



**Saskatchewan
Ministry of
Agriculture**

Varieties of Grain Crops 2009

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 agronomic 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 2009 Seed Guide:

- § Variety may not be described in 2010
- 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 \$5000 to the program.

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, canola, canary seed and sunflower. 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.

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 medium with L and E varieties plus or minus 1-2 days, and VL and VE varieties beyond this range.

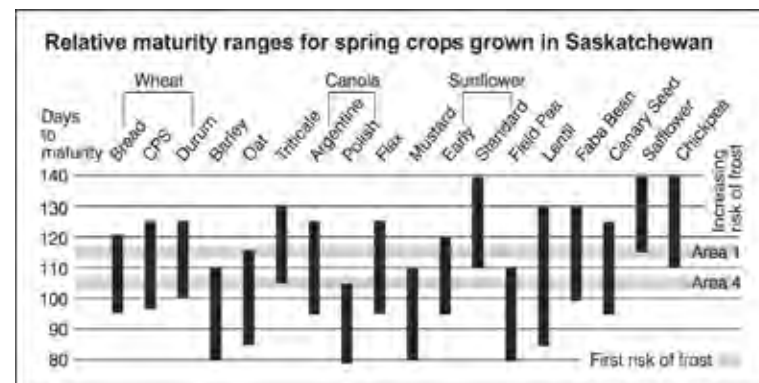
Comparisons

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.



Plant Disease Resistance

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.

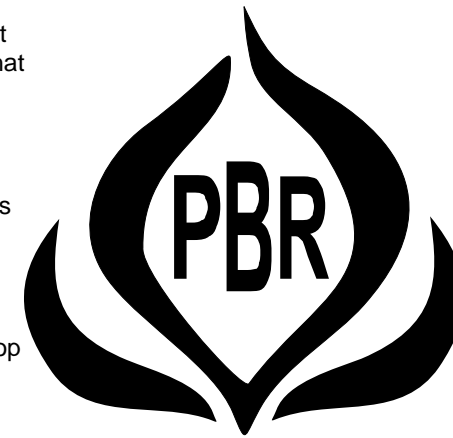
Because of variation in disease levels from year to year, each new variety is assigned a rating relative to a few existing varieties that serve as disease level standards or checks. Varieties differ in resistance because of differences in their genetic make-up and/or differences in the genetic make-up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

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.

What is Plant Breeders' Rights?

Plant Breeders' Rights 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 on Plant Breeders' Rights can be obtained from the Plant Breeders' Rights Office, tel. (613) 221-7522, fax (613) 228-4552.

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 grown commercially in Saskatchewan to date have ascochyta blight ratings from very poor to fair. 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 these conditions, varieties with ascochyta blight resistance ratings of very poor to poor do not show resistance to ascochyta and 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.

