

# Varieties of Grain Crops 2014

## Crop Production Areas



The cropland of Saskatchewan has been divided into four areas based roughly on agro-climatic conditions. Crop yields can vary from area to area. In choosing a variety, producers will want to consider the yield data in combination with marketing and agonomic factors.

**Area 1:** Drought is a definite hazard and high winds are common. Sawfly outbreaks often occur in this area. Cereal rust may be a problem in the southeastern section.

**Area 2:** Drought and sawfly may be problems in the western and central sections of the area. Cereal rust may be a problem in the southern section.

**Area 3:** Sawfly can also be a problem. Drought is not as likely to be a problem in this area, particularly in the east. Cereal rust may occur in the eastern portion. The frost-free period can be fairly short in the northern section.

**Area 4:** Rainfall is usually adequate for crop production. However, early fall frosts and wet harvest conditions are frequent problems.

### Note About Dividing Lines:

The dividing lines do not represent distinct changes over a short distance. The change from one area to another is gradual.

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## Symbols Used in 2014 Seed Guide:

- § Variety may not be described in 2015
- Insufficient test data to describe
- ☉ Plant Breeders' Rights at time of printing
- ☼ Applied for PBR protection at time of printing

### Abbreviations used:

**Relative maturity:** VE = Very Early, E = Early, M = Medium, L = Late, VL = Very Late

**Resistance:** VG = Very Good, G = Good, F = Fair, P = Poor, VP = Very Poor, n/a = not applicable

**Seed size:** S = Small, M = Medium, L = Large

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# Testing Varieties in Saskatchewan

By Saskatchewan Ministry of Agriculture

Regional testing of crop varieties is conducted to provide producers with information on the agronomic performance of varieties under different agro-climatic conditions. Saskatchewan producers will continue to have the opportunity to evaluate the newest grain crop varieties and their suitability for production in different regions of the province.

Saskatchewan Ministry of Agriculture provides \$100,000 towards a testing program that is based on industry-government partnership. An entry fee system is used in which variety owners or companies with the distribution rights to a particular variety pay a portion of the cost of having the variety tested. The Saskatchewan Seed Growers' Association also provides \$5,000 to the program.

Technical and in-kind support is also provided by The Western Producer, publisher of the 2014 SaskSeed Guide.

A long-term database is developed providing comparisons to a commonly grown check variety. The data include information on yield, various agronomic factors, and certain market related traits.

The Saskatchewan Variety Performance Group (SVPG) administers the program. SVPG is composed of representatives from individual organizations with an interest in providing variety testing information.

SeCan Association administers the funds for SVPG. Crop coordinators manage the data and provide expertise for their respective crops.

The results of the testing are reviewed by the Saskatchewan Advisory Council on Grain Crops (SACGC), which also updates disease and other agronomic information, and approves the data prior to inclusion in this publication.

The Saskatchewan Ministry of Agriculture grant also provides some support to programs that test pulses, sunflower and canaryseed. The testing information from these crops is included in this publication.

## Relative yield of varieties

Trials are conducted using uniform protocols and standard check varieties. Data are collected from as many sites as are available and statistically analyzed. Results in this publication are aggregated over a number of years and on an area basis.

Grain yield is a function of genetic and non-genetic factors. Variety trials are designed to measure the yield differences that are due to genetic causes. It is important to minimize variability due to non-genetic factors such as moisture, temperature, transpiration, weeds, diseases and other pests. Experimental design uses replication (repeated plantings of the varieties) and randomization (the position of the varieties within the test is assigned by chance) to estimate the precision with which the genetic factors can be measured.

Relative yield is the yield of one variety expressed as a percentage of the check variety. Yields obtained in these trials are not identical to those obtained in commercial production. However, the relative ranking of these varieties compared to the check variety, obtained over a number of years at several locations, would remain the same regardless of whether the grain yield was measured in small plots or large-scale fields. Relative yield is the best estimate of expected yield advantage in the areas indicated.

## Testing Pulse Crops

In 2013 the Saskatchewan Pulse Growers and the pulse breeding program at the Crop Development Centre (CDC), University of Saskatchewan continued a 5-year agreement with a budget of \$160,000 per year to conduct the pulse crop regional variety trials in Saskatchewan. The CDC collaborates with researchers at several locations, including Agriculture and Agri-Food Canada research stations, provincial Agri-ARM sites, and the Canada-Saskatchewan Irrigation Diversification Centre, in order to conduct the trials. The project collects data on varieties from the CDC program, as well as those arising from other public or private pulse breeding programs. Since 2006, field pea, lentil, chickpea, dry bean and faba bean variety trials were conducted at 3-15 locations per crop in their target areas of adaptation in Saskatchewan. (Source: CDC)

## Relative Maturity

### Ratings

Maturity is measured from seeding to swathing ripeness. The actual number of days to reach maturity depends on local climatic conditions and to some extent on management practices.

Some of the tables in this booklet express the relative maturity in days while others use a five category scale: VE, E, M, L, and VL (very early, early, medium, late, very late). The limits for each category can vary from crop to crop. In barley, for example, AC Metcalfe would be M, with L and E varieties plus or minus 1-2 days, and VL and VE varieties beyond this range.

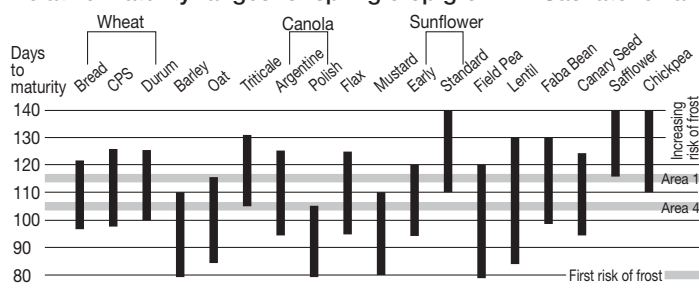
### Comparisons

The relative maturity of varieties of different crops is important when making plans for seeding.

The table below compares the relative maturity ranges for crops grown in Saskatchewan. Within each crop there are early and late maturing varieties. Whether a crop matures before the first killing frost depends on seeding date, management practices and environment factors. Not all crops have a wide area of adaptation.

It is noted that climatic conditions can cause a wide variability in crop maturity.

Relative maturity ranges for spring crop grown in Saskatchewan



# Plant Disease Resistance

By Saskatchewan Ministry of Agriculture

Resistance to the most important diseases in Western Canada is assessed in most crops before the variety is registered. The methods used to assess resistance in each crop are different. In some cases, spores of the pathogen are applied to plants in the greenhouse or in the field. In other cases, assessment is based on naturally occurring infection in the field. Each variety is rated on a five-point scale of very poor (VP), poor (P), fair (F), good (G), very good (VG). New varieties are not tested side-by-side with all existing varieties.

Because of variation in disease levels from year to year, each new variety is assigned a rating relative to a few existing varieties that serve as disease level standards or checks. Varieties differ in resistance because of differences in their genetic make-up and/or differences in the genetic make-up of the pathogen that causes the disease. However, the genetic make-up of a pathogen can change over time, and overcome

the resistance in a variety. In such cases, a variety with good resistance can quickly display poor resistance to a particular disease. Unfortunately, because not all varieties are tested side-by-side every year, the ratings of older varieties may be less reliable.

Preserving the efficacy of disease resistance genes in current crop varieties is the most economical method of plant disease control. Disease resistance can be prolonged with good agronomic and integrated pest management practices. Crop type, variety and fungicide rotation is an important method of preserving the effectiveness of disease resistance genes and fungicides. Disease resistance genes usually become ineffective due to short rotations and the prolonged use of one crop variety on a large acreage.

A number of factors can affect the level of disease symptoms observed at a given location in a given year. Environmental conditions such as moisture and temperature, the

genetic make-up of both the variety and the pathogen, and the amount of the pathogen present can all affect the level of disease. Although a variety with fair resistance can show disease symptoms under favourable conditions, a susceptible variety would have much more disease under the same conditions.

For example, ascochyta blight of chickpea is a very aggressive fungal disease. It can completely kill susceptible varieties within two weeks of symptoms first appearing. Chickpea varieties currently grown commercially in Saskatchewan have fair ascochyta blight ratings. This resistance weakens as plant development nears the flowering stage. Cool, moist environmental conditions favour the disease, and if these conditions persist early in the growing season, the disease symptoms can occur much earlier than the flowering stage. This is especially true on chickpea grown outside the Brown Soil Zone (the area of best adaptation) or on heavy textured soils such as clays and clay loams.

In the past, infected chickpea varieties lacking resistance to ascochyta blight can be defoliated, with girdled branches and dead plants. If conditions turn warm and dry, the diseased plants can re-grow from auxiliary nodes, often producing flowers and pods. However, these late pods and seeds will most likely be frozen in the first fall frost and have no commercial value.

## What is Plant Breeders' Rights

Plant Breeders' Rights (PBR) provides a way to assure that companies and institutions that invest in plant breeding are able to keep reasonable control of their varieties and secure fair compensation for their efforts. This encourages additional investment in crop variety development for Canadian farmers.

Plant Breeders' Rights for crop variety developers are comparable in many ways to patent protection in other areas. When a plant breeder develops a new variety for use in Canada they may apply under the Plant Breeders' Rights Act to obtain certain controls over the multiplication and sale of the seed of that variety. Sale, trade or any other transfer of the seed for propagation purposes is prohibited by law without:

- 1) the written permission of the breeder or their agent; and
- 2) payment of a royalty to the breeder or their agent.

Under PBR, farmers are allowed to save seed of the variety for their own use, on their own farms.

Varieties protected by Plant Breeders' Rights are identified with the above logo.

Further information can be obtained from the Plant Breeders' Rights Office, tel. 613-773-7188, fax 613-773-7261.



# CEREAL CROPS

## Wheat

### Main Characteristics of Varieties

Category and Variety	Years Tested	Area 1&2	Area 3&4	Irrigation	Protein	Resistance To										Rel. Maturity (days)	Head Awedness	Seed Weight (mg)	Volume Wt. <sup>2</sup> (kg/hL)	Ht. (cm)
						Lodging	Sprouting	Stem Rust	Leaf Rust	Stripe Rust	Loose Smut	Bunt	Leaf Spot	FHB						
<b>CWRS<sup>1</sup></b>	<b>Yield (% AC Barrie)</b>					<b>Relative to AC Barrie</b>														
AC Barrie ☺	11	100	100	100	14.9	G	G	G	P	VP	G	F	P	F	100	N	36.0	79.9	93	
CDC Abound ☺	7	109	106	---	-0.3	G	F	VG	P	P	F	F	P	VP	+2	Y	+2.4	-0.3	-10	
CDC Alsask ☺ §	4	107	106	---	+0.2	F	G	VG	VG	F	G	G	P	P	-1	N	-0.3	-1.3	-1	
Alvena ☺	4	105	104	---	+0.2	G	P	G	F	F	G	G	---	P	-2	N	-1.1	0.0	0	
AAC Bailey ☺	3	103	103	---	-0.3	G	G	VG	VG	---	P	G	F	F	-2	N	+0.3	-3.0	0	
AAC Brandon <sup>1</sup> ✱	2	109	105	---	-0.6	G	P	VG	VG	G	G	P	F	G	+1	Y	-0.5	-1.8	-12	
Carberry ☺	5	109	103	---	-0.1	VG	F	G	VG	G	G	VG	P	G	+3	Y	+1.2	+1.2	-12	
Cardale <sup>1</sup> ✱	4	102	105	---	+0.1	G	G	VG	VG	G	F	G	P	G	+1	Y	-3.3	0.0	-9	
AAC Elie <sup>1</sup> ✱	2	108	103	---	-0.5	G	F	VG	VG	G	F	F	F	F	+1	Y	-0.3	-1.6	-13	
AC Elsa ☺ §	7	103	104	97	-0.1	G	F	VG	G	F	G	F	F	P	-1	N	-2.4	-0.5	-1	
Fieldstar VB <sup>3</sup> ☺	9	111	110	---	-0.3	F	VG	G	VG	P	F	F	F	F	0	Y	-2.1	+0.7	+3	
Glenn ☺	5	107	107	---	-0.5	VG	F	VG	VG	G	F	F	F	F	+3	Y	-1.7	+1.9	-4	
CDC Go	4	102	103	---	-0.1	G	P	VG	F	G	P	F	VP	P	-1	Y	+3.6	-0.3	-6	
Goodeve VB <sup>3</sup> ☺	9	111	111	---	0.0	VG	G	G	G	F	G	P	F	VP	-2	N	+0.8	-0.9	-2	
Harvest ☺	6	101	104	---	-0.4	VG	VG	VG	G	G	G	VP	P	VP	-1	N	-0.4	+0.1	-6	
CDC Imagine ☺ §	5	98	102	---	-0.1	G	F	F	F	F	G	G	P	VP	0	N	-1.7	-1.8	-3	
Infinity ☺	8	107	107	---	-0.2	G	G	G	G	P	G	G	G	VP	-1	N	-2.8	-0.6	-1	
AC Intrepid ☺	5	101	104	102	-0.3	G	P	G	G	G	F	G	P	P	-3	N	-0.2	-0.4	-2	
KANE ☺ §	5	104	104	---	-0.2	G	VG	VG	VG	G	P	F	F	F	+1	Y	-0.5	+1.4	-5	
CDC Kernan ☺	5	110	109	---	-0.1	G	P	G	G	F	VG	F	F	F	+1	Y	+1.3	-0.1	+3	
Lillian ☺	7	101	98	---	+0.3	F	G	G	VG	VG	F	G	G	VP	0	N	-0.3	-1.1	-1	
CDC VR Morris <sup>1</sup> ✱	3	113	111	---	-0.3	G	P	G	VG	---	F	F	F	G	-1	N	-2.3	+0.7	-2	
Muchmore ☺	5	115	103	---	-0.5	VG	G	VG	VG	G	G	VG	P	P	+3	Y	+1.3	0	-15	
CDC Osler §	3	101	104	---	-0.3	G	F	VG	G	F	G	G	F	F	-1	N	-3.7	-0.7	-2	
CDC Plentiful <sup>1</sup> ✱	3	111	109	---	-0.3	VG	P	VG	VG	G	VG	F	P	G	-1	N	-2.9	-0.3	-4	
AAC Redwater <sup>1</sup> ✱	2	105	102	---	-0.3	G	VG	VG	VG	G	P	F	P	F	-2	Y	-3.3	-3.1	-5	
Shaw VB ☺	5	121	119	---	-0.7	G	G	VG	G	F	VP	G	P	P	+1	N	-0.4	-1.6	+5	
CDC Stanley ☺	5	114	112	---	-0.2	G	G	VG	G	F	G	VP	F	P	0	N	-2.2	-1.1	-3	
Stettler ☺	6	114	110	106	+0.1	G	G	G	P	G	VG	G	P	P	+1	Y	-0.6	0.0	-6	
SY433 <sup>1</sup> ✱	3	101	110	---	-0.3	G	VG	VG	VG	---	F	VP	F	G	0	Y	+0.1	-1.7	+2	
CDC Thrive ☺	5	110	111	---	-0.1	G	F	G	F	F	G	F	F	P	0	N	-0.5	0.0	+1	
Unity VB <sup>3</sup> ☺	9	118	119	---	-0.7	F	VG	G	VG	P	P	VG	F	F	0	Y	-0.6	+1.0	+1	
CDC Utmost VB <sup>3</sup> ☺	5	119	116	---	-0.5	G	G	G	VG	F	P	VP	F	P	-1	N	-0.5	-0.1	-3	
Vesper VB <sup>1,3</sup> ☺	4	117	116	---	-0.9	F	F	G	VG	VP	F	VP	P	F	0	Y	+0.9	-1.2	-1	
Waskada ☺	9	117	112	108	-0.3	F	VG	VG	F	P	G	VG	P	G	+1	Y	+0.3	+1.4	+4	
WR859 CL ☺	6	111	104	108	-0.2	G	G	G	VG	F	VG	VG	P	G	0	Y	-2.2	0.0	-7	
5602HR ☺ §	6	103	104	---	+0.1	F	F	VG	VG	F	VG	G	P	G	+1	Y	0.0	+1.6	+1	
5603HR <sup>1</sup> ☺	5	113	112	---	-0.7	G	VG	G	VG	P	P	F	G	F	+3	Y	-2.7	-2.0	+1	
5604HR CL <sup>1</sup> ☺	5	105	102	---	-0.8	G	G	VG	VG	---	P	F	P	F	-1	Y	-2.5	-0.3	-2	
5605HR CL <sup>1</sup> ✱	2	105	112	---	0.2	G	---	P	G	---	VG	G	P	G	+1	Y	-2.0	-0.3	-2	
<b>Hard White Spring<sup>1</sup></b>																				
AAC Iceberg ✱	2	105	101	---	-0.9	G	P	VG	VG	F	P	F	P	F	0	Y	+2.5	+0.7	-8	
Snowbird ☺ §	5	99	102	---	-0.6	G	G	G	F	P	G	P	P	F	0	N	-1.8	-0.4	+1	
Snowstar ☺	4	105	107	---	-1.2	VG	G	VG	G	P	P	VP	P	P	-1	N	-5.2	+1.2	-9	
AAC Whitefox ✱	2	105	111	---	-1.2	VG	---	G	G	P	P	P	P	F	-1	N	-1.2	+0.4	0	
Whitehawk ☺	3	103	97	---	-1.0	G	G	F	VG	P	F	P	P	P	-2	N	-4.1	+0.3	-5	
CDC Whitewood ✱	2	98	99	---	-0.5	G	G	G	G	F	VP	VP	P	F	0	Y	-0.8	-0.1	-10	
<b>Soft White Spring<sup>1</sup></b>																				
AC Andrew	5	138	135	---	-3.6	G	P	G	P	F	VP	VP	F	F	+5	Y	+0.7	-1.8	-9	
AAC Chiffon ✱	2	152	140	---	-4.1	G	VP	VP	F	G	VP	VP	---	VP	+5	Y	+5.6	+1.2	+1	
Sadash ☺	5	146	134	---	-4.3	VG	P	G	F	VG	F	VP	F	VP	+5	Y	+0.7	+0.6	-6	

