG	XX
Pomona ▲	20	104	XX	101	103	107	M	42	39	104	G	XX
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to CDC Dancer)												
AAC Justice	28	104	XX	99	109+	XX	M	42	36	91	G	R
AC Juniper	80	104+	102	104	106+	105+	E	41	38	94	VG	I
Bradley †	31	104+	XX	103	108	106	M	39	39	92	VG	R
CDC Boyer †	89	102	103	102	100	105	M	39	42	101	G	MS
CDC Minstrel	61	104+	103	103	105	105+	M	39	38	88	VG	R
CDC Norseman	27	101	XX	100	101	XX	E	41	38	94	G	MS
CDC Orrin	52	109+	113+	107+	107+	XX	M	41	40	84	G	R
CDC Seabiscuit	30	111+	124	106	108	108	M	39	41	101	G	MR
CDC Weaver †	44	104	108+	103	100	100	M	40	43	91	F	R
CS Camden	27	109+	XX	109+	106	XX	L	41	39	90	G	I
Derby	79	101	103	102	96-	105	L	41	39	103	G	MS
Jordan †	36	112+	112+	109+	117+	XX	VL	38	44	87	G	R
Souris †	28	110+	120+	103	111	XX	M	41	34	91	VG	R
Stride	30	104+	101	102	107	106	M	42	35	104	G	R
Triactor	47	110+	109	108+	114+	110+	M	38	38	89	G	R
FEED												
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to CDC Dancer)												
AC Mustang *	108	114+	118+	112+	110+	116+	L	42	37	103	G	I
CDC Nasser	31	116+	132	107	115+	110	L	39	36	98	G	MR
Lu *†	58	100	99	98	99	108	VE	41	39	85	G	R
Previously tested varieties (Yield and agronomic data only directly comparable to CDC Dancer)												
CDC Baler *	42	99	96	106	96	XX	L	40	43	99	XX	S
CDC Haymaker	28	104	XX	103	105	XX	L	39	40	100	F	MR
Murphy *	51	95-	93	96	97	94	M	39	36	108	XX	S

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. The long term average maturity for CDC Dancer is 98 days and rated as Early (E). Varieties rated Intermediate (I) to Susceptible (S) for the smuts should be treated with a systemic seed treatment to reduce the potential for infection. New registrations: Kara (CFA1102), Kyron (CFA1207), ORe3541M (OT6008), ORe3542M (OT6009), OT3085 and Pomona (CFA1220). Insufficient data to describe: ORe3541M (OT6008), ORe3542M (OT6009) and OT3085.
* Yield figures based on direct and indirect comparisons with CDC Dancer. † - Flagged for possible removal in 2019.

WINTER WHEAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% Radiant): Low < 45 (bu/ac)	Medium 45 - 75 (bu/ac)	High 75 - 105 (bu/ac)	V. High > 105 (bu/ac)	Agronomic Characteristics: Winter Survival	Maturity Rating	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Resistance to Lodging	Disease Tolerance: Stripe Rust	Leaf Rust	Stem Rust	Bunt	Fusarium Head Blight
CANADA WESTERN RED WINTER																		
Yield, significant differences and agronomic data only directly comparable to Radiant																		
Radiant (bu/ac)		**76**	**37**	**63**	**87**	**114**												
Radiant		**100**	**100**	**100**	**100**	**100**	**VG**	**L**	**12.0**	**63**	**36**	**90**	**VG**	**S**	**S**	**S**	**S**	**S**
AAC Elevate	72	106+	106	107+	107+	XX	G	M	+0.3	63	39	84	VG	MS	I	MR	MR	I
AAC Gateway	75	100	XX	99	103	XX	F	M	+0.9	63	33	77	VG	MR	I	MR	S	I
AAC Goldrush ▲	29	102	XX	98	105	XX	VG	M	+0.5	63	34	86	G	I	R	MR	S	I
AAC Wildfire ▲	43	114+	XX	117+	114+	XX	VG	VL	+0.3	64	38	86	G	R	I	S	MR	MR
AC Tempest †	117	97-	96	97	96-	99	P	VL	+1.5	63	37	91	VG	MR	S	S	MS	I
CDC Buteo †	198	97-	94-	98	95-	101	VG	M	+0.3	65	34	91	F	S	I	I	S	MR
CDC Chase †	43	101	XX	96	104	XX	F	M	+0.6	64	33	94	F	MR	R	R	S	MS
Emerson	79	98	96	95	100	XX	G	M	+0.7	64	30	86	G	MR	I	R	S	R
Flourish †	119	100	99	98	102	104	F	E	+0.6	63	35	80	VG	I	I	I	MR	S
Moats	90	104+	91	102	107+	108+	G	M	+0.7	64	33	91	F	MR	R	R	MS	S
CANADA WESTERN EXPERIMENTAL																		
Yield, significant differences and agronomic data only directly comparable to Radiant																		
AAC Icefield ▲	39	105	XX	98	111+	XX	F	M	-0.6	63	32	82	VG	R	R	MR	S	MS
CANADA WESTERN SPECIAL PURPOSE																		
Yield, significant differences and agronomic data only directly comparable to Radiant																		
Pintail	79	108+	XX	109+	109+	XX	VG	L	-1.4	61	29	88	F	MR	MS	MS	S	S