Wheat

Main Characteristics of Varieties

Variety	Years Tested	Area 1 & 2	Area 3 & 4	Irrigation	Protein	Resistance to:										Relative Maturity in days	Head Awedness	Seed Weight (mg)	Volume Weight** (Kg hL-1)	Height (cm)
						Lodging	Shattering	Sprouting	Stem Rust	Leaf Rust	Stripe Rust*	Loose Smut	Bunt	Leaf Spot	Fusarium Head Blight					
Bread Wheat		Yield as % of AC Barrie																	Relative to AC Barrie	
AC Barrie	11	100	100	100	14.8	G	G	G	G	P	P	G	F	P	F	100	N	36.0	79.9	93
AC Abbey §	8	95	95	98	-0.8	F	G	P	G	P	F	F	G	P	P	-1	Y	-1.9	-1.0	-5
CDC Abound	6	109	104	---	-0.3	G	G	F	G	P	---	F	F	P	VP	2	Y	+2.4	-0.3	-10
CDC Alsask	4	107	106	---	+0.2	F	G	G	G	VG	F	G	G	P	P	-1	N	-0.3	-1.3	-1
Alvena	3	104	104	---	+0.3	G	G	P	G	F	---	G	G	---	P	-2	N	-1.1	0.0	0
CDC Bounty	5	104	106	---	-0.1	F	G	G	G	F	---	G	F	P	F	-1	N	-0.2	+1.6	+8
AC Cadillac	7	102	102	98	-0.2	F	G	F	G	G	F	VG	VG	P	F	-1	N	+1.3	+1.7	+7
AC Elsa	7	103	104	97	-0.1	G	G	F	G	G	F	G	F	F	P	-1	N	-2.4	-0.5	-1
Fieldstar VB ***	5	110	113	---	-0.4	F	G	G	G	VG	---	F	G	---	F	0	Y	-2.1	+0.7	3
CDC Go	4	102	103	---	-0.1	G	G	P	G	F	---	P	G	VP	P	-1	Y	+3.6	-0.3	-6
Goodeve VB ***	5	109	113	---	-0.1	VG	G	G	G	F	G	P	F	VP	VP	-2	N	+0.8	-0.9	-2
Harvest	6	101	104	---	-0.4	VG	G	VG	G	G	---	G	F	P	VP	-1	N	-0.4	+0.1	-6
Helios	4	102	101	101	0.0	G	G	G	G	P	---	VG	G	P	F	-2	N	-0.7	-0.4	0
CDC Imagine	5	98	102	---	-0.1	G	G	F	F	F	F	G	G	P	VP	0	N	-1.7	-1.8	-3
Infinity	7	107	106	---	-0.2	G	G	G	G	G	---	G	F	F	VP	-1	N	-2.8	-0.6	-1
AC Intrepid	5	101	104	102	-0.3	G	G	P	G	G	G	F	G	P	P	-3	N	-0.2	-0.4	+2
KANE	4	105	104	---	-0.2	G	G	VG	G	VG	---	P	F	F	F	1	Y	-0.5	+1.4	-5
Lillian	6	104	100	---	+0.2	F	G	G	G	VG	G	F	G	P	VP	0	N	-0.3	-1.1	-1
Lovitt	4	103	102	---	0.0	G	G	VG	G	G	P	G	F	F	VP	-1	N	-3.3	-0.6	+1
McKenzie	6	107	103	109	-0.4	F	G	G	G	VG	P	VP	VG	P	F	-1	Y	-1.5	+0.1	+1
CDC Osler	3	101	105	---	-0.3	G	G	F	G	G	---	G	G	F	VP	-1	N	-3.7	-0.7	-2
Prodigy §	5	103	104	---	+0.4	G	F	G	G	G	---	F	G	P	VP	+1	Y	-3.2	+1.7	+5
Somerset	4	105	101	---	+0.1	G	G	F	G	G	---	G	F	P	P	-1	N	+1.1	-2.4	+6
AC Splendor §	9	92	94	89	+0.4	F	G	F	G	G	F	F	F	VP	P	-4	N	-0.2	+0.1	-1
Stettler	1	116	110	---	+0.1	G	G	G	G	P	---	G	G	P	P	+1	Y	-0.6	0	-6.2
Superb	6	108	109	---	-0.4	G	F	G	P	P	F	G	VP	P	P	+3	Y	+2.6	-0.5	-7
CDC Teal	7	101	101	99	-0.1	G	G	P	G	G	F	G	F	P	VP	-2	N	-1.2	-0.3	0
Unity VB ***	5	116	122	---	-0.8	F	G	G	G	VG	---	P	VG	P	P	0	Y	-0.6	+1.0	+1
Waskada	5	118	113	---	-0.3	F	G	G	G	F	---	G	G	P	G	+1	Y	+0.3	+1.4	+4
5601HR	4	95	97	---	-0.1	G	G	VG	G	G	F	P	G	P	F	+2	N	+0.7	-0.1	+1
5602HR	5	104	103	---	+0.4	F	G	P	G	VG	F	G	G	P	G	+1	Y	0.0	+1.6	+1
Canada Prairie Spring - Red Seeded																				
AC Crystal	11	118	115	110	-1.3	VG	G	P	G	P	P	P	VG	F	VP	+3	Y	+4.9	-0.1	-11
AC Taber	5	120	118	116	---	VG	G	P	G	F	P	P	VG	F	VP	+4	Y	+4.5	-0.5	-11
5700PR	5	115	120	115	-1.3	VG	G	G	G	F	P	P	G	P	VP	+2	Y	+6.8	+1.1	-16
5701PR	4	108	110	105	-0.6	G	G	F	G	VG	G	P	F	F	VP	+2	Y	+8.9	0.9	-13
5702PR	2	132	120	---	-1.8	G	G	F	F	G	P	P	F	F	P	+1	Y	+8.5	0.0	-10
Canada Prairie Spring - White Seeded																				
AC Vista	9	122	121	113	-1.5	G	G	F	G	P	F	P	VG	P	VP	+1	Y	+6.7	-2.1	-9
Hard White Wheat																				
Kanata	5	91	93	---	0.0	VG	G	F	F	G	P	F	P	P	F	-2	N	-1.9	-0.1	-6
Snowbird	5	99	102	---	-0.6	G	G	F	G	F	---	G	F	P	P	+2	N	-1.8	-0.4	+1
Snowstar	2	107	108	---	-1.2	VG	G	F	VG	G	---	P	P	P	P	0	N	-3.4	+1.5	-10
Soft White Spring																				
AC Andrew	2	134	143	129	-3.5	G	G	P	P	F	---	P	P	---	F	+5	Y	+0.7	-1.8	-9
Bhishaj	5	128	---	122	---	G	G	---	P	F	---	F	P	---	VP	+3	Y	-4.2	-2.0	-7
Canada Western Extra Strong																				
Burnside	4	92	96	---	-0.3	F	G	F	G	G	---	VG	F	P	P	0	N	+3.6	-0.4	+6
Glencross VB ***	2	110	120	---	-0.5	F	G	---	G	G	---	VG	F	P	VP	-1	N	+7.2	-2.5	+7
CDC Rama	4	107	107	---	-0.2	F	G	G	G	G	G	VG	G	P	F	+2	Y	+7.5	+1.0	+7
CDC Walrus	3	102	101	---	-0.3	F	G	F	G	G	---	VG	F	P	P	+2	N	+5.3	-0.2	+7
Durum Wheat		Yield as % of Strongfield																	Relative to Strongfield	
Strongfield	6	100	100	100	14.5	F	VG	F	VG	VG	G	P	VG	F	VP	102	Y	40.3	78.8	92
AC Avonlea	6	95	96	---	-0.2	F	VG	F	VG	VG	---	P	VG	F	VP	-1	Y	+0.1	-0.9	+2
Brigade	1	102	108	---	-0.9	G	VG	F	VG	VG	---	P	VG	F	P	+2	Y	+1.1	+0.3	+6
Commander	4	105	95	---	-0.7	G	VG	F	VG	VG	---	P	VG	P	VP	0	Y	+1.3	-1.2	-16
Eurostar	1	96	100	---	-0.2	F	VG	F	VG	VG	---	P	VG	F	P	+2	Y	+0.6	+0.8	+4
Kyle	6	89	91	---	-0.3	P	VG	F	VG	VG	G	P	VG	P	VP	+1	Y	-0.5	-0.6	12
Napoleon §	6	95	99	---	-0.5	F	VG	F	VG	VG	---	P	VG	F	VP	0	Y	+1.2	-2.1	+5
AC Navigator	6	98	90	---	-0.9	G	VG	G	VG	VG	G	P	VG	VP	VP	0	Y	+0.8	-0.3	-13
CDC Verona	1	99	104	---	-0.3	G	VG	F	VG	VG	---	P	VG	F	P	+2	Y	+0.1	-0.2	+1