# Wheat (cont'd)

Category and Variety	Years Tested	Area 1&2	Area 3&4	Irrigation	Protein	Resistance To										Rel. Maturity	Head Awkwardness	Seed Weight (mg)	Volume Wt. <sup>2</sup> (kg/hL)	Ht. (cm)
						Lodging	Sprouting	Stem Rust	Leaf Rust	Stripe Rust	Loose Smut	Bunt	Leaf Spot	FHB						
<b>CPSR<sup>1</sup></b>		<b>Yield (% AC Barrie)</b>										<b>Relative to AC Barrie</b>								
Conquer VB <sup>3</sup> ☼	5	124	124	---	-1.5	F	P	VG	G	G	P	VG	F	P	+1	Y	+9.6	+1.8	-4	
AC Crystal ☼	11	118	115	110	-1.3	VG	P	VG	P	VP	P	VG	F	VP	+3	Y	+4.9	-0.1	-11	
Enchant VB ☼	3	117	116	---	-1.5	F	G	G	VG	VP	G	VG	P	VP	+1	Y	+16.8	+1.5	-5	
AAC Ryley ☼	2	113	115	---	-1.6	G	G	VG	VG	VP	F	VG	P	P	0	Y	+12.8	-0.9	-11	
SY985 ☼	4	113	111	---	-0.8	G	P	VG	VG	---	VG	G	F	F	+1	Y	+10.1	+0.4	-15	
5700PR ☼	5	115	119	115	-1.2	VG	F	VG	F	P	P	VG	P	P	+2	Y	+6.8	+1.1	-16	
5702PR ☼	6	126	124	---	-1.6	G	P	F	G	P	P	F	G	P	+1	Y	+8.5	0.0	-10	
<b>Canada Western Extra Strong<sup>1</sup></b>																				
Burnside	6	98	100	---	-0.1	F	G	VG	VG	VG	VG	F	P	VP	0	N	+3.6	-0.4	+6	
Glencross VB <sup>3</sup>	4	110	118	---	-0.6	F	F	VG	G	---	VG	F	P	VP	-1	N	+7.2	-2.5	+7	
<b>Canada Western General Purpose</b>																				
AAC Innova ☼	3	145	136	---	-3.6	G	VP	G	VG	VG	VP	VP	F	VP	+6	Y	+2.4	-1.8	-7	
CDC NRG003 ☼	5	128	124	---	-2.0	G	G	VG	P	---	P	VG	VP	VP	0	Y	+6.4	-1.8	-10	
NRG010 ☼	5	129	127	---	-2.6	G	F	VG	VG	VG	P	VG	P	P	+2	Y	+3.3	-2.0	-7	
Pasteur	3	143	137	---	-2.6	VG	G	G	VG	G	P	VP	F	F	+8	N	+2.9	+0.9	-7	
AAC Proclaim ☼	2	129	128	---	-2.8	F	F	G	VG	P	G	VP	F	G	+4	Y	+0.8	+0.3	+10	
<b>CWAD</b>		<b>Yield (% Strongfield)</b>										<b>Relative to Strongfield</b>								
Strongfield ☼	6	100	100	100	14.5	F	F	VG	VG	G	P	VG	F	VP	105	Y	42.1	79.2	89	
Brigade ☼	5	109	112	110	-1.2	G	F	VG	VG	G	P	VG	F	P	+2	Y	+1.1	+0.3	+6	
AAC Current ☼	2	101	95	---	0.0	F	F	VG	VG	G	P	G	F	VP	0	Y	+1.0	+1.0	+4	
CDC Desire ☼	2	102	100	---	-0.2	F	G	VG	VG	G	P	VG	F	VP	-2	Y	-3.0	-0.1	0	
Enterprise ☼	5	103	101	106	-0.2	F	G	VG	VG	VG	P	G	F	P	0	Y	-3.2	+0.6	+2	
Eurostar ☼	5	100	104	102	-0.5	F	F	VG	VG	VG	P	VG	F	P	+2	Y	+0.6	+0.8	+4	
CDC Fortitude	2	107	102	---	-0.2	VG	---	G	VG	G	P	VG	P	P	+1	Y	-2.0	0.0	-1	
AAC Marchwell VB <sup>3</sup> ☼	2	102	109	---	-0.4	F	---	VG	VG	VG	G	VG	P	P	0	Y	-2.7	-0.6	0	
AC Navigator ☼	6	98	90	---	-0.7	G	G	VG	VG	VG	P	VG	VP	VP	+2	Y	+1.2	-0.1	-8	
AAC Raymore ☼	2	96	96	---	0.2	F	F	VG	VG	G	P	G	F	VP	-1	Y	-0.1	-0.1	0	
Transcend ☼	4	102	103	94	-0.3	F	G	VG	VG	VG	P	VG	F	P	+2	Y	-1.4	0.0	+8	
CDC Verona ☼	5	102	104	103	-0.3	G	F	VG	VG	VG	P	VG	F	P	+2	Y	+0.1	-0.2	+1	
CDC Vivid ☼	2	105	99	---	-0.2	G	F	VG	VG	G	F	VG	F	VP	0	Y	-0.6	-0.2	0	

<sup>1</sup> Includes direct and indirect comparisons with AC Barrie

<sup>2</sup> multiply by 0.8 = lbs per bushel

<sup>3</sup> VB varietal blend

## Additional Information

Producers are strongly encouraged to use a combination of the Canadian Food Inspection Agency's List of Registered Varieties ([www.inspection.gc.ca](http://www.inspection.gc.ca)) and the Canadian Grains Commission's Variety Designation Lists ([www.grainscanada.gc.ca](http://www.grainscanada.gc.ca)) to determine the registration and grade eligibility status of varieties.

Grain yield, protein content, time to maturity, seed weight, volume weight and plant height of all varieties of common wheat and durum wheat are compared to **AC Barrie** and **Strongfield**, respectively.

Most varieties have been rated for their relative resistance to pre-harvest sprouting. Under wet postmaturity conditions varieties rated poor have a reduced ability to retain high Hagberg Falling Number values relative to those rated good or very good. Varieties with high test weight retain grade better un-

der adverse harvest weather than those with low test weight. During wet harvest weather, grades drop more rapidly due to sprouting in swathed than in standing crops.

New races of leaf rust and stripe rust continue to evolve, so the rust resistance in varieties changes from year to year. This publication contains the most up-to-date information on rust resistance in current varieties. Early seeding may minimize risk of crop losses for varieties sown in southeastern Saskatchewan that are rated poor or very poor to leaf rust. Field scouting throughout the growing season is encouraged so that timely corrective action can be undertaken if required.

All varieties are at least moderately resistant to shattering. All varieties have moderately good resistance to common root rot.

Seed of varieties rated poor and very poor for

bunt and loose smut should be treated with a recommended fungicide. Please refer to the Seed Facts section of this booklet or *Guide to Crop Protection*.

All wheat and durum varieties exhibit similar susceptibility to ergot infestation.

## CANADA WESTERN RED SPRING (CWRS)

**Fieldstar VB, Goodeve VB, Shaw VB, Unity VB, CDC Utmost VB, and Vesper VB** are CWRS midge tolerant varieties. They contain the same *Sm1* gene for tolerance. To manage against the build-up of midge resistance to the *Sm1* gene, an interspersed refuge is used commercially. These varieties are not immune to wheat midge and can suffer some midge damage when high midge infestation levels occur. More information on midge tolerant wheat cultivars and interspersed refuge can be found at: ([www.midgetolerantwheat.ca](http://www.midgetolerantwheat.ca)).

**Wheat Additional Information (cont'd)**

Seed of the new varieties **AAC Brandon**, **AAC Elie**, **AAC Redwater**, and **5605HR CL** will not be available in 2014. Limited quantities of seed of the new varieties **AAC Bailey**, **Cardale**, **CDC VR Morris**, **CDC Plentiful** and **SY433** will be available in 2014.

**Lillian** has solid stem and is the only spring wheat variety listed with some resistance to the wheat stem sawfly.

**CDC Abound**, **CDC Imagine**, **CDC Thrive**, **WR859 CL**, **5604HR CL**, and **5605HR CL** are tolerant to the CLEARFIELD® herbicides Adrenalin SC and Altitude FX.

**CANADA WESTERN HARD WHITE SPRING (CWHWS)**

Seed of the new varieties **AAC Iceberg**, **AAC Whitefox**, and **CDC Whitewood**, will not be available in 2014. Limited quantities of seed of **Whitehawk** will be available in 2014.

**CANADA PRAIRIE SPRING RED (CPSR)**

**Conquer VB** and **Enchant VB** are the only

CPSR midge tolerant varieties using the same *Sm1* gene as in the CWRS varieties and will be marketed with an interspersed refuge (see above). Seed of the new variety **AAC Ryley** will not be available in 2014. Limited quantities of seed of **Enchant VB** will be available in 2014.

**CANADA WESTERN EXTRA STRONG SPRING (CWES)**

**Glencross VB** is the only CWES wheat midge tolerant variety based on the *Sm1* gene and will be marketed with an interspersed refuge (see above).

**CANADA WESTERN SOFT WHITE SPRING (CWSWS)**

Soft white spring wheat may be used as a feedstock in the production of ethanol. Soft white spring wheat varieties are susceptible to pre-harvest sprouting. The leaf spot pathogens that affect other wheat classes also affect soft white cultivars and therefore recommendations for leaf spot control are similar. Seed of the new variety **AAC Chifon** will not be available in 2014.

**CANADA WESTERN GENERAL PURPOSE SPRING (CWGP)**

Varieties in the General Purpose market class are intended for ethanol and livestock feed purposes. Seed of the new varieties **AAC Innova** and **AAC Proclaim** will not be available in 2014.

**CANADA WESTERN AMBER DURUM (CWAD)**

**CDC Fortitude** and **AAC Raymore** have solid stem with resistance to the wheat stem sawfly. **AAC Marchwell VB** is the only CWAD variety with orange wheat blossom midge tolerance based on the *Sm1* gene and will be marketed with an interspersed refuge (see above). Seed of the new varieties **AAC Current**, **CDC Desire**, **CDC Fortitude**, **AAC Marchwell VB**, **AAC Raymore**, and **CDC Vivid** will not be available in 2014. Durum wheat varieties are generally more susceptible than CWRS varieties to Fusarium Head Blight. All durum varieties are susceptible to two new races of loose smut.