REMARKS: Winter wheat can be grown successfully in all areas of Alberta if seeded into standing stubble within the optimal seeding date period (generally before September 15) and if there is adequate snowfall. Varieties with poor (P) winter survival are generally not suitable outside of southern Alberta. The long term average maturity for **Radiant** is August 10 and is rated as late (L). Fusarium head blight infection may be reduced if varieties with Intermediate (I) resistance or better are used and when recommended seeding dates are followed. **Radiant** and **AAC Elevate** have tolerance to the wheat curl mite, the vector for Wheat Streak Mosaic Virus. To preserve the effectiveness of the wheat curl mite tolerance gene, agronomic practices that eliminate the "green bridge" of plant material that serves as a reservoir for mites should be followed whenever possible. Fields in southern Alberta should be inspected in the fall for infestation by Russian wheat aphid, as it may reduce winter survival. **AAC Wildfire** expresses some tolerance to Russian wheat aphid. **AC Tempest, Radiant** and **AAC Wildfire** have bronze chaff at maturity. **AAC Icefield** is a hard white winter wheat under interim registration, eligible for experimental grades to facilitate market research under an Identity Preserved system. **AAC Icefield** expresses high milling yield of very white flour and good gluten strength at lower protein concentrations that may be of interest in some niche markets. For more information contact FP Genetics. **Pintail** has an awnless head which may improve palatability when harvested for forage or silage. **AAC Wildfire** will be available in 2018. Limited quantities of **AAC Goldrush** and **AAC Icefield** may be available in 2019. XX - Insuficient data to describe. † Flagged for possible removal in 2019.

FALL RYE

Variety	Hybrid or OP Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% Hazlet): Low < 48 (bu/ac)	Medium 48 - 80 (bu/ac)	High 80 - 112 (bu/ac)	V. High > 112 (bu/ac)	Agronomic Characteristics: Winter Survival	Test Weight (lb/bu)	TKW (g)	Falling Number (sec)	Height (cm)	Resistance to Lodging
Yield, significant differences and agronomic data only directly comparable to Hazlet													
Hazlet (bu/ac)			**101**	**48**	**67**	**94**	**137**						
Hazlet	**OP**	**54**	**100**	**100**	**100**	**100**	**100**	**EX**	**59**	**39**	**145**	**108**	**G**
KWS Bono	Hybrid	24	137+	XX	115	130+	133+	EX	58	34	258	101	VG
Brasetto	Hybrid	20	123+	XX	121	134	120+	EX	59	36	246	104	VG
KWS Daniello	Hybrid	11	123+	XX	115	126	122+	VG	59	35	258	104	G
KWS Gatano	Hybrid	14	124+	XX	XX	125+	120+	VG	58	33	250	102	F
Guttino	Hybrid	20	120+	XX	119	122+	120+	EX	60	36	279	101	VG
Prima	OP	51	85	77-	75-	91	89-	EX	58	33	188	120	F

REMARKS: Hazlet has lower viscosity which improves feed performance in monogastric livestock. Fall rye is much more cold tolerant than winter wheat or winter triticale. The long term average heading date and maturity for Hazlet is June 1 and August 6, respectively. All fall rye varieties are similar for heading and maturity and are considered early. A major factor in marketing rye grain into the milling market is sprouting. This is generally measured using the Hagberg falling number test and is measured in seconds. Typically, a falling number of 180 seconds or greater is preferred by the rye milling market. Falling number is heavily influenced by moisture around harvest time and producers must make sure rye is harvested in a timely manner, similar to wheat crops. There is considerable variation in fall rye varieties for falling number and this must be considered if the milling market is the targeted end-user for rye grain. All fall rye is susceptible to ergot, however Daniello and Gatano have reduced susceptibility. AFSC crop insurance deadlines for seeding fall rye is September 20, north of the Bow River and September 30, south of the Bow River. XX - Insufficient data to describe.