♣ Includes direct and indirect comparisons with AC Barrie

* stripe rust data are preliminary

** multiply by 0.8 = lbs per bushel

*** VB varietal blend

Additional Information

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

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

Several new races of leaf rust capable of overcoming leaf rust resistance gene Lr16 have multiplied rapidly. If varieties rated poor or very poor for leaf rust are sown in southeastern Saskatchewan, early seeding may minimize risk of crop losses.

Durum wheat varieties are generally more susceptible than CWRS varieties to Fusarium Head Blight and CPS varieties are intermediate.

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.

Please refer to the *Seed Facts* section of this booklet or *Guide to Crop Protection, 2009*.

Canada Western Red Spring Wheat Goodeve VB and Unity VB are the first CWRS wheat midge tolerant varieties. They both contain the same "Sm1" gene for tolerance. To manage against the build-up of midge resistance to the gene, an "interspersed refuge" will be used commercially. These varieties are not immune to wheat midge and can suffer some midge damage when high midge infestation levels occur.

Seed of the new varieties **Fieldstar VB, Goodeve VB, Helios, Stettler, Unity VB, and Waskada** will not be available in 2009. Limited quantities of seed of the new varieties **CDC Abound, Alvena, and KANE** will be available in 2009.

AC Abbey and **Lillian** have a solid stem and some resistance to the wheat stem sawfly. **AC Abbey** has semidwarf stature. **CDC Abound** and **CDC Imagine** are tolerant to the CLEARFIELD® herbicides Adrenalin SC and Altitude FX.

Canada Prairie Spring Wheat AC Crystal, 5700PR and 5701PR have improved quality compared to **AC Taber**.