# Winter Wheat

## Main Characteristics of Varieties

Category and Variety	Site Years Tested	Yield <sup>1</sup> (% CDC Buteo)				Winter Survival <sup>2</sup>	Relative Maturity	Protein (%)	Height (cm)	Resistance To					
		Low Moisture Potential	High Moisture Potential							Lodging	Stem Rust	Leaf Rust	Stripe Rust	Bunt	FHB
<b>Canada Western Red Winter</b>															
CDC Buteo (bu/ac)		40	60	80	100	VG	M	12.4	88	F	G	G	VP	VP	G
AC Bellatrix §	160	108	102	99	97	F	L	+0.1	0	G	VP	VP	VP	F	F
Emerson *	26	105	100	98	96	G	M	+0.3	-5	VG	VG	G	G	VP	VG
Flourish ☼	60	103	102	100	99	F	E	+0.3	-10	VG	F	F	F	F	VP
AAC Gateway *	29	113	107	104	102	F	M	+0.5	-13	VG	G	F	G	VP	F
McClintock ☼ §	219	100	98	98	98	F	L	-0.2	+3	VG	VG	G	G	VP	VP
Moats *	74	98	102	104	104	G	M	+0.2	+1	G	VG	VG	G	P	VP
CDC Osprey	178	105	102	100	99	VG	M	-0.2	+2	G	P	P	VP	VP	P
Radiant ☼	145	105	103	101	100	VG	L	-0.3	-1	VG	VP	VP	P	VP	VP
<b>Canada Western General Purpose</b>															
Accipiter ☼	144	110	107	105	105	G	M	-0.4	-7	VG	VG	G	---	VP	VP
Broadview ☼	71	113	107	103	101	G	E	-0.9	-9	G	VG	VG	VP	VP	VP
CDC Clair §	116	108	103	103	101	VG	M	-0.6	0	F	P	P	---	VP	---
CDC Falcon <sup>3</sup>	369	103	102	102	102	F	E	-0.6	-15	VG	G	G	VP	VP	VP
CDC Harrier §	235	108	103	103	101	G	M	-1.2	+5	G	G	P	VP	VP	P
CDC Kestrel §	116	110	105	104	102	VG	M	-1.6	+5	G	P	P	---	VP	---
Peregrine ☼	114	115	110	108	105	VG	M	-0.4	+6	F	VG	VG	G	VP	P
Pintail *	35	103	105	106	107	VG	M	-1.4	-3	G	P	P	G	VP	VP
CDC Ptarmigan <sup>4</sup>	104	115	112	109	108	G	M	-2.1	+2	F	P	P	VP	VP	---
CDC Raptor §	200	103	102	100	100	G	M	-0.6	-7	VG	VG	G	---	VP	---
Sunrise <sup>4</sup>	66	115	110	108	106	G	M	-0.9	-1	G	G	G	G	VP	---
Swainson	43	123	113	109	107	F	M	-0.6	+7	F	VG	VG	G	VP	---

<sup>1</sup> Yield: For a more in-depth yield analyses go to [http://www.usask.ca/agriculture/plantsci/winter\\_cereals/variety-selector/index.php](http://www.usask.ca/agriculture/plantsci/winter_cereals/variety-selector/index.php)

<sup>2</sup> Winter damage: For more detailed information go to [http://www.wheatworkers.ca/FowlerSite/winter\\_cereals/WWWModel.php](http://www.wheatworkers.ca/FowlerSite/winter_cereals/WWWModel.php)

<sup>3</sup> Effective August 1, 2014, **CDC Falcon** will be moved from Canada Western Red Winter class to Canada Western General Purpose class.

<sup>4</sup> **CDC Ptarmigan** has an awnless head and soft white kernels. **Sunrise** has soft red kernels.

# Rye

## Main Characteristics of Varieties

Variety	Years Tested	Yield (% Prima)		Relative Maturity	Resistance To		
		Area 1 & 2	Area 3		Winter Damage	Shattering	Lodging
Prima	23	100	100	M	VG	F	F
Hazlet	10	116	100	M	VG	VG	VG
AC Remington	11	95	90	M	VG	VG	G
AC Rifle	23	95	86	M	VG	VG	VG

### Additional Information

Medium maturity of rye means that the variety will mature about July 31 in an early year, August 4 in a medium year and August 8 in a late year. An early variety would mature about July 27 in an early year, July 31 in a medium year and August 4 in a late year. Late varieties would mature about August 4 in an early year, August 8 in a medium year and August 12 in a late year. Wet and cool conditions during maturation can prolong maturity far beyond these dates.

# Triticale

## Main Characteristics of Varieties

Variety	Years Tested	Area 1 and 2	Area 3	Test Weight kg hL <sup>-1</sup>	Relative Maturity	Resistance To						
						Lodging	Stem Rust	Leaf Rust	Bunt	Root Rot	Ergot	FHB
Spring Habit		Yield (% AC Ultima)										
AC Ultima	18	100	100	70	E	G	VG	VG	VG	F	P	F
Brevis	7	110	109	73	E	VG	VG	VG	VG	---	G	F
Bumper ☪	3	104	112	71	E	G	VG	VG	VG	---	---	P
Bunker ☪	4	92	97	73	E	G	VG	VG	VG	---	---	F
AC Certa	14	97	98	74	M	G	VG	VG	VG	G	---	---
Pronghorn	18	98	101	69	E	G	G	VG	VG	F	F	G
Sunray	6	105	100	68	E	G	VG	VG	VG	---	G	P
Taza ☪	4	108	101	69	E	G	VG	VG	VG	---	F	VP
Tyndal ☪	4	99	102	73	E	G	VG	VG	VG	---	---	P
Winter Habit		Yield (% Pika)										
Pika	6	100	100	68	E	F	---	---	---	---	---	---
Bobcat	6	86	86	66	M	G	---	---	---	---	---	---
Luoma ☪	5	100	96	67	L	F	---	---	---	---	---	---
Metzger ☪	5	96	101	67	E	G	---	---	---	---	---	---

### Additional Information

Spring triticale matures 1-2 days later than **AC Crystal** CPS wheat, therefore it should be planted as early as possible. The seeding rate for spring triticale should be at least 30 per cent more than that of CWRS wheat to obtain the same number of plants per square foot. Susceptibility to Fusarium Head Blight is at least as great in triticale as in wheat. **AC Ultima** has an improved Hagberg Falling Number. **Brevis** is shorter and stronger straw. Tyndal and Bunker are spring forage types, and along with **Taza** have reduced awns.

Winter triticale has winter hardiness equal to that of winter wheat. **Bobcat**, **Luoma** and **Metzger** have reduced awns. **Bobcat** and **Metzger** are shorter and stronger straw.

All triticale cultivars are susceptible to ergot infection and similar in reaction. Severe infestation of ergot can occur in any of the available cultivars if environmental conditions are favourable. **Sunray** and **Brevis** represent improvements in ergot resistance.

# Malting Barley

## Main Characteristics of Varieties

Category <sup>1</sup> and Variety	Years Tested	2 or 6 Row	Rough or Smooth Awns	Yield (% AC Metcalfe)		Relative Maturity <sup>2</sup>	Resistance To									
				Area 1 & 2	Area 3 & 4		Lodg- ing	Netted Net Blotch <sup>3</sup>	Spotted Net Blotch	Spot Blotch	Scald	Loose Smut	Other Smuts	Root Rot	Stem Rust	FHB
<b>Malting Acceptance: Recommended</b>																
AC Metcalfe ☼	11	2	R	100	100	M	G	VP	F	F	P	VG	F	F	G	F
Bentley ☼	7	2	R	113	112	L	G	P	VG	F	P	P	G	F	G	P
CDC Copeland ☼	8	2	R	107	108	M	G	F	F	VP	P	P	F	F	G	F
CDC Kindersley ☼	6	2	R	104	106	E	G	P	G	F	VP	VP	VG	F	G	F
Major ☼	7	2	R	112	115	M	G	F	G	G	VP	VG	G	P	G	F
CDC Meredith ☼	7	2	R	114	112	L	G	P	VG	P	P	VG	G	F	G	F
Merit 57 ☼	7	2	R	109	107	L	G	P	VG	P	F	VP	F	G	F	P
Newdale ☼	6	2	R	112	113	M	G	F	G	F	P	VP	G	G	G	F
CDC PolarStar <sup>4</sup> ☼	5	2	R	103	100	M	F	VP	G	P	VP	VP	VG	P	VP	G
Celebration ☼	6	6	S	105	106	M	VG	VP	G	G	VP	VG	VG	P	F	P
Legacy ☼	6	6	S	104	101	M	G	VP	G	G	P	F	G	G	G	P
Tradition	5	6	S	112	107	M	VG	VP	F	G	P	VP	G	G	G	VP
<b>Malting Acceptance: Under Test</b>																
Cerveza ☼	6	2	R	113	115	M	G	P	G	VG	VP	VG	VG	F	F	F
CDC Landis ☼	7	2	R	109	109	M	G	F	VG	F	VP	VP	G	P	G	F
AAC Synergy ✨	4	2	R	118	113	M	G	G	VG	VG	VP	VP	F	F	G	P
CDC Anderson ☼	6	6	R	104	107	M	G	P	G	VG	P	G	VG	F	G	F
CDC Mayfair ☼	7	6	R	105	109	M	G	P	G	F	P	VP	VG	P	G	P
<b>Other<sup>5</sup></b>																
Harrington	11	2	R	95	89	M	F	VP	P	VP	P	P	P	F	P	G
CDC Kendall ☼	11	2	R	101	102	M	G	F	G	VP	P	P	P	G	P	F
CDC Battleford ☼	6	6	S	108	108	M	G	P	VG	VG	P	P	G	G	G	VP
CDC Clyde ☼	8	6	S	110	106	M	VG	F	G	VG	P	F	VG	G	G	VP
Innovation	3	6	R	107	107	M	VG	VP	G	G	P	P	G	F	G	F
Lacey	4	6	S	101	101	M	G	VP	F	G	P	F	G	G	G	VP
Stellar-ND ☼	5	6	R	107	105	M	VG	VP	F	G	VP	G	VG	P	F	F

<sup>1</sup> These categories are established annually by the Canadian Malting Barley Technical Centre (Call 204-984-4399 for more information).

<sup>2</sup> Relative maturity: The relative maturity of the check, **AC Metcalfe**, is M (on average, 91 days from seeding to swathing ripeness).

<sup>3</sup> There are two forms of net blotch, netted (*Pyrenophora teres f. teres*) and spotted (*Pyrenophora teres f. maculata*). Generally, in Saskatchewan the netted form is more prevalent.

<sup>4</sup> **CDC PolarStar** is available only through a closed loop Identity Preserved program offered by Prairie Malt Limited/Sapporo Breweries and their agents.

<sup>5</sup> Although not on the CMBTC list, a malting barley market may exist for these varieties.

### Lines Under Test for Malting and Brewing Quality

Small scale tests are a good measure of malting potential, but are not sufficient to determine the commercial acceptability of malting varieties. Final acceptance is given only after two years of successful plant scale evaluation. Several carload lots of barley are malted and brewed. The beer is then given the ultimate test – a taste panel. This process normally takes a minimum of three years since a crop grown in one year will be malted in January-February, brewed in May-June, and aged and tasted in October-November of the following year.

### Additional Information

Growers are reminded that the malting and brewing industry is cautious about using new varieties. Growers are cautioned that most malting varieties, especially two-row barley, are more susceptible to sprouting.





## Recommended Malting Barley Varieties 2014-15

These recommendations are based on the varieties expected to be selected by grain and malting companies for both domestic and export markets from the 2014 harvest. Seeding decisions should be based on agronomic considerations and feedback from your grain company representative, local elevator operators and malting companies. This list is published on behalf of the members of the CMBTC, and other companies that have provided their input. Varieties not listed are not recommended. The varieties are listed in descending order to the amount expected to be selected next crop year.

### Recommended Two-Row Barley Varieties

VARIETY	DOMESTIC	EXPORT
AC Metcalfe <sub>4</sub>	Established	Established
CDC Copeland <sub>4</sub>	Established	Established
CDC Meredith <sub>4</sub>	Established	Limited
CDC PolarStar <sub>5</sub> **	Established	Established

The four varieties above will represent 80 to 85% of the anticipated selections.

The varieties in the table below represent 15 – 20% of the anticipated selections and it is expected that several of them will become dominant varieties in the future.

VARIETY	COMMERCIALIZATION STATUS	
Newdale <sub>3</sub>	Established	Note: Norman, Cerveza, CDC Landis, ABI Voyager, and AAC Synergy are not yet being grown for the commercial market. Production is limited to quantities required for testing and market development. **CDC Polarstar is available only through a closed loop Identity Preserved program offered by Prairie Malt Limited/Sapporo Breweries and their agents.
Major <sub>1</sub>	Increasing	
Bentley <sub>5</sub>	Increasing	
Merit 57 <sub>5</sub>	Increasing	
CDC Kindersley <sub>4</sub>	Increasing	

### Recommended Six-Row Barley Varieties

VARIETY	DOMESTIC	EXPORT
Legacy <sub>1,2,3</sub>	Established	Established
Tradition <sub>1,2,3</sub>	Established	Established
Celebration <sub>5</sub>	Limited	Limited

CDC Mayfair and CDC Anderson are not yet being grown for the commercial market. Production is limited to quantities required for testing and market development. **Please talk to your local malting company selector in regards to demand for Lacey and Robust.**

“Domestic” as used in this publication, means barley selected for domestic processing into malt to supply domestic brewers as well as for malt destined for export. “Export” is that malting barley designated for markets outside of Canada including the U.S., shipped as unmalted grain.

The following companies have pedigreed seed distribution rights for those varieties that are footnoted:

1-Viterra; 2- BARI-Canada; 3 – FP Genetics; 4 - SeCan; 5 – CANTERRA SEEDS

**The CMBTC and its' members recommends the use of Certified seed to ensure varietal purity and to increase opportunity for selection.**

**CMBTC Members:** Alfred C. Toepfer (Canada) Ltd., CANTERRA SEEDS, CWB, Canadian Grain Commission, Cargill AgHorizons, SABMiller, Richardson International, Parrish and Heimbecker, Prairie Malt Limited, the Public Barley Breeders, Syngenta Canada Inc, SeCan, Manitoba Liquor Control Commission, Alberta Agriculture, Saskatchewan Agriculture, Manitoba Agriculture Food and Rural Development, Molson Coors, Alberta Barley Commission, Fedoruk Seeds, FP Genetics and Viterra.  
**Other organizations providing input to this list:** BARI-Canada, BMBRI

**Questions? Call your selector, seed company, grain handling company, or contact the CMBTC at 204-984-4399 ([cmbtc@cmbtc.com](mailto:cmbtc@cmbtc.com))**



# Feed and Food Barley

## Main Characteristics of Varieties

Category and Variety	Years Tested	2 or 6 Row	Rough or Smooth Awns	Yield (% AC Metcalfe)		Relative Maturity <sup>1</sup>	Resistance To									
				Area 1 & 2	Area 3 & 4		Lodging	Netted Net Blotch <sup>2</sup>	Spotted Net Blotch	Spot Blotch	Scald	Loose Smut	Other Smuts	Root Rot	Stem Rust	FHB
<b>Hulled</b>																
CDC Austenson	7	2	R	118	121	M	G	P	VG	G	VP	VP	VG	F	F	F
CDC Bold	7	2	R	111	112	L	G	VP	F	VP	P	P	G	G	G	VP
Brahma	7	2	R	114	115	M	G	VP	F	VP	P	P	VG	G	P	F
Busby	6	2	R	104	106	E	G	P	G	P	F	VP	VG	VP	F	F
Canmore	3	2	R	110	115	L	VG	P	G	F	G	VG	VG	F	P	F
Champion	8	2	R	117	117	M	G	VP	F	P	VP	VP	VG	G	F	F
CDC Coalition	7	2	R	111	114	M	VG	VP	G	F	P	VG	G	F	G	F
CDC Cowboy	6	2	R	99	105	L	F	F	G	F	P	P	G	F	G	G
CDC Dolly	11	2	R	103	103	E	G	VP	P	VP	F	VP	F	F	P	G
Gadsby	6	2	R	110	111	M	F	P	G	VP	VG	VG	VG	F	G	F
CDC Helgason	7	2	R	105	106	M	G	G	G	F	P	VG	G	F	F	P
CDC Maverick	4	2	S	97	94	M	F	F	G	F	P	VP	VG	F	G	G
McLeod	6	2	R	108	114	M	G	VP	F	VP	P	VP	VG	F	P	F
CDC Mindon	7	2	R	104	103	M	G	VP	G	F	VP	VG	VG	F	F	G
CDC Trey	5	2	R	104	110	M	G	F	VG	F	P	P	VG	G	G	F
Xena	7	2	R	112	115	M	G	VP	F	VP	P	P	P	G	G	G
Amisk	3	6	R	108	117	M	G	F	G	G	F	VP	P	P	G	VP
Breton	4	6	S	108	116	M	F	F	G	G	G	P	G	F	G	VP
Chigwell	7	6	S	107	111	M	G	F	G	G	G	P	VG	VP	VP	VP
Muskwa	4	6	S	111	108	M	G	P	G	G	G	P	VG	P	G	VP
AC Rosser	11	6	S	115	115	M	G	F	G	G	VP	P	G	G	G	VP
Sundre	5	6	S	120	116	L	G	P	F	F	VG	P	VG	P	F	VP
<b>Hulless</b>																
CDC Carter	7	2	R	94	99	M	G	F	G	F	P	VG	VG	VP	F	F
CDC Clear	5	2	R	96	101	L	G	P	VG	F	P	VG	VG	F	G	G
CDC McGwire	8	2	R	98	99	M	G	F	G	F	F	P	G	G	F	G
Taylor	6	2	R	78	84	M	VG	P	G	F	VP	VG	F	P	G	G

<sup>1</sup> Relative maturity: The relative maturity of the check, AC Metcalfe, is M (on average, 91 days from seeding to swathing ripeness).