FLAX

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% CDC Bethune): Low < 20 (bu/ac)	Medium 20 - 30 (bu/ac)	High 30 - 37 (bu/ac)	V. High > 37 (bu/ac)	Agronomic Characteristics: Maturity Rating	Seed Colour	Seed Size	Height (cm)	Resistance to Lodging	Disease Tolerance: Fusarium Wilt	Powdery Mildew	Quality: Oil Content (%)	ALA Content (%)	Iodine Value
Varieties tested in the 2017 trials (Yield, significant differences and agronomic data only directly comparable to CDC Bethune)																
CDC Bethune (bu/ac)		**31**	**14**	**26**	**34**	**46**										
CDC Bethune		**100**	**100**	**100**	**100**	**100**	**L**	**brown**	**M**	**57**	**G**	**MR**	**MR**	**46**	**55**	**189**
CDC Buryu ▲	26	100	97	104	99	97	L	brown	L	57	G	MR	MR	46	56	193
CDC Plava	34	101	98	109	101	93	M	brown	M	53	G	MR	XX	47	57	196
Topaz	26	101	104	100	97	105	L	brown	M	55	G	MR	MR	47	55	189
WestLin 61	26	101	99	106	100	97	M	brown	S	52	G	MR	MR	48	61	197
WestLin 72	26	100	96	106	103	94	VL	brown	S	53	VG	MR	MR	47	57	193
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to CDC Bethune)																
AAC Bravo	23	104	XX	XX	XX	105+	L	brown	L	64	G	MR	MR	45	60	194
CDC Glas	23	106+	XX	XX	106	108+	L	brown	M	61	G	MR	MR	46	57	192
CDC Neela	24	109+	108	116	108	XX	L	brown	M	55	G	MR	MR	46	59	194
CDC Sanctuary	27	106+	112	99	XX	104	VL	brown	M	64	G	MR	MR	46	57	191
CDC Sorrel	32	104	112	104	100	99	L	brown	L	61	F	MR	MR	45	58	193
Hanley †	37	97-	99	97	95	97	M	brown	M	53	VG	R	MR	45	59	198
Prairie Grande†	76	98-	103	101	94	96	M	brown	M	53	G	MR	MR	46	58	193
Prairie Sapphire	23	96	XX	XX	XX	100	L	brown	M	64	G	MR	MR	48	57	193
Prairie Thunder	40	100	106	95	XX	99	M	brown	M	55	G	R	MR	45	58	195
Taurus †	27	98-	103	97	XX	XX	M	brown	M	53	VG	MR	R	46	54	187
VT50	24	103	XX	109	104	97	VL	yellow	S	51	VG	MR	XX	47	68	209
WestLin 60	24	100	100	105	XX	98	M	brown	M	50	G	MR	XX	46	60	198
WestLin 71	25	95-	99	91	XX	94	L	brown	M	56	G	MR	MS	48	61	198

Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. The long term average maturity for CDC Bethune in Alberta is 110 days and rated as Late (L). All varieties are immune to flax rust. Insufficient data to describe: AAC Prairie Sunshine. † - Flagged for possible removal in 2019.

Canola variety information

Canola Performance Trials (CPT) have been conducted since 2011 and represent the next generation in variety evaluation for Western Canadian canola growers. The trials were designed to provide the following key information:

- relevant, unbiased and timely performance data that reflects actual production practices
- comparative data on leading varieties and newly introduced varieties from participating companies
- detailed reporting on agronomic characteristics such as yield, height, lodging, maturity and economic performance as well as site specific performance variables including weather, soil type, crop nutrition, seeding and harvest management

The CPT trials are conducted under the guidance of a governance committee that approves participating varieties, protocol design, data collection, analyses, reports and finance management.

The 2017 CPT program was funded by the Alberta Canola Producers Commission, SaskCanola and the Manitoba Canola Growers Association with contributions from the British Columbia Grain Producers Association. The Canola Council of Canada delivers the program on their behalf. More about the CPT program and the CPT Technical and Governance Committee is in the Canola Variety Selection Guide available at the website: www.canolaperformancetrials.ca/

Canola trial summaries

The CPT summaries in this factsheet are based on successful trials that did not show confounding factors during field inspections. The combination of drought and excessive moisture in different areas resulted in only 10 successful small plot trials in 2017. The small trial sites were distributed based on seeded acres in Manitoba, Saskatchewan and Alberta.

Small plot trials included a limited selection of popular and newly introduced varieties. The new small plot system ensured the following:

- all varieties are treated with appropriate commercially associated herbicides and seed treatments
- an independent third-party representative inspected all trials
- harvest occurred at the most appropriate time to minimize harvest losses due to maturity differences

Field scale comparisons add extra perspective for assessing consistency in variety performance. In 2015, the large scale comparisons were changed to assess the yield impact of selected shatter tolerant varieties under swath or straight cut harvest systems. In 2017, selected clubroot resistant varieties were also tested in large scale trials (but not on clubroot infested land).

Canola trial analysis

To ensure quality data and statistical analysis, the CPT technical committee established protocols and developed research plot designs. Performance objectives were established to provide guidelines on timely field operations and data collection. All sites were inspected to verify that guidelines were followed for fair comparisons among the varieties tested.

Audits of field scale projects give growers the confidence that the protocol was conducted in a scientifically sound manner and that comparisons are appropriate. Qualified professionals with extensive backgrounds in conducting field scale research trials performed the audits.

Small yield differences can easily be due to random variation and, thus, are unlikely to be real effects of varieties. When comparing average zone yields for varieties in the small plot data, the least significant difference (LSD) ranged from 10 to 14 per cent in 2017. This number is based on a confidence level that similar differences would occur by chance less than 5 per cent of the time.

In the small plot design used, varieties are grouped by herbicide system, which means that the LSD shown strictly applies only to comparisons between a few varieties of the same herbicide system. Comparisons between many varieties or between different herbicide systems are still valid, but the LSD would be larger.

More importantly, comparisons between varieties within the same herbicide system reveal only genetic differences, whereas variety comparisons from different herbicide systems involve the net effect of both genetic and herbicide effects (weed control + crop tolerance).

When comparing variety yields in the field scale summaries, an asterisk (*) indicates yields that are statistically different (5% level) using the paired t-test.

As results from more sites are combined, the statistical power to determine if small differences are not due to chance often improves quickly up to 15 to 20 sites, and then marginally after that. This result means that smaller differences are more relevant when all sites are averaged, rather than just a few selected sites. Also, the predictability that the average yield differences would likely occur in other fields in future years increases when there are a high number of individual sites for comparing two varieties.

Where are CPT results available?

Results from zones with less than 5 sites of data are not shown in this publication due to limited reliability. Full results are available through an online interactive tool at the website: www.canolaperformancetrials.ca

The interactive tool allows growers to explore many agronomic factors and to search for trial data in specific geographic areas near their farming operations. Details on management, operations and environmental data for each individual site will be reported online. The online tool has an economic calculator that includes the costs associated with growing the selected variety to assist growers in determining potential profitability.

***Brassica rapa* (Polish canola) and Canola Quality *Brassica juncea*: no varieties were tested under PCT in 2012 through 2017.**

CANOLA PERFORMANCE TRIALS 2017 - SMALL PLOT RESULTS

		Mid Season zone (5 sites)				Overall 10 sites in 2017				
Distributor	Name	Yield (%5440)	Days to maturity	Lodging[1]	Height (Inches)	Yield (%5440)	Days to maturity	Lodging[1]	Height (Inches)	Disease tolerance[2]
	Clearfield									
BrettYoung	5545 CL	**96**	97	1.7	42	**96**	98	1.5	47	BL
CANTERRA SEEDS	CS2200 CL	**89**	100	1.6	42	**90**	100	1.4	46	BL
Crop Production Services / Proven Seed	PV 200 CL	**93**	98	1.7	43	**94**	98	1.4	47	BL
DupontPioneer	46H75	**96**	100	1.6	43	**96**	100	1.4	47	BL
	LSD (5%)	**13**				**13**				
	Liberty Link									
Bayer CropScience	5440	**100**	96	1.3	43	**100**	97	1.2	47	BL
Bayer CropScience	L241C	**97**	96	1.3	42	**98**	96	1.2	45	BL, CR
Bayer CropScience	L252	**105**	96	1.4	43	**105**	98	1.3	46	BL
	LSD (5%)	**14**				**11**				
	Roundup Ready									
DupontPioneer	45H33	**100**	95	1.7	42	**99**	96	1.5	48	BL, CR
DupontPioneer	45M35	**103**	97	1.5	41	**102**	97	1.4	45	BL
BrettYoung	6074 RR	**99**	100	1.7	40	**99**	99	1.4	44	BL, S
BrettYoung	6076 RR	**95**	98	1.5	44	**95**	98	1.3	48	BL, CR, S
BrettYoung	6080 RR	**91**	97	1.5	38	**91**	97	1.3	43	BL
BrettYoung	6090 RR	**101**	99	1.5	45	**99**	98	1.4	49	BL, CR
DEKALB	74-44 BL	**87**	95	1.7	39	**90**	96	1.4	42	BL
CANTERRA SEEDS	CS2000	**94**	98	1.7	41	**94**	97	1.4	46	BL, CR
CANTERRA SEEDS	CS2100	**97**	97	1.8	40	**95**	97	1.6	44	BL
CANTERRA SEEDS	CS2300	**103**	98	1.5	42	**101**	99	1.3	48	BL
DL Seeds	DL1634 RR	**96**	100	1.5	43	**96**	100	1.3	48	BL
Crop Production Services / Proven Seed	PV 540 G	**94**	96	1.6	40	**96**	97	1.3	44	BL
Crop Production Services / Proven Seed	PV 581 GC	**97**	99	1.5	43	**95**	99	1.3	48	BL, CR
BrettYoung	4187 RR	**97**	99	1.4	43	**97**	99	1.3	47	BL, CR
Cargill	V12-1*	**95**	96	1.6	41	**95**	97	1.4	44	BL
	LSD (5%)	**10**				**10**				
CHECK 5440 AVERAGE YIELD (BU/AC)		**67**				**65**				