<sup>2</sup> There are two forms of net blotch: netted (*Pyrenophora teres f. teres*) and spotted (*Pyrenophora teres f. maculata*). Generally, in Saskatchewan the netted form is more prevalent.

### Forage Barley

**Desperado**, **Dillon**, and **AC Ranger** are six-row forage varieties. **CDC Cowboy**, **CDC Maverick**, and **Stockford** are two-row forage varieties.

### Hulless

In hulless varieties the hull is left in the field, therefore, comparable yields are 9-12 per cent lower. Hulless seed is more susceptible to damage than hulled seed, so handling should be minimized. **CDC Lophy-I** is a low phytate, hulless two-row feed variety.

### Hulless Food

**CDC Alamo**, **CDC Fibar**, and **CDC Rattan** are high beta-glucan, waxy starch varieties. **CDC Hilose** is a high beta-glucan, high amylose starch variety. All are available for specialty markets. **CDC Carter**, **CDC McGwire**, **Millhouse**, and **Roseland** are two-row, normal starch, hulless barleys suitable for food use.

### Irrigation

Disease resistance, straw strength and maturity are more critical when barley is grown under irrigation. Growers should select early, strong-strawed, disease resistant varieties.

### Additional Information

Most available varieties are susceptible to one or more types of smut. Therefore, seed of susceptible varieties should be treated with a registered fungicide on a regular basis. Harvesting grain over 16 per cent moisture and then using aeration bins for drying can lead to sprouting and embryo death. Seed with reduced germination is undesirable for seed or malting. Two-row barley varieties are generally more resistant to shattering than six-row varieties.

# Oat

## Main Characteristics of Varieties

Variety	Years Tested	Yield		Test Weight (g/0.5L)	% Hull	% Plump	Relative Maturity <sup>1</sup>	Height (cm)	Resistance To			
		(% CDC Area 1 & 2)	Dancer Area 3 & 4)						Lodging	Stem Rust	Crown Rust	Smut
CDC Dancer ☼	8	100	100	253	19.8	70	M	103	G	F	F	VG
SW Betania ☼	7	105	105	245	22.0	67	M	97	G	VP	P	G
CDC Big Brown ☼	6	107	107	256	20.4	71	L	101	G	P	G	VG
CDC Boyer	8	99	100	232	23.3	71	M	105	G	F	F	P
Bradley ☼	5	105	102	240	21.7	66	L	103	VG	P	P	VG
Derby	8	98	102	247	22.9	65	M	107	G	VP	VP	P
HiFi ☼	6	99	97	253	22.4	55	M	103	G	F	VG	P
Jordan ☼	7	110	118	238	22.4	76	VL	102	G	F	F	VG
AAC Justice *	3	112	114	255	22.4	61	L	101	G	F	VG	VG
Leggett ☼	7	103	104	256	22.0	71	L	96	G	F	VG	VG
Lu	6	102	103	248	25.2	47	E	99	G	VP	VP	G
CDC Minstrel ☼	7	106	107	245	21.0	75	L	98	VG	F	P	VG
AC Morgan	8	104	108	236	25.1	54	L	101	VG	VP	VP	F
CDC Morrison ☼	3	100	95	248	24.4	67	L	95	VG	F	VG	VG
CDC Nasser	6	110	107	233	21.8	64	VL	106	G	P	VP	VG
CDC Orrin ☼	6	108	109	253	23.2	74	L	103	G	P	VP	VG
Pinnacle ☼	8	113	109	244	23.6	70	VL	101	F	F	P	VG
Ronald ☼	7	96	99	249	22.4	55	L	97	VG	F	P	VG
CDC Ruffian *	4	113	112	247	20.4	72	L	95	G	VP	F	VG
CDC Seabiscuit ☼	7	110	106	240	20.3	73	L	100	G	F	P	F
Souris ☼	6	108	104	253	21.5	58	M	98	VG	G	VG	VG
Stride ☼	5	111	111	255	22.9	65	L	103	G	F	VG	VG
Summit ☼	6	103	103	256	21.6	67	M	94	G	F	VG	VG
Triactor ☼	7	114	118	240	22.8	66	L	99	G	VP	G	F
CDC Weaver ☼	7	108	111	245	19.2	71	L	104	F	F	P	VG

<sup>1</sup> Maturity Rating M = 96 days

### Additional Information

Although disease pressure is lower in eastern Saskatchewan than in Manitoba, crown rust races capable of attacking most varieties, except **CDC Big Brown**, **HiFi**, **Leggett**, **CDC Morrison**, **Souris**, **Stride**, **Summit**, and **Triactor** are increasing in southeast Saskatchewan. Early seeding will reduce the likelihood of severe infection.

Producers growing oats for the milling market are advised to check the “approved” varieties list available from the various oat millers.

### Feed Oat

**CDC SO-I** and **CDC Nasser** are specialty feed oat varieties with higher digestible energy for cattle.

### Forage Oat

**CDC Baler**, **CDC Haymaker** and **Murphy** are forage oat varieties available for annual forage production in Saskatchewan.

### Hulless Oat

**Bullion** and **AC Gwen** are hulless varieties available for production in Saskatchewan. The hull is part of normal oat yield, thus hulless types yield less. They are difficult to handle and store and should be stored at less than 12 per cent moisture.

### False Wild Oats or Fatuoids

False wild oats, or fatuoids, are off-types within common oat fields that have an appearance similar to wild oat, most noticeably, a prominent, dark awn and increased hairiness at the base of each floret. They are thought to result from the infrequent cross-pollination between common oat (*Avena sativa*) and true wild oat (*Avena fatua*). As such, their presence will likely be observed more often in fields planted from farm-saved seed. They have been reported within fields of common oat at rates up to 1 per cent and occur within all oat varieties.

## OTHER CROPS

### Buckwheat

Buckwheat is sensitive to high temperatures and dry weather conditions in the blossom stage, which can reduce seed set and yields. New self-pollinated varieties are being released. Buckwheat is very susceptible to frost at all stages of growth. Delayed seeding is advisable to avoid spring frost.

### Caraway

Caraway is a biennial spice crop, producing seed in the second year and sometimes in the third year. Seedlings are small, slow in developing and compete poorly with weeds. The crop is usually swathed because of its indeterminate growth habit and seed shattering. For more information, consult the Saskatchewan Agriculture publication, *Caraway*.

### Coriander

Coriander is an annual spice crop. Seedlings are small, slow to develop, and compete poorly with weeds. The large seeded type is earlier maturing than the small seeded type. **CDC Major** is a large-seeded coriander variety and **CDC Minor** is a small-seeded variety. The crop is usually straight-cut to avoid wind damage in swaths. For more information, consult the Saskatchewan Agriculture publication, *Coriander*.

### Fenugreek

Fenugreek is a leguminous spice crop adapted to dryland conditions in the Dark Brown and Brown Soil Zones. The crop should be seeded early to avoid yield and quality loss from fall frost. Contract production is advisable, as markets are limited. For more information, consult the Saskatch-

ewan Agriculture publication, *Fenugreek in Saskatchewan*.

### Safflower


Safflower is an annual oilseed or birdseed crop which can be grown successfully in the Brown Soil Zone. Safflower must be sown early (late April).

**Saffire** matures in about 120 days. Seed should be planted shallow but into a firm, moist seedbed at about 30 kg/ha (27 lbs/ac). **Saffire** has moderate resistance to sclerotinia head rot and alternaria leaf spot. Contract production is advised.

**AC Sunset** has the earliness of **Saffire** combined with higher oil content and resistance to sclerotinia head rot.

## Canaryseed

### Main Characteristics of Varieties

Variety	Type	Site Years Tested	Yield <sup>1</sup> (% CDC Maria)	Days to Heading	Days to Maturity	Height (cm)	Test Weight (kg/hL) <sup>3</sup>	Seed Weight (g/1000)
CDC Maria	glabrous	94	100	59	101	97	70	7.5
CDC Bastia	glabrous	82	114	+1	0	+2	0	+0.1
Cantate <sup>2</sup>	hairy	37	131	+1	+2	+2	-6	+0.1
Keet	hairy	94	123	+3	+3	+5	-6	-0.2
CDC Togo 	glabrous	87	111	+1	+1	0	-1	+0.7

<sup>1</sup> Yield data not collected by Area

<sup>2</sup> 2004-2013 data only

<sup>3</sup> multiply by 0.8 = lb per bushel

### Additional Information

The seed of annual canarygrass, more commonly called canaryseed, is used as food for caged and wild birds. **Elias** pedigreed seed has not been produced in recent years. Seed hulls of **CDC Bastia**, **CDC Calvi**, **CDC Maria**, and **CDC Togo** do not have the small sharp hairs that cause irritation when canaryseed is threshed and handled and are called glabrous. **CDC Calvi**, a new, higher yielding glabrous variety was registered in 2013. Seed of **CDC Calvi** will not be available in 2014.

Canaryseed plants have a dense, shallow root system and growing the crop on sandy soils is not recommended. Canaryseed may be grown successfully on stubble, providing adequate moisture is available for rapid germination and emergence. The recommended seeding rate is 34 kg/ha (30 lb/ac) with germination greater than 85 per cent. Reduced emergence might be expected if canaryseed is seeded below 5 cm.

Canaryseed is subject to damage by English grain aphid and bird cherry oat aphid. Aphid populations build up rapidly on leaves, stems and head of the plant in July and August and may require an insecticide application to prevent yield loss. Information from the United States indicates that infestations of 10 to 20 aphids on 50 per cent of the stems prior to soft dough stage may cause enough damage to warrant insecticide application. The aphids often hide in the dense head of the canaryseed plant. Damage may occur at populations below these levels.

Canaryseed leaf mottle is a foliar disease that can cause yield losses. Leaf mottle is caused by a fungus, *Septoria triseti* that only affects canaryseed. The disease is inconspicuous at early stages because there is little visual contrast between healthy and diseased leaf area. Stubble borne inoculum is the source of infection, thus crop rotation is key in limiting the severity of leaf mottle.

Canaryseed is resistant to shattering. It may be straight-combined or swathed when fully mature. For more information on canaryseed, consult the Saskatchewan Agriculture publication, *Canaryseed*.

# General Seed Facts

## Pedigreed Seed

Use certified seed regularly. This assures that the seed has high genetic purity, high germination and is relatively free from weeds and other crop seeds.

## Re-Use of Hybrid Seed

Seed grown from a hybrid variety (regardless of crop or variety) should not be re-used since a 20 to 25 per cent yield reduction can occur in the next generation. This reduction is due to loss of hybrid vigour and possible occurrence of male-sterile plants. Lack of uniformity for maturity and quality traits can also occur.

## Seed Cleaning

Seed should be cleaned carefully to remove weed seeds, trash, small or broken kernels, ergot and sclerotia. Not all seed-cleaning plants are equipped to clean grain to acceptable seed standards.

## Seed Treatment

Various fungicides have been registered for the control of seedling diseases caused by soil- and seed-borne pathogens.

Use of seed from cereal crops infected with *Fusarium* may result in poor emergence. Such seed should be treated with a registered fungicide before planting. Use of infected seed may introduce *Fusarium* diseases into unaffected areas.

Smuts that attack wheat, barley, oat and rye can be controlled by seed treatment. If seed from a crop in which bunt or smut was observed must be used for seed, seed should be tested and seed treatment should be considered. If the presence of smut is uncertain, varieties rated very poor should be treated every year, those rated poor every second year and those rated fair every third year.

Only systemic fungicides will control true loose smut of barley and wheat, and stem smut of rye. Pathogens causing the other types of smut (covered, false loose, oat smut and bunt) are carried on the outside of the seed and can be controlled by non-systemic seed treatments.

The virulent form of blackleg of canola is widespread in Saskatchewan. Seed treatment with a recommended fungicide can reduce the level of disease. Use of canola seed commercially coated with an appropriate seed treatment is a convenient alternative to on-farm seed treatment.

Wireworms that attack all grain crops, and flea beetles that attack canola and mustard, can be controlled by seed treatment with insecticides.

Read the label carefully before using any seed treatment or insecticide. Information on their use and recommended rates is found in the Saskatchewan Agriculture publication, *Guide to Crop Protection*. Carryover stocks of treated seed should be tested for germination before planting. Treated seed must not be delivered to an elevator or used for feed.

## Seed-Borne Diseases of Pulses

Pulse growers should use seed that has been tested for seed-borne diseases such as ascochyta, anthracnose and botrytis. Tolerances for seed infection vary with the pulse crop, the disease, weather conditions of the region and the availability of a seed treatment. If infection of the crop from sources other than seed is likely, using seed with low infection levels becomes less important.

In regions with frequent rainfall and high humidity, tolerances will be lower. Thus, for ascochyta blight of lentil, use of seed with up to 5 per cent seed infection is acceptable in the Brown and Dark Brown Soil Zones, but 0 per cent is desirable in the Black Soil Zone. A seed treatment for ascochyta-infected lentil seed is available and is recommended if seed infection levels approach 5 per cent. In pea, up to 10 per cent seed infection with ascochyta is acceptable. In chickpea, 0 per cent ascochyta seed infection is recommended because of the high rate of transmission of the disease from the seed to the emerging seedlings and its highly destructive nature. Refer to Saskatchewan Agriculture publication, *Guidelines for Seed-Borne Diseases of Pulse Crops*.

## Crop Rotation

Seeding into stubble of the same crop kind will increase disease risk, particularly in higher rainfall areas. Residue of infected crops may harbour disease pathogens. Maintain a diverse crop rotation.

## Ergot

Ergot attacks all varieties of rye, triticale, wheat and barley, as well as most common grass species. Oat is rarely attacked and all broadleaf species are immune. Grain containing 0.1 per cent ergot is considered poisonous and should not be used for food. Refer to the Saskatchewan Agriculture publication *Ergot of Cereals and Grasses*.

## Seed Inoculation

Legume crops obtain much of their nitrogen requirement by forming a symbiotic association with soil bacteria called *Rhizobium*. These bacteria colonize the roots to form structures called nodules where they fix nitrogen for the legume plant. To enhance nitrogen fixation, the legume crop seed should be inoculated. **Use the proper strain of bacteria specific to that crop.** For further details, consult the *Pulse Production Manual* (Saskatchewan Pulse Growers).

## Damp and Frozen Seed

Seed which is stored damp or tough may be low in germination and may lack adequate vigour. Grain which will be used for seed should be dried, if necessary, soon after harvest. The drying temperature should be below 37°C for batch driers and 43°C for recirculating and continuous driers. Frozen grain should always be tested for germination by a seed-testing laboratory before planting. Such grain will frequently produce a high percentage of abnormal seedlings.

## Wheat Midge

All wheat classes, including durum and triticale, are susceptible to wheat midge. Farmers in infested areas should be prepared to spray fields with recommended insecticides if necessary. Consider the use of midge-tolerant varieties. Refer to the Saskatchewan Agriculture publication, *Wheat Midge*.

The Saskatchewan Advisory Council on Grain Crops (SACGC) and the Saskatchewan Variety Performance Group (SVPG) coordinate, supervise and review the collection, analysis and reporting of information in this booklet. Membership consists of representatives from:

- Saskatchewan Ministry of Agriculture
- Seed Companies
- Saskatchewan Seed Growers Association
- Producer Associations
- Agriculture and Agri-Food Canada
- Crop Development Centre
- University of Saskatchewan
- Saskatchewan Crop Insurance Corporation

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# PULSE CROPS

## Lentil

### Main Characteristics of Varieties

Market Class	Variety	Herbicide Tolerance <sup>1</sup>	Years Tested <sup>2</sup>	Yield (% CDC Maxim)		Height (cm)	Days to Flower	Maturity Rating <sup>3</sup>	Resistance To		Seed Coat Colour	Coty-ledon Colour	Seed Weight (g/1000)
				Area 1 & 2	Area 3 & 4				Asco-chyta Blight	Anthrac-nose Race 1			
Small red	CDC Maxim	CL	7	100	100	34	51	E/M	G	G	gray	red	40
	CDC Cherie		5	109	106	32	51	E/M	G	F	gray	red	39
	CDC Dazil	CL	6	104	101	33	53	E/M	G	F	gray	red	35
	CDC Imax	CL	7	95	81	35	51	E/M	G	F	gray	red	45
	CDC Impact	CL	6	80	76	30	47	E	G	P	gray	red	34
	CDC Red Rider		6	95	85	34	52	E/M	G	F	gray	red	45
	CDC Redberry		6	97	99	34	50	E/M	G	G	gray	red	42
	CDC Redcliff		7	107	103	35	51	E/M	G	F	gray	red	38
	CDC Redcoat		6	105	93	33	50	E/M	G	G	gray	red	39
	CDC Rouleau		6	96	93	33	52	M	G	G	gray	red	37
	CDC Scarlet		5	108	104	35	53	E/M	G	F	gray	red	36
Extra small red	CDC Impala	CL	6	94	91	30	51	E	G	G	gray	red	31
	CDC Imperial	CL	6	84	79	30	49	E	G	G	gray	red	30
	CDC Redbow		6	102	99	30	49	E	G	G	gray	red	32
	CDC Rosebud		6	100	99	30	50	E	G	G	tan	red	31
	CDC Rosie		5	97	91	33	52	E/M	G	G	gray	red	30
	CDC Ruby		7	90	91	30	48	E	G	G	gray	red	29
Large red	CDC KR-1		7	110	91	37	52	M	G	G	gray	red	56
	CDC KR-2	CL	3	104	---	37	52	M	G	G	gray	red	55
Small green	CDC Invincible	CL	7	99	84	33	49	E	G	G	green	yellow	34
	CDC Milestone		6	91	84	31	49	E	G	VP	green	yellow	37
	CDC Viceroy		6	97	98	34	49	E	G	G	green	yellow	33
Extra small green	CDC Asterix		6	99	101	30	48	E	G	F	green	yellow	26
Medium green	CDC Impress	CL	6	87	71	34	50	M	G	P	green	yellow	52
	CDC Imigreen	CL	7	78	71	44	50	M	G	VP	green	yellow	57
	CDC Meteor		6	102	89	34	50	M	G	VP	green	yellow	51
	CDC Richlea		6	93	80	35	50	M	VP	VP	green	yellow	51
	CDC Sovereign		6	83	77	40	52	L	G	P	green	yellow	66
Large green	CDC Greenland		7	89	70	38	52	M/L	G	VP	green	yellow	64
	CDC Greenstar		4	100	77	40	52	M/L	G	F	green	yellow	73
	CDC Impower	CL	6	86	78	41	52	M/L	G	VP	green	yellow	64
	CDC Improve	CL	6	87	76	39	51	M	F	VP	green	yellow	67
	CDC Plato		6	87	77	38	52	M/L	G	P	green	yellow	62
	CDC Sovereign		6	83	77	40	52	L	G	P	green	yellow	66
French green	CDC LeMay		6	84	80	35	48	E	F	VP	green marble	yellow	33
	CDC Marble		5	108	103	36	49	E	G	F	green marble	yellow	34
Green cotyledon	CDC Peridot	CL	6	84	94	37	48	E	F	P	green marble	yellow	38
	CDC QG-1		5	80	65	42	51	M	F	F	green	green	49
	CDC QG-2		3	89	--	40	48	E	F	F	green marble	green	32
Spanish brown	CDC SB-1		4	76	81	35	48	E	F	F	gray dotted	yellow	37
	CDC SB-2		5	95	85	37	49	E	G	G	gray dotted	yellow	37

<sup>1</sup> CL indicates Clearfield variety.

<sup>2</sup> Co-op and Regional Trials in Saskatchewan since 2006. Comparisons to the check variety, small red lentil **CDC Maxim**.

<sup>3</sup> Maturity ratings: Normal maturity range in days based on May 1 seeding is E = 100, VL = 110 but maturity can be much earlier in dry years, much later in cool wet years. See Page 2 for more information on maturity range in lentil.

#### Additional Information

Seed supplies may be limited for **CDC Scarlet**, **CDC Rosie**, **CDC Asterix**. Seed supplies will be limited for **CDC Greenstar**, **CDC Marble**, **CDC QG-2** and **CDC KR-2**.

Weight, diameter and thickness of lentil seeds will vary depending on environmental conditions and agronomic factors.



## Field Pea Additional Information (cont'd)

For detailed production information consult the *Pulse Production Manual* published by Saskatchewan Pulse Growers. The relative maturity of the check variety **CDC Golden** is M (Medium), which is on average 90 days from seeding to swathing ripeness. Please add 3-4 days for each rating beyond Medium. As harvest proceeds into the fall, these ranges expand.

## Chickpea

### Main Characteristics of Varieties

Market Class	Variety	Years Tested	Yield (% Amit)		Ascochyta Blight <sup>2</sup>	Height (cm)	Days to Flower	Maturity	Seed Weight (g/1000)	Seed Shape <sup>3</sup>	Seed or Seed Coat Colour <sup>4</sup>
			Area 1 <sup>1</sup>	Area 2 <sup>1</sup>							
<b>Kabuli</b>	Amit (B-90) ☉	12	100	100	4.4	47	56	L	258	Ro	B
	CDC Alma	5	88	94	6.2	43	53	L	369	RH	B
	CDC Frontier	12	107	104	4.4	46	56	L	349	RH	B
	CDC Leader	8	108	107	4.4	42	54	M	389	RH	B
	CDC Luna	11	97	100	5.7	40	53	M/L	369	RH	B
	CDC Orion	7	107	107	4.9	46	51	L	439	RH	B
<b>Desi</b>	CDC CabriŞ	11	103	101	4.8	49	51	M	304	P	T
	CDC Consul (603-3)	6	111	110	4.0	48	53	M	304	P	LT
	CDC Corinne	11	114	110	4.1	45	55	M	244	A/P	T
	CDC Cory	5	113	105	4.2	50	56	M	270	A/P	T
	CDC Vanguard	11	108	108	4.8	43	53	M/L	221	P	T

<sup>1</sup> Area 1: brown soil zone; Area 2: dark brown soil zone

<sup>2</sup> Ascochyta Blight at pod filling period: 0-9 scale; 0 = no symptom; 9 = plants are completely blighted. Scores 4-6 are considered fair.

<sup>3</sup> Seed shape: Ro = Round; RH = Ram-head; P = plump; A = angular

<sup>4</sup> Seed or seed coat colour: B = beige; LT = light tan; T = tan.

### Additional Information

Please refer to *2014 SaskSeed Guide* for pedigreed seed availability. For more details on production consult the *Pulse Production Manual* published by the Saskatchewan Pulse Growers ([www.saskpulse.com](http://www.saskpulse.com)).

## Soybean

### Main Characteristics of Varieties

Variety	Type <sup>1</sup>	Years Tested	Yield (% 23-10RY)	Corn Heat Units <sup>2</sup>	Days to Maturity <sup>3</sup>	Seed Size (# seeds/lb)	Hilum Colour <sup>4</sup>
23-10RY	RR2	2	100	2325	124	3128	BL
29002RR	RR1	2	88	2375	121	3400	Y
900Y61 *	RR1	2	102	2425	127	2608	BR
900Y71 ☉	RR1	2	109	2450	127	2935	IY
Bishop R2	RR2	2	90	2450	124	2987	IY
LS 002R23	RR2	2	113	2375	125	2719	BL
McLeod R2	RR2	2	117	2375	125	2473	BL
NSC Libau RR2Y	RR2	2	103	2375	127	2800	BL
NSC Reston RR2Y	RR2	2	102	2325	123	2653	BL
NSC Tilston RR2Y	RR2	2	108	2375	125	2965	BL
Pekko R2	RR2	2	98	2325	124	2389	BL
Sampsa R2	RR2	2	101	2425	128	2092	IB
TH 32004R2Y	RR2	2	117	2425	126	3400	BL
TH 33003R2Y	RR2	2	107	2400	124	3200	BR
Vito R2	RR2	2	99	2350	125	3160	GR

<sup>1</sup> All varieties in this table are either Roundup Ready 1 or Genuity Roundup Ready 2 Yield™

<sup>2</sup> Corn Heat Unit ratings are assigned by individual companies to assist growers select varieties suitable for their area; Days to Maturity is also an important indicator.

<sup>3</sup> Average from 2012 and 2013. Longer season varieties did not fully mature at all sites. Cold growing seasons result in delayed maturity.

<sup>4</sup> Hilum is the point where the seed attaches to the pod. BR = Brown, Y = Yellow, IY = Imperfect Yellow, IB = Imperfect Black, BL = Black, GR = Grey

### Additional Information

Data are derived from the Western Canada soybean variety trial co-ordinated by Manitoba Agriculture, Food and Rural Initiatives. Test sites include Saskatoon, Floral, Yorkton, Redvers, Outlook (dryland and irrigated), and Rosthern in SK; Bow Island (dryland and irrigated) in AB; Melita, Carberry (dry and irrigated), Hamiota, Roblin, and Boissevain in MB. Two year mean yield of the check variety **23-10RY** was 41 bushels/acre. Typical on-farm yields are 25-30 bu/acre. For effective nodulation and nitrogen fixation, soybean must be inoculated with a *Bradyrhizobium japonicum* bacterial inoculant, since this bacteria is not native to western Canadian soils.



# Dry Bean

## Main Characteristics of Varieties

Variety	Type	Years Tested <sup>1</sup>	Yield ----- (% CDC Pintium) -----			Days to Flower	Maturity Rating <sup>2</sup>	% Pod Clearance <sup>3</sup>	Seed Weight (g/1000)	Growth Habit <sup>4</sup>
			Irrigation	Area 2	Area 3					
CDC Pintium	pinto	12	100	100	100	50	E	85	350	I
Island	pinto	6	117	111	100	55	M	79	355	II
Mariah ☼	pinto	4	112	113	94	55	L	82	293	II
CDC Marmot	pinto	4	109	120	115	50	E	80	367	I
Winchester	pinto	5	116	111	109	52	M	82	352	II
Winmor	pinto	6	118	104	100	55	M	72	350	II
CDC WM-2 ☼	pinto	7	114	108	104	52	E	79	365	II
Envoy	navy	12	80	90	84	53	M	77	184	I
Lightning	navy	7	109	95	90	60	L	85	175	II
Skyline ☼	navy	5	74	95	92	57	L	80	163	I
OAC Spark	navy	5	86	100	101	55	L	81	163	I
AC Polaris	great northern	7	97	102	95	52	L	70	310	III
AC Redbond	small red	8	98	103	99	51	M	65	290	II
CDC Blackcomb	black	6	113	99	94	56	M	85	167	II
Carman Black	black	5	125	115	112	59	M	88	180	II
CDC Jet	black	12	94	96	92	58	L	85	170	II
AC Black Diamond	shiny black	7	102	94	94	54	M	70	250	II
CDC Sol ☼	yellow	6	102	93	85	55	L	78	399	I

<sup>1</sup> Co-op and regional trials grown in narrow rows. Direct comparisons to **CDC Pintium** since 2002.

<sup>2</sup> Maturity ratings based on E = 100 days; L = 110 days for May 20 planting to swathing maturity. See page 2 for more information.

<sup>3</sup> Pod clearance: percentage of pods that completely clear the cutterbar at time of swathing (~4 cm).

<sup>4</sup> Growth habit: I = Determinate bush; II = Indeterminate bush; III = Indeterminate vine.

# Faba Bean

## Main Characteristics of Varieties

Variety	Years Tested	Yield (% CDC Fatima)	Maturity (days)	Seed Weight (g/1000)
<b>Coloured Flower</b>				
CDC Fatima	8	100	105	520
CDC Blitz	6	101	109	410
FB9-4	5	96	104	680
Florent	4	112	107	660
CDC SSNS-1	8	90	105	335
Taboar ☼	4	96	107	480
<b>White Flower</b>				
Snowbird ☼	8	104	104	495
Imposa ☼	4	110	107	695
CDC Snowdrop	5	88	104	335
Tobasco ☼	5	101	106	530

### Additional Information

Faba bean regional trials began in 2006 to accommodate growing interest in this crop as a nitrogen-fixing, high protein food and feed grain in moist areas. White-flowered types are zero tannin. All coloured flower types have seed coats that contain tannins and may be suitable for export food markets if seed size and quality match customer demand. Maturity ratings are based on days until swathing, but will vary depending on seeding date.