* Indicates varieties with Specialty oil profiles and premiums associated with pricing. Visit www.canolaperformancetrials.ca for more details. 1 - Lodging score, 1 to 5 scale, lower score indicates less lodging. 2 - Indicates genetic disease resistance with an "R" or resistant rating to BL=Blackleg, CR=Clubroot and improved tolerance to sclerotinia "S", based on variety descriptions submitted to CFIA. LSD - least signficant difference at 5% level

CANOLA PERFORMANCE TRIALS 2017 - LARGE SCALE VARIETY (% YIELD OF 5440)

Variety	Season Zone			Overall Sites
	Long (7)	Mid (14)	Short (5)	
Standard Harvest Trials				
		Yield (bu/ac)		
45H33	56	53	50	53
L252	61*	57*	53*	57*

* - indicates statistically significant different yield (5% level)

Variety	Season Zone	Overall Sites (12)
	Long (9)	
Straight Cut Trials		
	Yield (bu/ac)	
45M35	43	47
75-65 RR	43	47
L140P	45*	49*

* - indicates L140P yield is statistically different than the other 2 varieties (5% level). While 45M35 and 75-65 RR yields are statistically similar

Variety	Season Zone	Overall Sites (8)
Clubroot Resistant Variety Trials		
	Yield (bu/ac)	
CS2000		61
L241C		62ns

ns - indicates the yields were not statistically different

BREEDING INSTITUTIONS AND SEED DISTRIBUTORS OF VARIETIES LISTED IN THIS PUBLICATION

Crop Kind, Class & Variety	Breeding Institution	Distributor
FEED and FOOD BARLEY		
Two-Row		
Altorado	Highland Specialty Grains	Proven Seed/CPS Canada Inc.
Brahma	Westbred, LLC.	Proven Seed/CPS Canada Inc.
Busby	FCDC (Lacombe)	Mastin Seeds
Canmore	FCDC (Lacombe)	CANTERRA SEEDS
CDC Austenson	U of S - CDC	SeCan Members
CDC Coalition	U of S - CDC	CANTERRA SEEDS
CDC Cowboy	U of S - CDC	SeCan Members
CDC Maverick	U of S - CDC	SeCan Members
CDC Trey	U of S - CDC	FP Genetics
Champion	Westbred, LLC.	Proven Seed/CPS Canada Inc.
Claymore	Highland Specialty Grains	Proven Seed/CPS Canada Inc.
CONLON	NDSU	Seed Depot
Gadsby	FCDC (Lacombe)	SeCan Members
Oreana	Highland Specialty Grains	Proven Seed/CPS Canada Inc.
Ponoka	FCDC (Lacombe)	SeCan Members
Seebe	FCDC (Lacombe)	SeCan Members
XENA	Westbred, LLC.	Proven Seed/CPS Canada Inc.
Six-Row		
AC Harper	AAFC (Lethbridge)	SeCan Members
AC Ranger	AAFC (Brandon)	FP Genetics
AC Rosser	AAFC (Brandon)	SeCan Members
Amisk	FCDC (Lacombe)	SeCan Members
Chigwell	FCDC (Lacombe)	SeCan Members
Muskwa	FCDC (Lacombe)	SeedNet Inc.
Sundre	FCDC (Lacombe)	Mastin Seeds
Trochu	FCDC (Lacombe)	SeCan Members
HULLESS - FOOD and FEED BARLEY		
CDC Ascent	U of S - CDC	SeCan Members
CDC Carter	U of S - CDC	SeCan Members
CDC McGwire	U of S - CDC	SeCan Members
Falcon	FCDC (Lacombe)	Progressive Seeds Ltd
Tyto	FCDC (Lacombe)	Progressive Seeds Ltd
MALTING BARLEY		
Two-Row		
AAC Connect	AAFC (Brandon)	CANTERRA SEEDS
AAC Synergy	AAFC (Brandon)	Syngenta Canada
AC Metcalfe	AAFC (Brandon)	SeCan Members
Bentley	FCDC (Lacombe)	CANTERRA SEEDS
CDC Bow	U of S - CDC	SeCan Members
CDC Clear (hulless)	U of S - CDC	SeCan Members
CDC Copeland	U of S - CDC	SeCan Members
CDC Fraser	U of S - CDC	SeCan Members
CDC Kindersley	U of S - CDC	SeCan Members
CDC Meredith	U of S - CDC	SeCan Members
CDC PlatinumStar	U of S - CDC/Sapporo/PML	CANTERRA SEEDS
CDC PolarStar	U of S - CDC/Sapporo/PML	CANTERRA SEEDS
Cerveza ^	AAFC (Brandon)	Mastin Seeds
Harrington	U of S - CDC	SeCan Members
Lowe	FCDC (Lacombe)	SeCan Members
Major	AAFC (Brandon)	Alliance Seed
Merit 57	Busch Ag Res. Inc.	CANTERRA SEEDS
Newdale	AAFC (Brandon)	FP Genetics
Sirish	Syngenta AG	Syngenta Canada
TR13606	FCDC (Lacombe)	FCDC (Lacombe)
Six-Row		
Legacy	Busch Ag Res. Inc.	Proven Seed/FP Genetics