# Flax

## Main Characteristics of Varieties

Variety	Years Tested	Yield <sup>1</sup>			Relative Maturity <sup>2</sup>	Seed Size	Resistance To		
		(% CDC Bethune)					Lodging	Powdery Mildew <sup>3</sup>	Fusarium Wilt <sup>3</sup>
		Area 1&2	Area 3&4	Irrigation					
CDC Bethune ☼	10	100	100	100	L	M	G	MR	MR
CDC Glas ☼	4	104	106	95	L	M	G	MR	MR
Hanley ☼	4	90	90	93	M	M	G	MR	R
Lightning ☼	6	92	92	93	L	M	G	MR	R
Prairie Blue ☼	4	99	92	97	L	S	VG	MR	MR
Prairie Grande ☼	6	92	94	92	M	M	VG	MR	MR
Prairie Thunder ☼	8	95	95	98	M	M	VG	MR	R
CDC Neela ☼	4	103	106	94	L	M	G	MR	MR
CDC Sanctuary ☼	6	106	99	97	L	M	F	MR	MR
CDC Sorrel ☼	8	100	101	92	L	L	G	MR	MR
Taurus ☼	6	94	99	94	M	M	G	R	MR
Vimy	10	94	90	85	M	L	P	MS	MR
AC Watson	6	88	93	92	M	M	G	R	MR

<sup>1</sup> Data from Regional and Coop yield trials.

<sup>2</sup> Relative maturity: The relative maturity of the check, **CDC Bethune**, is L (on average 101 days from seeding to swathing ripeness).

<sup>3</sup> Resistance Scale: MS = Moderately Susceptible, MR = Moderately Resistant, R = Resistant.

### Additional Information

All variety descriptions other than yield are based on data from the Flax Cooperative Trials in the Prairie Provinces.

All varieties are immune to rust.

Frozen flax straw should be analyzed by a feed testing laboratory to determine that it is free of prussic acid before using it as a livestock feed.

The flax industry is encouraging all flax producers to replace their existing seed stocks for the 2014 season so that all trace of Triffid can be removed from the grain supply. During the 2014 season, flax producers are encourage to deliver all previous seed stocks and grain inventory to the elevator system to minimize the chance of cross contamination of new flax supplies with old inventory.

## Reboot Your Flax Seed in 2014!

By Venkata Vakulabharanam, Provincial Specialist – Oilseed Crops

Since 2009, the flax industry has been working hard to keep the European Union (EU) market open for Canadian flax. Over the last three years, the amount of Triffid contamination in our flax seed stocks and commercial production has decreased dramatically. Significant and consistent decrease was seen in our pedigreed flax seed, which showed 'zero' positive samples for Triffid in testing conducted for three years in a row, including 2013/2014 samples to date. Farm grain and farm saved seed are consistently showing about three per cent of triffid contamination. As the current tolerance limit to access the EU market is still effectively zero, planting 'Triffid-free' seed is still the key!

The flax breeder at the Crop Development Centre reconstituted their two popular flax varieties **CDC Bethune**, **CDC Sorrel** and two new varieties **CDC Sanctuary** and **CDC Glas**. Reconstitution of a variety is a very laborious process where the breeder tests each and every plant in the greenhouse for Triffid contamination and only seed from negatively tested plants is pooled to make Breeder's seed for that variety. These reconstituted breeder seed lots were supplied to SeCan. This pedigreed seed is grown under a very stringent agreement in 2012 and 2013.

During the summer of 2013, SeCan tried to

rename two old CDC flax varieties but were not successful due to Plant Breeders' Rights limitations. However, seed growers with re-constituted seed are provided with a Re-constituted Flax Seed Certificate for authenticity.

Recommendation to growers:

- Flax growers should plant only **certified** seed of both re-constituted varieties or other varieties during 2014.
- Growers are asked to verify 'Reconstituted Flax Seed Certificate' if purchasing certified seed of **CDC Bethune**, **CDC Sorrel**, **CDC Sanctuary** and **CDC Glas**.
- New cultivars **CDC Sanctuary** (106 per

cent in brown soil zone) and **CDC Glas** (103 per cent in Western Canada) gave better yield than **CDC Bethune** in co-op trials.

- ...So, it is a good opportunity to try new varieties on your farm while eliminating Triffid contamination.

The Flax industry is providing a great opportunity to all flax growers to start with clean seed again - A well thought out response to restore our flax markets. Be a part of the industry awareness campaign 'Reboot Canada's Flax Industry'.

### 2009 - 2012 Test Results

Class and Testing Method	% of CDC Triffid Positive Samples 2009/2010	% of CDC Triffid Positive Samples 2010/2011	% of CDC Triffid Positive Samples 2011/2012	% of CDC Triffid Positive Samples 2012/2013
<b>Grain (1 X 60 test)</b>	10%	test not used	test not used	test not used
<b>Grain (4 X 60 test)</b>	test not used	7%	3-5%	4%
<b>Farm saved seed (4 X 60 test)</b>	14%	4%	4-5%	3%
<b>Pedigreed seed (4 X 60 test)</b>	7%	2%	0%	0%

# Mustard

## Main Characteristics of Varieties<sup>1</sup>

Type and Variety	Years Tested	Yield	Plant Height (cm)	Glucosinolate (μmol/g seed)	Mucilage <sup>2</sup> (cS*ml/g seed)	Volatile oil <sup>3</sup> (μmol/g seed)	Fixed Oil (% seed)	Protein (% Seed)	Seed Weight (g/1000)	Maturity (days)
<b>Yellow Mustard</b>		Yield (% AC Pennant)								
AC Pennant	14	100	96	148	44.7	n/a	29.5	34.3	5.7	92
Andante	14	101	102	145	55.7	n/a	28.4	35.1	6.0	93
<b>Brown Mustard</b>		Yield (% Duchess)								
Duchess	14	100	113	n/a	n/a	9.5	38.1	28.7	2.7	92
Amigo <sup>4</sup>	5	92	113	n/a	n/a	13.6	34.7	30.3	2.8	94
Centennial Brown	14	101	117	n/a	n/a	10.3	36.3	30.1	3.1	92
<b>Oriental Mustard</b>		Yield (% Cutlass)								
Cutlass	14	100	115	n/a	n/a	11.6	41.0	29.1	2.8	91
Forge	14	97	125	n/a	n/a	12.2	38.9	29.6	2.6	92
AC Vulcan	14	98	116	n/a	n/a	12.4	40.6	29.5	2.9	91

<sup>1</sup> Data from 1999-2012 Co-operative Test. Yield % of check

<sup>2</sup> Mucilage in yellow mustard is a measurement of viscosity of aqueous extracts from seed

<sup>3</sup> Volatile oil = allyl glucosinolate

<sup>4</sup> Data from 2008-2012 Co-operative Mustard Test

### Additional Information

Three types of mustard are grown in western Canada: yellow (*Sinapis alba*), and brown and oriental (*Brassica juncea*). Mustard is typically grown under contract, where the contractor specifies the variety to be grown to meet industry specifications for product quality. All mustard varieties have good resistance to blackleg disease and mature, on average, in 91 to 94 days.

The two yellow mustard varieties have similar yield. A unique feature of yellow mustard is high mucilage content. Mucilage is valued by the mustard industry as a stabilizer in prepared food products. **Andante** has higher mucilage content. High protein content is of importance for yellow mustard flour as an ingredient in meat products. **Andante** has higher protein content than **AC Pennant**.

Brown mustard is grown primarily for the Dijon mustard market. **Centennial Brown** has significantly higher allyl glucosinolate and protein contents, and is also larger seeded than **Duchess**. **Centennial Brown** and **Duchess** are highly susceptible to white rust disease (stag-head). **Amigo** is the first brown mustard variety highly resistant to white rust race 2a, but susceptible to race 2v. **Amigo** has higher allyl glucosinolate content than **Centennial Brown** and **Duchess**. Its seed weight is somewhat lower than **Centennial Brown**.

Three varieties of oriental mustard (yellow-seeded) are available for production. **Cutlass** is the highest yielding variety. **AC Vulcan** and **Forge** have higher allyl glucosinolate content and greater protein content than **Cutlass**. **Forge** has significantly lower fixed oil content and smaller seed size than **Cutlass**.

# Canola (Small Scale Trials)

## Main Characteristics of Varieties

Variety	Distributor	Yield (bu/ac)				Maturity (days)			Height (cm)			Blackleg Rating
		Growing Season Zone <sup>1</sup>				Growing Season Zone			Growing Season Zone			
		Long (2)	Mid (14)	Short (4)	Avg.	Long	Mid	Short	Long	Mid	Short	
<b>Clearfield</b>												
5525 CL	BrettYoung	86	69	75	72	94	100	108	130	115	125	R
VR 9560 CL <sup>2</sup>	Viterra	87	72	80	75	93	102	110	130	123	125	R
LSD <sup>3</sup>		13	9	19								
<b>Liberty Link</b>												
5440	Bayer CropScience	100	75	90	82	94	99	108	128	120	128	R
L252	Bayer CropScience	112	79	96	87	95	101	109	128	120	123	R
L261	Bayer CropScience	101	76	89	82	93	102	110	150	130	138	R
L130	Bayer CropScience	94	72	89	79	9	99	107	130	120	125	R
L154	Bayer CropScience	103	74	87	81	93	99	108	130	120	125	R
L159	Bayer CropScience	98	77	90	82	95	100	109	138	125	130	R
LSD <sup>3</sup>		14	7	9								
<b>Roundup Ready</b>												
1990	CANTERRA SEEDS	99	74	82	79	92	100	109	126	114	115	R
6044 RR	BrettYoung	97	70	80	76	95	99	107	127	112	113	R
6050 RR	BrettYoung	91	70	77	74	93	99	107	117	110	118	R
6060 RR	BrettYoung	98	72	81	77	97	103	110	134	119	125	R
73-15 RR	DEKALB	---	---	75	75	---	---	105	---	---	110	---
73-45 RR	DEKALB	87	68	79	73	92	98	106	110	105	110	R
73-75 RR	DEKALB	101	72	75	77	92	99	106	121	111	110	R
74-44 BL	DEKALB	94	72	81	77	92	98	107	120	107	115	R
74-47 CR	DEKALB	102	70	81	77	96	101	108	128	114	123	R
74-54 RR	DEKALB	95	71	81	76	92	99	107	119	113	118	R
SY4114	Syngenta Canada	101	72	75	76	92	99	106	120	110	110	R
SY4135	Syngenta Canada	100	72	81	78	92	99	107	122	110	115	R
V12-1 <sup>3</sup>	Cargill - VICTORY Canola	93	74	86	79	93	100	109	134	117	120	R
V12-2 <sup>3</sup>	Cargill - VICTORY Canola	93	69	76	74	96	101	109	128	113	118	R
VR 9562 GC	Crop Production Services	98	73	82	78	94	99	107	133	119	130	R
VT 530 G	Crop Production Services	96	73	83	78	93	100	108	132	119	123	MR
LSD <sup>4</sup>		11	7	12								

<sup>1</sup> The number of sites tested is included in brackets.

<sup>2</sup> Specialty oil profile and available for premium pricing.

<sup>3</sup> Higher oil content and may be eligible for pricing premiums.

<sup>4</sup> LSD = least significant yield difference (5% level) within herbicide system.

### Additional Information

#### **Brassica napus (Argentine Canola)**

Argentine varieties mature two weeks later than Polish varieties and are therefore better suited to the mid and long season growing areas of Saskatchewan. Blackleg disease, which is now widespread in Saskatchewan, can cause severe yield losses in varieties that are susceptible. Argentine varieties are susceptible to seed shattering when left standing at full maturity. Later maturing varieties tend to produce higher levels of green seed under wet and cool conditions at harvest, which can cause substantial grade reductions. The control of herbicide tolerant canola volunteers requires good agronomic practices, such as proper crop and herbicide rotations.

#### **Brassica rapa (Polish Canola)**

Polish varieties mature approximately two

weeks earlier than Argentine varieties and are less likely to produce green seed. Polish varieties are more heat and drought tolerant than the Argentine type. They are also more shatter resistant than Argentine varieties and are therefore well suited to straight combining. All current Polish varieties have poor resistance to blackleg, but blackleg is less of a threat in Polish canola because of its early maturity, which tends to reduce the impact of the disease on seed yields. Three new synthetic Polish varieties are **Early One**, **ACS-C29** and **Synergy**. All three varieties yield significantly more than their open-pollinated counterparts like **AC Sunbeam**. **Early One** and **ACS-C29** are available through Mastin Seeds, while **Synergy** and **AC Sunbeam** are available through SeCan. (Source: AAFC, Saskatoon)

#### **Brassica juncea Canola**

Canola quality *Brassica juncea* is a class of canola that is especially well adapted to areas where hot, dry conditions are common. It has very good resistance to blackleg and exhibits better heat and drought tolerance than other *Brassica napus* canola. All production is contracted.

**XCEED** Canola, available from Proven Seed, Crop Production Services in 2014, is suited to the Brown and Dark Brown growing season zones. It is compatible with the Clearfield Production System (Source: CPS).

# Canola (Large Scale Strip Trials)

## Main Characteristics of Varieties

Variety	Yield (% 73-75 RR)			
	Growing Season Zone <sup>1</sup>			
	Long	Mid	Short	Average
<b>Check</b>				
73-75 RR (yield in bu/ac)	55	53	51	53
<b>Liberty Link</b>				
5440	100 (9)	102 (19)	107 (6)	102
L252	108 (7)	104 (16)	107 (5)	105
L261	107 (7)	103 (14)	107 (5)	105
L130	101 (16)	102 (30)	109 (10)	103
L154	100 (4)	105 (8)	102 (3)	103
L159	99 (2)	102 (6)	101 (2)	101
<b>Roundup Ready</b>				
1990	102 (1)	100 (16)	106 (6)	101
6060 RR	97 (4)	93 (7)	95 (1)	94
73-15 RR	---	104 (20)	106 (10)	104
73-45 RR	99 (13)	101 (40)	106 (12)	102
73-75 RR	100 (22)	100 (68)	100 (18)	100
74-44 BL	102 (18)	104 (50)	107 (16)	104
74-47 CR	98 (4)	98 (21)	97 (3)	98
74-54 RR	101 (14)	103 (42)	104 (12)	102
SY4114	---	102 (3)	99 (3)	100
SY4135	---	98 (3)	105 (3)	101
V12-1	---	99 (10)	---	99
V12-2	---	97 (7)	---	97
VT 530 G	---	104 (1)	---	104

<sup>1</sup> The number of sites tested is included in brackets.

### Least Significant Difference

When comparing average zone yields for varieties in the small plot data, the least significant difference (LSD) is about 7 to 19 bu/ac. If variety A yielded 52 bu/ac. and variety B yielded 45 bu/ac., they would be considered statistically the same. This is based on a confidence level that significant differences would occur by chance less than 5% of the time. In the small plot design used, varieties were grouped by herbicide system, which means that the LSD shown strictly applies to comparisons between varieties of the same herbicide system.