Crop Kind, Class & Variety	Breeding Institution	Distributor
CANADA WESTERN AMBER DURUM		
AAC Cabri	AAFC (Swift Current)	SeCan Members
AAC Congress	AAFC (Swift Current)	CANTERRA SEEDS
AAC Current	AAFC (Swift Current)	Alliance Seed.
AAC Durafield	AAFC (Swift Current)	SeCan Members
AAC Marchwell VB	AAFC (Swift Current)	SeCan Members
AAC Raymore	AAFC (Swift Current)	SeCan Members
AAC Spitfire	AAFC (Swift Current)	SeCan Members
AC Navigator	AAFC (Swift Current)	Proven Seed/CPS Canada Inc.
Brigade	AAFC (Swift Current)	Proven Seed/CPS Canada Inc.
CDC Alloy	U of S - CDC	FP Genetics
CDC Carbide VB	U of S - CDC	Proven Seed/CPS Canada Inc.
CDC Desire	U of S - CDC	Syngenta Canada
CDC Dynamic	U of S - CDC	Proven Seed/CPS Canada Inc.
CDC Fortitude	U of S - CDC	Proven Seed/CPS Canada Inc.
CDC Verona	U of S - CDC	Alliance Seed.
CDC Vivid	U of S - CDC	Proven Seed/CPS Canada Inc.
Enterprise	AAFC (Swift Current)	CANTERRA SEEDS
Strongfield	AAFC (Swift Current)	SeCan Members
Transcend	AAFC (Swift Current)	FP Genetics
CANADA WESTERN RED SPRING		
5604HR CL	Syngenta Seeds Canada Inc.	Proven Seed/CPS Canada Inc.
5605HR CL	Syngenta Seeds Canada Inc.	Proven Seed/CPS Canada Inc.
AAC Bailey	AAFC (Swift Current)	CANTERRA SEEDS
AAC Brandon	AAFC (Swift Current)	SeCan Members
AAC Cameron VB	AAFC (Brandon)	CANTERRA SEEDS
AAC Connery	AAFC (Swift Current)	CANTERRA SEEDS
AAC Elie	AAFC (Swift Current)	Alliance Seed
AAC Pervail VB	AAFC (Winnipeg)	Alliance Seed
AAC Redberry	AAFC (Swift Current)	Alliance Seed
AAC Redwater	AAFC (Winnipeg)	SeCan Members
AAC Tisdale	AAFC (Swift Current)	SeCan Members
AAC Viewfield	AAFC (Swift Current)	FP Genetics
AC Barrie	AAFC (Swift Current)	SeCan Members
AC Intrepid	AAFC (Swift Current)	CANTERRA SEEDS
AC Splendor	AAFC (Winnipeg)	SeCan Members
Carberry	AAFC (Swift Current)	SeCan Members
Cardale	AAFC (Winnipeg)	Seed Depot
Coleman	U of Alberta	Lefsrud Seed
CDC Adamant VB	U of S - CDC	FP Genetics
CDC Abound	U of S - CDC	Proven Seed/CPS Canada Inc.
CDC Bradwell	U of S - CDC	SeCan Members
CDC Go	U of S - CDC	Public release U of S - CDC
CDC Hughes VB	U of S - CDC	Proven Seed/CPS Canada Inc.
CDC Landmark VB	U of S - CDC	FP Genetics
CDC Plentiful	U of S - CDC	FP Genetics
CDC Stanley	U of S - CDC	Proven Seed/CPS Canada Inc.
CDC Titanium VB	U of S - CDC	Proven Seed/CPS Canada Inc.
CDC Utmost VB	U of S - CDC	FP Genetics
CDC VR Morris	U of S - CDC	Proven Seed/CPS Canada Inc.
Glenn	NDSU	CANTERRA SEEDS
Go Early	U of Alberta	Mastin Seeds
Goodeve VB	AAFC (Swift Current)	Alliance Seed
Muchmore	AAFC (Swift Current)	FP Genetics
Peace	AAFC (Winnipeg)	CANTERRA SEEDS
Shaw VB	AAFC (Winnipeg)	SeCan Members
Stettler	AAFC (Swift Current)	SeCan Members
Superb	AAFC (Winnipeg)	SeCan Members
SY433	Syngenta Seeds Canada Inc.	Syngenta Canada
SY479 VB	Syngenta Seeds Canada Inc.	Alliance Seed
SY Slate	Syngenta Seeds Canada Inc.	Syngenta Canada
SY Sovite	Syngenta Seeds Canada Inc.	Syngenta Canada
Thorsby	U of Alberta	CANTERRA SEEDS
Vesper VB ^	AAFC (Winnipeg)	SeCan Members
WR859CL ^	Syngenta Seeds Canada Inc.	Richardson Intl