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

### Where can you get the Canola Performance Trial results?

Results are available through an online interactive tool at [www.canolaperformancetrials.ca](http://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 are 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. Data is also available in booklet form that will be distributed through various publications and can be obtained from your local agri-retailer.

# Sunflower

## Main Characteristics of Varieties

Variety	Years Tested	Yield (% 63A21)	Average Maturity (days)	Harvest Moisture (%)
<b>Oilseed</b>				
63A21	4	100	113	19.1
2930	3	87	119	23.6
8N 270 <sup>1</sup>	4	89	118	27.3
7111 <sup>1</sup>	2	90	120	26.4
<b>Oilseed EMSS (Early Maturing, Short Stature)</b>				
63A21	14	100	113	19.1
AC Sierra	5	60	108	16.6

<sup>1</sup> Clearfield tolerant variety.

### Additional Information

Sunflower requires 105-125 days to mature, depending on the cultivar and the growing season. Oilseed sunflower has been grown in the Dark Brown and Black Soil Zones in southeastern Saskatchewan. Harvest moisture is a good indication of how quickly these hybrids will be ready to combine in the field. The EMSS varieties are adapted to production in most areas of Saskatchewan. **AC Sierra** is open pollinated and not a hybrid.

The Saskatchewan Sunflower Committee has been conducting trials in Saskatchewan for the purpose of registration and demonstration since 1983. Sunflowers no longer require three years of yield testing to be sold in Saskatchewan. Saskatchewan Sunflower Committee will publish results from each year. For the complete data set please email or call Shannon Friesen with Saskatchewan Agriculture ([shannon.friesen@gov.sk.ca](mailto:shannon.friesen@gov.sk.ca) or 306-848-2856).

# Breeding Institutions and Seed Distributors of Varieties Listed in this Publication

Crop Kind, Class & Variety	Breeding Institution	Distributor
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## CANARYSEED

CDC Bastia	U of S - CDC	Public release U of S - CDC
Cantate	J. Joordans Zaadhandel BV	Hansen Seeds
Keet	U of Minnesota; U of S - CDC	Public release U of S - CDC
CDC Maria	U of S - CDC	C. Special Crops
CDC Togo	U of S - CDC	CANTERRA SEEDS

## WHEAT

### Canada Western Red Spring

CDC Abound	U of S - CDC	Proven Seed/CPS Canada
CDC Alsask	U of S - CDC	Proven Seed/CPS Canada
Alvena	AAFC (Swift Current)	SeCan Members
AAC Bailey	AAFC (Swift Current)	CANTERRA SEEDS
AC Barrie	AAFC (Swift Current)	SeCan Members
AAC Brandon	AAFC (Swift Current)	SeCan Members
Carberry	AAFC (Swift Current)	SeCan Members
Cardale	AAFC (Winnipeg)	Seed Depot
AAC Elie	AAFC (Swift Current)	Alliance Seed Corp.
AC Elsa	AAFC (Swift Current)	SeCan Members
Fieldstar VB	AAFC (Winnipeg)	SeCan Members
Glenn	NDSU	CANTERRA SEEDS
CDC Go	U of S - CDC	Public release U of S - CDC
Goodeve VB	AAFC (Swift Current)	Alliance Seed Corp.
Harvest	AAFC (Winnipeg)	FP Genetics
CDC Imagine	U of S - CDC	Proven Seed/CPS Canada
Infinity	AAFC (Swift Current)	CANTERRA SEEDS
AC Intrepid	AAFC (Swift Current)	CANTERRA SEEDS
KANE	AAFC (Winnipeg)	SeCan Members
CDC Kernen	U of S - CDC	CANTERRA SEEDS
Lillian	AAFC (Swift Current)	SeCan Members
CDC VR Morris	U of S - CDC	Proven Seed/CPS Canada
Muchmore	AAFC (Winnipeg)	FP Genetics
CDC Osler	U of S - CDC	Public release U of S - CDC
CDC Plentiful	U of S - CDC	FP Genetics
AAC Redwater	AAFC (Winnipeg)	SeCan Members
Shaw VB	AAFC (Winnipeg)	SeCan Members
CDC Stanley	U of S - CDC	Proven Seed/CPS Canada
Stettler	AAFC (Swift Current)	SeCan Members
SY433	Syngenta Seeds Canada Inc.	Syngenta Canada
CDC Thrive	U of S - CDC	Proven Seed/CPS Canada
Unity VB	AAFC (Winnipeg)	SeCan Members
CDC Utmost VB	U of S - CDC	FP Genetics
Vesper VB	AAFC (Winnipeg)	SeCan Members
Waskada	AAFC (Winnipeg)	SeCan Members
WR859 CL	Syngenta Seeds Canada Inc.	Richardson Intl
5602HR	Syngenta Seeds Canada Inc.	Proven Seed/CPS Canada
5603HR	Syngenta Seeds Canada Inc.	Proven Seed/CPS Canada
5604HR CL	Syngenta Seeds Canada Inc.	Proven Seed/CPS Canada
5605HR CL	Syngenta Seeds Canada, Inc.	Proven Seed/CPS Canada

### Canada Prairie Spring Red

Conquer VB	AAFC (Winnipeg)	CANTERRA SEEDS
AC Crystal	AAFC (Swift Current)	SeCan Members
Enchant VB	AAFC (Winnipeg)	FP Genetics
AAC Ryley	AAFC (Swift Current)	SeCan Members
SY985	Syngenta Seeds Canada Inc.	Proven Seed/ Richardson Intl.
5700PR	Syngenta Seeds Canada Inc.	Proven Seed/CPS Canada
5702PR	Syngenta Seeds Canada Inc.	Proven Seed/CPS Canada

### Canada Western Hard White Spring

AAC Iceberg	AAFC (Winnipeg)	Alliance Seed Corp.
Snowbird	AAFC (Winnipeg)	FP Genetics
Snowstar	AAFC (Winnipeg)	SeCan Members
AAC Whitefox	AAFC (Winnipeg)	SeCan Members
Whitehawk	AAFC (Winnipeg)	SeCan Members
CDC Whitewood	U of S - CDC	SeCan Members

### Canada Western Soft White Spring

AC Andrew	AAFC (Lethbridge)	SeCan Members
AAC Chiffon	AAFC (Lethbridge)	Seed Net
Sadash	AAFC (Lethbridge)	SeCan Members

### Canada Western Extra Strong

Burnside	AAFC (Winnipeg)	David W. Fauraschou - MB
Glencross VB	AAFC (Winnipeg)	David W. Fauraschou - MB

### Canada Western General Purpose

AAC Innova	AAFC (Lethbridge)	Alliance Seed Corp.
CDC NRG003	U of S - CDC	CANTERRA SEEDS
NRG010	AAFC (Swift Current)	CANTERRA SEEDS
Pasteur	Wiersum Plant Breeding	SeCan Members
AAC Proclaim	AAFC (Lethbridge)	FP Genetics

Crop Kind, Class & Variety	Breeding Institution	Distributor
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## Canada Western Amber Durum

AC Avonlea	AAFC (Swift Current)	FP Genetics
Brigade	AAFC (Swift Current)	Proven Seed/CPS Canada
AAC Current	AAFC (Swift Current)	Alliance Seed Corp.
CDC Desire	U of S - CDC	Syngenta Canada
Enterprise	AAFC (Swift Current)	CANTERRA SEEDS
Eurostar	AAFC (Swift Current)	SeCan Members
CDC Fortitude	U of S - CDC	Proven Seed/CPS Canada
AC Navigator	AAFC (Swift Current)	Proven Seed/CPS Canada
Strongfield	AAFC (Swift Current)	SeCan Members
Transcend	AAFC (Swift Current)	FP Genetics
AAC Marchwell VB	AAFC (Swift Current)	SeCan Members
AAC Raymore	AAFC (Swift Current)	SeCan Members
CDC Verona	U of S - CDC	Alliance Seed Corp.
CDC Vivid	U of S - CDC	Proven Seed/CPS Canada

## WINTER WHEAT

Accipiter	U of S - CDC	SeCan Members
AC Bellatrix	AAFC (Lethbridge)	FP Genetics
Broadview	AAFC (Lethbridge)	CANTERRA SEEDS
CDC Buteo	U of S - CDC	SeCan Members
CDC Clair	U of S - CDC	SeCan Members
Emerson	AAFC (Lethbridge)	CANTERRA SEEDS
CDC Falcon	U of S - CDC	SeCan Members
Flourish	AAFC (Lethbridge)	SeCan Members
AAC Gateway	AAFC (Lethbridge)	Seed Depot
CDC Harrier	U of S - CDC	SeCan Members
CDC Kestrel	U of S - CDC	SeCan Members
McClintock	U of M (Winnipeg)	CANTERRA SEEDS
Moats	U of S - CDC	SeCan Members
CDC Osprey	U of S - CDC	CANTERRA SEEDS
Peregrine	U of S - CDC	SeCan Members
Pintail	AARD (Lacombe)	Mastin Seeds
CDC Ptarmigan	U of S - CDC	Western Ag
Radiant	AAFC (Lethbridge)	CANTERRA SEEDS
CDC Raptor	U of S - CDC	SeCan Members
Sunrise	U of S - CDC	Western Ag
Swainson	U of S - CDC	Public Release U of S - CDC

## WINTER RYE

Hazlet	AAFC (Swift Current)	SeCan Members
Prima	AAFC (Swift Current)	SeCan Members
AC Remington	AAFC (Swift Current)	CANTERRA SEEDS
AC Rifle	AAFC (Swift Current)	SeCan Members

## TRITICALE

Bobcat	AAFRD (Lacombe)	Progressive Seeds
Brevis	AAFC (Swift Current)	Wagon Wheel Seed Corp
Bumper	AAFC (Swift Current)	SeCan Members
Bunker	AAFRD (Lacombe)	FP Genetics
AC Certa	AAFC (Swift Current)	Progressive Seeds
Luoma	AAFRD (Lacombe)	Corns Brothers Farms
Metzger	AAFRD (Lacombe)	Haney Farm Ltd.
Pika	AAFRD (Lacombe)	Progressive Seeds
Pronghorn	AAFRD (Lacombe)	Progressive Seeds
Sunray	AAFC (Lethbridge)	SeedNet Inc.
Taza	AAFRD (Lacombe)	Solick Seeds
Tyndal	AAFRD (Lacombe)	SeCan Members
AC Ultima	AAFC (Swift Current)	FP Genetics

## FORAGE BARLEY

CDC Cowboy	U of S - CDC	SeCan Members
Desperado	AAFC (Brandon)	Alliance Seed Corporation
Dillon	Western Plant Breeders Inc.	Proven Seed/CPS Canada
CDC Maverick	U of S - CDC	SeCan Members
AC Ranger	AAFC (Brandon)	FP Genetics
Stockford	Westbred, LLC.	Proven Seed/CPS Canada

## MALTING BARLEY

### Two-Row

Bentley	AARD (Lacombe)	CANTERRA SEEDS
Cerveza	AAFC (Brandon)	Mastin Seeds Ltd.
CDC Copeland	U of S - CDC	SeCan Members
Harrington	U of S - CDC	SeCan Members
CDC Kendall	U of S - CDC	Proven Seed/CPS Canada
CDC Kindersley	U of S - CDC	SeCan Members
CDC Landis	U of S - CDC	Fedoruk Seeds Ltd.
Major	AAFC (Brandon)	Proven Seed/CPS Canada
CDC Meredith	U of S - CDC	SeCan Members
Merit 57	Busch Ag Res. Inc.	CANTERRA SEEDS
AC Metcalfe	AAFC (Brandon)	SeCan Members
Newdale	AAFC (Brandon)	FP Genetics
CDC PolarStar	U of S - CDC/Sapporo/PML	CANTERRA SEEDS
AAC Synergy	AAFC (Brandon)	Syngenta Canada Inc.

Crop Kind, Class & Variety	Breeding Institution	Distributor
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**MALTING BARLEY (CONT'D)**
**Six-Row**

CDC Anderson ☺	U of S - CDC	SeCan Members
CDC Battleford ☺	U of S - CDC	SeCan Members
Celebration ☺	Busch Ag Res. Inc.	CANTERRA SEEDS
CDC Clyde ☺	U of S - CDC	Proven Seed/CPS Canada
Innovation ☺	Bush Ag. Res. Inc.	CANTERRA SEEDS
Lacey	U of Minnesota	Alliance Seed Corp.
Legacy ☺	Busch Ag Res. Inc.	Proven Seed/FP Genetics
CDC Mayfair ☺	U of S - CDC	CANTERRA SEEDS
Stellar-ND ☺	NDSU	CANTERRA SEEDS
Tradition	Busch Ag Res. Inc.	Proven Seed/FP Genetics

**HULLED - FEED BARLEY**
**Two-Row**

CDC Austenson ☺	U of S - CDC	SeCan Members
CDC Bold	U of S - CDC	CANTERRA SEEDS
Brahma *	Westbred, LLC.	Proven Seed/CPS Canada
Busby ☺	AARD (Lacombe)	Mastin Seeds Ltd.
Canmore *	AARD (Lacombe)	CANTERRA SEEDS
Champion ☺	Westbred, LLC.	Proven Seed/CPS Canada
CDC Coalition ☺	U of S - CDC	CANTERRA SEEDS
CDC Cowboy ☺	U of S - CDC	SeCan Members
CDC Dolly	U of S - CDC	SeCan Members
Gadsby ☺	AARD (Lacombe)	SeCan Members
CDC Helgason ☺	U of S - CDC	SeCan Members
CDC Maverick *	U of S - CDC	SeCan Members
McLeod ☺	Westbred, LLC.	Proven Seed/CPS Canada
CDC Mindon ☺	U of S - CDC	SeCan Members
CDC Trey ☺	U of S - CDC	FP Genetics
Xena	Western Plant Breeders Inc.	Proven Seed/CPS Canada

**Six-Row**

Amisk *	AARD (Lacombe)	SeCan Members
Breton *	AARD (Lacombe)	CANTERRA SEEDS
Chigwell ☺	AARD (Lacombe)	SeCan Members
Muskwa *	AARD (Lacombe)	SeedNet Inc.
AC Rosser ☺	AAFC (Brandon)	SeCan Members
Sundre ☺	AARD (Lacombe)	Mastin Seeds Ltd.

**HULLLESS - FOOD, MALTING, FEED BARLEY**

CDC Alamo	U of S - CDC	Public release, U of S - CDC
CDC Candle	U of S - CDC	Public release, U of S - CDC
CDC Carter ☺	U of S - CDC	SeCan Members
CDC Clear *	U of S - CDC	TBA
CDC Fibar ☺	U of S - CDC	CANTERRA SEEDS
CDC Hilose ☺	U of S - CDC	CANTERRA SEEDS
CDC Lophy-I	U of S - CDC	Public release, U of S - CDC
CDC McGwire ☺	U of S - CDC	SeCan Members
Millhouse	AAFC (Brandon)	AAFC
CDC Rattan ☺	U of S - CDC	CANTERRA SEEDS
Roseland	AAFC (Brandon)	TBA
Taylor ☺	AAFC (Brandon)	Alliance Seed Corporation

**OAT**
**Hulled Varieties**

SW Betania ☺	Lantmannen SW Seed	Proven Seed/CPS Canada
CDC Big Brown ☺	U of S - CDC	SeCan Members
CDC Boyer	U of S - CDC	SeCan Members
Bradley ☺	AAFC - ECORC	SeCan Members
CDC Dancer ☺	U of S - CDC	FP Genetics / Cargill
Derby	U of S - CDC	Proven Seed/Mastin Seeds
HiFi ☺	NDSU	Seed Depot
Jordan ☺	AAFC (Winnipeg)	SeCan Members
AAC Justice *	AAFC (Winnipeg)	FP Genetics
Leggett ☺	AAFC (Winnipeg)	FP Genetics
Lu	AAFC (Lacombe)	SeCan Members
CDC Minstrel ☺	U of S - CDC	FP Genetics
AC Morgan	AAFC (Lacombe)	SeCan Members
CDC Morrison ☺	U of S - CDC	CANTERRA SEEDS
CDC Nasser	U of S - CDC	T & L Seeds
CDC Orrin ☺	U of S - CDC	FP Genetics / Cargill
Pinnacle ☺	AAFC (Winnipeg)	FP Genetics
Ronald ☺	AAFC (Winnipeg)	SeCan Members
CDC Ruffian *	U of S - CDC	FP Genetics
CDC Seabiscuit ☺	U of S - CDC	CANTERRA SEEDS
CDC SO-I	U of S - CDC	T & L Seeds
Souris ☺	NDSU	Seed Depot
Stride ☺	AAFC (Winnipeg)	SeCan Members
Summit ☺	AAFC (Winnipeg)	FP Genetics
Triactor ☺	Lantmannen SW Seed	CANTERRA SEEDS
CDC Weaver ☺	U of S - CDC	FP Genetics / Cargill

**Hullless Varieties**

Bullion	Lantmannen SW Seed	Proven Seed/CPS Canada
AC Gwen	AAFC (Winnipeg)	SeCan Members

Crop Kind, Class & Variety	Breeding Institution	Distributor
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**OAT (CONT'D)**
**Annual Forage Varieties**

CDC Baler	U of S - CDC	FP Genetics
CDC Haymaker *	U of S - CDC	SeCan Members
Murphy ☺	AAFC (Lacombe)	SeCan Members

**FLAX**

CDC Bethune ☺	U of S - CDC	SeCan Members
CDC Glas *	U of S - CDC	SeCan Members
Hanley ☺	AAFC (Morden)	SeCan Members
Lightning ☺	AAFC (Morden)	CANTERRA SEEDS
Prairie Blue ☺	AAFC (Morden)	SeCan Members
Prairie Grande ☺	AAFC (Morden)	SeCan Members
Prairie Thunder ☺	AAFC (Morden)	CANTERRA SEEDS
CDC Neela *	U of S - CDC	CANTERRA SEEDS
CDC Sanctuary ☺	U of S - CDC	SeCan Members
CDC Sorrel ☺	U of S - CDC	SeCan Members
Taurus ☺	Limagrain Nederland	FP Genetics
Vimy	U of S - CDC	SeCan Members
AC Watson	AAFC (Morden)	Proven Seed/CPS Canada

**SUNFLOWER**

AC Sierra	AAFC (Saskatoon)	AAFC (Indian Head)
63A21	Pioneer Hi-Bred	Pioneer Hi-Bred
2930	Syngenta	Syngenta
8N 270	Mycogen Seeds	Mycogen Seeds
7111	Syngenta	Syngenta

**MUSTARD**
**Brown**

Amigo	AAFC (Saskatoon)	Canadian Mustard Assoc.
Centennial Brown	AAFC (Saskatoon)	Canadian Mustard Assoc.
Duchess	Colman's of Norwich	Proven Seed/CPS Canada

**Oriental**

Cutlass	AAFC (Saskatoon)	Canadian Mustard Assoc.
Forge	Colman's of Norwich	Proven Seed/CPS Canada
AC Vulcan	AAFC (Saskatoon)	Canadian Mustard Assoc.

**Yellow**

Andante	AAFC (Saskatoon)	Canadian Mustard Assoc.
AC Penmant	AAFC (Saskatoon)	Canadian Mustard Assoc.

**SAFFLOWER**

Saffire	AAFC (Lethbridge)	Jerry Kubic (AB)
AC Sunset	AAFC (Lethbridge)	Proven Seed/CPS Canada

**SOYBEAN**

23-10RY		Dekalb
29002RR		Quarry Seeds Ltd.
900Y61 *		Dupont Pioneer
900Y71 ☺		Dupont Pioneer
Bishop R2		Secan
LS 002R23		Delmar Commodities
McLeod R2		Secan
NSC Libau RR2Y		NorthStar Genetics Manitoba
NSC Reston RR2Y		NorthStar Genetics Manitoba
NSC Tilston RR2Y		NorthStar Genetics Manitoba
Pekko R2		Brett-Young Seeds Ltd./Elite
Samps R2		Brett-Young Seeds Ltd./Elite
TH 32004R2Y		Quarry Seeds Ltd.
TH 33003R2Y		Quarry Seeds Ltd.
Vito R2		NorthStar Genetics Manitoba

**DRY BEAN**

AC Black Diamond	AAFC (Lethbridge)	Viterra Inc.
CDC Blackcomb	U of S - CDC	Sask. Pulse Growers
Carman Black	AAFC (Morden)	CANTERRA SEEDS
Envoy	GenTec Seeds	Hensell District Co-op
Island	AAFC (Lethbridge)	Viterra Inc.
CDC Jet	U of S - CDC	B&J Martens Seeds
Lightning	U of Guelph	Hensell District Co-op
Mariah ☺	Seminis Vegetable Seeds	CANTERRA SEEDS
CDC Marmot	U of S - CDC	Sask. Pulse Growers
CDC Pinitium	U of S - CDC	Sask. Pulse Growers
AC Polaris	AAFC (Lethbridge)	Viterra Inc.
AC Redbond	AAFC (Lethbridge)	Viterra Inc.
CDC Sol *	U of S - CDC	Legumex-Walker Inc.
Skyline ☺		Terramax Seeds
OAC Spark	U. of Guelph	U. of Guelph
Winchester	Rogers Brothers	ADM Edible Bean Specialties
Winmor	AAFC (Morden)	Viterra Inc.
CDC WM - 2 *	U of S - CDC	Legumex-Walker Inc.

Crop Kind, Class & Variety	Breeding Institution	Distributor
<b>CHICKPEA</b>		
CDC Alma	U of S - CDC	Sask. Pulse Growers
Amit (B-90) 🌱	ARO Volcani Centre	SaskCan Pulse Trading
CDC Cabri	U of S - CDC	Sask. Pulse Growers
CDC Consul		
CDC Corinne	U of S - CDC	Sask. Pulse Growers
CDC Cory	U of S - CDC	Sask. Pulse Growers
CDC Frontier	U of S - CDC	Sask. Pulse Growers
CDC Leader	U of S - CDC	Sask. Pulse Growers
CDC Luna	U of S - CDC	Sask. Pulse Growers
CDC Orion	U of S - CDC	Sask. Pulse Growers
CDC Vanguard	U of S - CDC	Sask. Pulse Growers

Crop Kind, Class & Variety	Breeding Institution	Distributor
<b>FIELD PEA</b>		
Abarth 🌱	Limagrain Nederland	FP Genetics
CDC Acer	U of S - CDC	Sask. Pulse Growers
DS Admiral 🌱	Danisco Seeds	FP Genetics
Agassiz 🌱	AAFC	CANTERRA SEEDS
CDC Amarillo	U of S - CDC	Sask. Pulse Growers
Argus 🌱	AAFC (Lacombe)	SeCan Members
CDC Bronco	U of S - CDC	Sask. Pulse Growers
CDC Centennial	U of S - CDC	Sask. Pulse Growers
Cooper 🌱	Limagrain Nederland	CANTERRA SEEDS
Cutlass	AARD / CDC	Sask. Pulse Growers
CDC Dakota	U of S - CDC	Sask. Pulse Growers
Delta	Limagrain Nederland	FP Genetics
Earlystar 🌱	AAFC (Lacombe)	CANTERRA SEEDS
Eclipse	Limagrain Nederland	FP Genetics
CDC Golden	U of S - CDC	Sask. Pulse Growers
CDC Horizon	U of S - CDC	Sask. Pulse Growers
CDC Hornet	U of S - CDC	Sask. Pulse Growers
CDC Leroy	U of S - CDC	Sask. Pulse Growers
CDC Limerick	U of S - CDC	Sask. Pulse Growers
CDC Meadow	U of S - CDC	Sask. Pulse Growers
SW Midas 🌱	Lantmannen SW Seed	FP Genetics
CDC Minuet	U of S - CDC	Sask. Pulse Growers
CDC Mosaic	U of S - CDC	Sask. Pulse Growers
CDC Mozart	U of S - CDC	Sask. Pulse Growers
CDC Patrick	U of S - CDC	Sask. Pulse Growers
CDC Pluto	U of S - CDC	Sask. Pulse Growers
Polstead	Limagrain Nederland	FP Genetics
CDC Prosper	U of S - CDC	Sask. Pulse Growers
CDC Raezer	U of S - CDC	Sask. Pulse Growers
Reward 🌱	AAFC (Lacombe)	SeCan Members
CDC Rocket	U of S - CDC	Sask. Pulse Growers
CDC Saffron	U of S - CDC	Sask. Pulse Growers
CDC Sage	U of S - CDC	Sask. Pulse Growers
SW Sergeant	Lantmannen SW Seed	FP Genetics
Sorento 🌱	Limagrain Nederland	FP Genetics
CDC Striker	U of S - CDC	Sask. Pulse Growers
CDC Tetris	U of S - CDC	Sask. Pulse Growers
Thunderbird 🌱	AAFC	CANTERRA SEEDS
Trapper	AAFC (Morden)	Public
CDC Treasure	U of S - CDC	Sask. Pulse Growers
CDC Tucker	U of S - CDC	Sask. Pulse Growers
40-10	SWS, Germany	FP Genetics

Crop Kind, Class & Variety	Breeding Institution	Distributor
<b>LENTIL</b>		
CDC Asterix	U of S - CDC	Sask. Pulse Growers
CDC Cherie	U of S - CDC	Sask. Pulse Growers
CDC Dazil	U of S - CDC	Sask. Pulse Growers
CDC Greenland	U of S - CDC	Sask. Pulse Growers
CDC Greenstar	U of S - CDC	Sask. Pulse Growers
CDC Imax	U of S - CDC	Sask. Pulse Growers
CDC Imigreen	U of S - CDC	Sask. Pulse Growers
CDC Impact	U of S - CDC	Sask. Pulse Growers
CDC Impala	U of S - CDC	Sask. Pulse Growers
CDC Imperial	U of S - CDC	Sask. Pulse Growers
CDC Impower	U of S - CDC	Sask. Pulse Growers
CDC Impress	U of S - CDC	Sask. Pulse Growers
CDC Improve	U of S - CDC	Sask. Pulse Growers
CDC Invincible	U of S - CDC	Sask. Pulse Growers
CDC KR-1	U of S - CDC	SaskCan Pulse Trading
CDC KR-2	U of S - CDC	SaskCan Pulse Trading
CDC LeMay	U of S - CDC	Sask. Pulse Growers
CDC Marble	U of S - CDC	SaskCan Pulse Trading
CDC Maxim	U of S - CDC	Sask. Pulse Growers
CDC Meteor	U of S - CDC	Sask. Pulse Growers
CDC Milestone	U of S - CDC	Sask. Pulse Growers
CDC Peridot	U of S - CDC	Sask. Pulse Growers
CDC Plato	U of S - CDC	Sask. Pulse Growers
CDC QG-1	U of S - CDC	SaskCan Pulse Trading
CDC QG-2	U of S - CDC	SaskCan Pulse Trading
CDC Red Rider	U of S - CDC	Sask. Pulse Growers
CDC Redberry	U of S - CDC	Sask. Pulse Growers
CDC Redbow	U of S - CDC	Sask. Pulse Growers
CDC Redcliff	U of S - CDC	Sask. Pulse Growers
CDC Redcoat	U of S - CDC	Sask. Pulse Growers
CDC Richlea	U of S - CDC	SeCan Members
CDC Rosebud	U of S - CDC	Sask. Pulse Growers
CDC Rosie	U of S - CDC	Sask. Pulse Growers
CDC Rouleau	U of S - CDC	Sask. Pulse Growers
CDC Ruby	U of S - CDC	Sask. Pulse Growers
CDC SB-1	U of S - CDC	Simpson Seeds
CDC SB-2	U of S - CDC	Simpson Seeds
CDC Scarlet	U of S - CDC	Sask. Pulse Growers
CDC Sovereign	U of S - CDC	Sask. Pulse Growers
CDC Viceroy	U of S - CDC	Sask. Pulse Growers

Crop Kind, Class & Variety	Breeding Institution	Distributor
<b>FABA BEAN</b>		
CDC Blitz	U of S - CDC	Redview Farms
CDC Fatima	U of S - CDC	Legumex-Walker Inc.
FB9-4	U of S - CDC	SaskCan Pulse Trading
Florent	NPZ	DL Seeds
Imposa 🌱	Limagrain Nederland	Cyre Seed Farms
CDC Snowdrop	U of S - CDC	
Snowbird 🌱	Limagrain Nederland	Bob Park - Lacombe, AB
CDC SSNS-1	U of S - CDC	
Taboar 🌱	Globe Seeds - Netherland	Terramax
Tobasco 🌱	DL Seeds Inc.	Ridell Seed Co.

**CANOLA**  
see table on pages VR20 + VR21

**Abbreviations Used in this List**

AC Prefix to variety names Agriculture Canada (Agriculture and Agri-Food Canada)  
AAC Prefix to variety names Agriculture Canada (Agriculture and Agri-Food Canada)  
AAFC Agriculture and Agri-Food Canada  
CDC Crop Development Centre  
AARD Alberta Agriculture and Rural Development, Lacombe, AB  
U University  
U of S University of Saskatchewan  
USDA United States Department of Agriculture

**Accessing Public Release Varieties**

Breeder seed of public release varieties is available to anyone (including farmers and seed growers) for multiplication, increase and marketing. There are no royalties or seed marketing agency fees attached to use or sale of seed produced from Breeder seed of public release varieties. While subsequent seed production may be Pedigreed, this is the buyer's choice and the buyer may increase and sell the seed of public release varieties in any way he/she wishes. To purchase Breeder seed of public release varieties, contact the breeding institution listed above.