BREEDING INSTITUTIONS AND SEED DISTRIBUTORS OF VARIETIES LISTED IN THIS PUBLICATION (continued)

Crop Kind, Class & Variety	Breeding Institution	Distributor
OAT		
Milling		
AAC Justice	AAFC (Winnipeg)	FP Genetics
AC Juniper	AAFC (Lacombe)	Mastin Seeds
AC Morgan	AAFC (Lacombe)	SeCan Members
Akina	Lantmannen SW Seed	La Coop Fédérée
Bradley	AAFC - ECORC	SeCan Members
CDC Boyer	U of S - CDC	SeCan Members
CDC Dancer	U of S - CDC	FP Genetics/Cargill
CDC Minstrel	U of S - CDC	FP Genetics
CDC Norseman	U of S - CDC	SeCan Members
CDC Orrin	U of S - CDC	FP Genetics/Cargill
CDC Ruffian	U of S - CDC	FP Genetics
CDC Seabiscuit	U of S - CDC	CANTERRA SEEDS
CDC Weaver	U of S - CDC	FP Genetics
CS Camden	Lantmannen SW Seed	CANTERRA SEEDS
Derby	U of S - CDC	Proven Seed/Mastin Seeds
Jordan	AAFC - ECORC	SeCan Members
Kara	Lantmannen SW Seed	La Coop Fédérée
Kyron	Lantmannen SW Seed	La Coop Fédérée
Pomona	University of Minnesota	La Coop Fédérée
Souris	NDSU	Seed Depot
Stride	AAFC (Winnipeg)	SeCan Members
Triactor	Lantmannen SW Seed	CANTERRA SEEDS
Feed		
AC Mustang	AAFC (Lacombe)	Mastin Seeds
CDC Nasser	U of S - CDC	T & L Seeds
Lu	AAFC (Lacombe)	SeCan Members
Forage		
CDC Baler	U of S - CDC	FP Genetics
CDC Haymaker	U of S - CDC	SeCan Members
Murphy	AAFC (Lacombe)	SeCan Members
FALL RYE		
Bono	KWS Lochow GMBH	FP Genetics
Brasetto	KWS Lochow GMBH	FP Genetics
Daniello	KWS Lochow GMBH	SeedNet Inc.
Gatano	KWS Lochow GMBH	FP Genetics
Guttino	KWS Lochow GMBH	SeedNet Inc.
Hazlet	AAFC (Swift Current)	SeCan Members
Prima	AAFC (Swift Current)	SeCan Members
TRITICALE		
AAC Delight	AAFC (Lethbridge)	Fabian Seeds Ltd.
AC Ultima	AAFC (Swift Current)	FP Genetics
Bumper	AAFC (Swift Current)	SeCan Members
Bunker	FCDC (Lacombe)	FP Genetics
Pronghorn	FCDC (Lacombe)	Progressive Seeds
Sunray	AAFC (Lethbridge)	SeedNet Inc.
Taza	FCDC (Lacombe)	Solick Seeds
Tyndal	FCDC (Lacombe)	SeCan Members
FLAX		
AAC Bravo	AAFC (Morden)	FP Genetics
CDC Bethune	U of S - CDC	SeCan Members
CDC Glas	U of S - CDC	SeCan Members
CDC Neela	U of S - CDC	CANTERRA SEEDS
CDC Plava	U of S - CDC	SeCan Members
CDC Sanctuary	U of S - CDC	SeCan Members
CDC Sorrel	U of S - CDC	SeCan Members
Hanley	AAFC (Morden)	SeCan Members
Prairie Grande	AAFC (Morden)	SeCan Members
Prairie Sapphire	AAFC (Morden)	Alliance Seed
Prairie Thunder	AAFC (Morden)	CANTERRA SEEDS
Taurus	Limagrain Netherlands	FP Genetics
Topaz	CPS Canada Inc.	Alliance Seed
VT50	CPS Canada Inc.	Proven Seed/CPS Canada Inc.
WestLin 60	CPS Canada Inc.	Proven Seed/CPS Canada Inc.
WestLin 61	CPS Canada Inc.	Proven Seed/CPS Canada Inc.
WestLin 71	CPS Canada Inc.	Proven Seed/CPS Canada Inc.
WestLin 72	CPS Canada Inc.	Proven Seed/CPS Canada Inc.

Crop Kind, Class & Variety	Breeding Institution	Distributor
CANADA WESTERN HARD WHITE SPRING		
AAC Iceberg	AAFC (Winnipeg)	Alliance Seed
CDC Whitewood	U of S - CDC	SeCan Members
Snowbird	AAFC (Winnipeg)	FP Genetics
Snowstar	AAFC (Winnipeg)	SeCan Members
Whitehawk	AAFC (Winnipeg)	SeCan Members
CANADA PRAIRIE SPRING RED		
5700PR	Syngenta Seeds Canada Inc.	Proven Seed/CPS Canada Inc.
AAC Crossfield	AAFC (Winnipeg)	CANTERRA SEEDS
AAC Crusader	AAFC (Winnipeg)	CANTERRA SEEDS
AAC Entice	AAFC (Winnipeg)	Proven Seed/CPS Canada Inc.
AAC Foray VB	AAFC (Winnipeg)	SeCan Members
AAC Goodwin	AAFC (Swift Current)	SeCan Members
AAC Penhold	AAFC (Swift Current)	SeCan Members
AAC Ryley	AAFC (Swift Current)	SeCan Members
AAC Tenacious VB	AAFC (Winnipeg)	Alliance Seed
AC Crystal	AAFC (Swift Current)	SeCan Members
CDC Terain	U of S - CDC	FP Genetics
SY985	Syngenta Seeds Canada Inc.	Proven Seed / Richardson Intl
SY995	Syngenta Seeds Canada Inc.	Syngenta Seeds Canada Inc.
SY Rowyn	Syngenta Seeds Canada Inc.	Alliance Seed
CANADA WESTERN SPECIAL PURPOSE		
AAC Awesome VB	AAFC (Lethbridge)	SeCan Members
AAC Innova	AAFC (Lethbridge)	Alliance Seed
AAC NRG097	AAFC (Swift Current)	CANTERRA SEEDS
Alderon	KWS-UK	SeCan Members
CDC NRG003	U of S - CDC	CANTERRA SEEDS
Charing VB	KWS-UK	SeCan Members
Pasteur	Wiersum Plant Breeding	SeCan Members
Sparrow VB	KWS-UK	SeCan Members
SY087	Syngenta Seeds Canada Inc.	Syngenta Canada
CANADA WESTERN SOFT WHITE SPRING		
AAC Chiffon VB	AAFC (Lethbridge)	SeedNet Inc.
AAC Indus VB	AAFC (Lethbridge)	SeCan Members
AC Andrew	AAFC (Lethbridge)	SeCan Members
AC Meena	AAFC (Lethbridge)	Haney Farms
Sadash VB	AAFC (Lethbridge)	SeCan Members
CANADA NORTHERN HARD RED		
AAC Concord	AAFC (Swift Current)	CANTERRA SEEDS
AC Foremost	AAFC (Swift Current)	SeCan Members
Conquer VB	AAFC (Winnipeg)	CANTERRA SEEDS
Elgin ND	NDSU	FP Genetics
Harvest	AAFC (Winnipeg)	FP Genetics
Lillian	AAFC (Swift Current)	SeCan Members
Unity VB	AAFC (Winnipeg)	SeCan Members
CANADA WESTERN RED WINTER		
AAC Elevate	AAFC (Lethbridge)	SeCan Members
AAC Gateway	AAFC (Lethbridge)	Seed Depot
AAC Goldrush	AAFC (Lethbridge)	FP Genetics
AAC Wildfire	AAFC (Lethbridge)	SeCan Members
AC Tempest	AAFC (Lethbridge)	SeCan Members
CDC Buteo	U of S - CDC	SeCan Members
CDC Chase	U of S - CDC	CANTERRA SEEDS
Emerson	AAFC (Lethbridge)	CANTERRA SEEDS
Flourish	AAFC (Lethbridge)	SeCan Members
Moats	U of S - CDC	SeCan Members
CANADA WESTERN EXPRIMENTAL WINTER WHEAT		
AAC Icefield	AAFC (Lethbridge)	FP Genetics
CANADA WESTERN SPECIAL PURPOSE WINTER WHEAT		
Pintail	FCDC (Lacombe)	Mastin Seeds