Canada Western Extra Strong Glencross VB is the first CWES wheat midge tolerant variety. It contains the same "Sm1" gene for tolerance as **Goodeve VB** and **Unity VB**. To manage against the build-up of midge resistance to the gene, an "interspersed

refuge" will be used commercially. These varieties are not immune to wheat midge and can suffer some midge damage when high midge infestation levels occur. Seed of the new variety **Glencross VB** will not be available in 2009. Limited quantities of seed of the new varieties **Burnside** and **CDC Walrus** will be available in 2009.

Canada Western Amber Durum All durum varieties are susceptible to two new races of loose smut.

Seed of the new varieties **Brigade, Eurostar, and CDC Verona** will not be available in 2009.

Commander and AC Navigator have strong gluten properties. They may be grown only under contract with the Canadian Wheat Board and Viterra.

Soft White Spring Wheat Soft white spring wheat may have potential demand as a feedstock in the production of ethanol. All soft white spring wheat varieties are eligible for both domestic and export markets. 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 would be similar. Seed of **Sadash** will not be available in 2009.

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
- Agriculture and Agri-Food Canada
- Seed Companies
- Crop Development Centre
- Sask. Seed Growers' Association
- Canada-Saskatchewan Irrigation Diversification Centre
- Producer Associations

SACGC and SVPG gratefully acknowledge the contributions of all individuals and organizations involved in the generation and publication of this information.

Winter Wheat

Main Characteristics of Varieties

Variety	Years Tested	Yield as % of CDC Clair			Resistance to:					
		Area 1 & 2	Area 3 & 4	Irrigation	Lodging	Winter Damage	Stem Rust	Leaf Rust	Bunt	
CDC Clair	16	100	100	100	G	VG	P	P	P	
AC Bellatrix	8	99	97	---	G	P	VP	P	G	
CDC Buteo	9	97	98	109	G	VG	G	G	P	
CDC Falcon	12	98	95	116	VG	F	VG	G	P	
CDC Harrier	13	102	99	109	G	G	G	P	P	
CDC Kestrel	16	101	101	103	G	VG	P	P	P	
McClintock	9	97	98	111	G	P	VG	VG	P	
CDC Osprey	16	100	99	93	G	VG	P	P	P	
Radiant	3	---	89	---	G	G	P	P	F	
CDC Raptor	10	99	100	112	VG	VG	VG	G	P	

Rye

Main Characteristics of Varieties

Variety	Years Tested	Yield as % of Prima		Relative Maturity	Resistance to:		
		Area 1 & 2	Area 3		Winter Damage	Shattering	Lodging
Prima	19	100	100	M	VG	F	F
AC Rifle	19	98	89	M	VG	VG	VG
AC Remington	8	102	95	M	VG	VG	G
Hazlet	6	116	104	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	Yield as % of AC Certa		Test Weight Kg hL ⁻¹	Relative Maturity	Resistance to:				
		Area 1 & 2	Area 3			Lodging	Stem Rust	Leaf Rust	Bunt	Root Rot
AC Certa	17	100	100	74	M	G	VG	VG	VG	G
AC Alta	13	105	100	68	L	G	VG	VG	VG	F
Bunker	4	99	97	73	E	G	VG	VG	VG	---
AC Copia	13	100	97	72	M	G	VG	VG	VG	F
Pronghorn	16	100	102	68	E	G	VG	VG	VG	F
Sandro	10	105	102	73	E	G	VG	VG	VG	G
Tyndal	4	106	102	73	E	G	VG	VG	VG	---
AC Ultima	13	104	103	70	E	G	VG	VG	VG	F

Additional Information:

Triticale matures 1-2 days later than **AC Crystal** CPS wheat, therefore it should be planted as early as possible. The seeding rate for triticale should be at least 30 percent 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 improved Hagberg Falling Number.

Winter triticale has winter hardiness equal to that of winter wheat. **Pika**, **Bobcat** and **Fridge** are the only available cultivars of winter triticale. **Bobcat** is awnletted with shorter and stronger straw. **Tyndal** and **Bunker** are also awnletted.

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.

Malting Barley

Main Characteristics of Varieties

Category* and Variety	Years Tested	2 or 6 Row	Rough or Smooth Awns	Yield as % of AC Metcalfe		Relative Maturity*	Lodging	Net-Form Net Blotch**	Spot-Form Net Blotch	Spot Blotch	Scald	Loose Smut	Other Smuts	Root Rot	Stem Rust	Fusarium Head Blight
				Area 1 & 2	Area 3 & 4											
Malting acceptance: Recommended																
AC Metcalfe	11	2	R	100	100	M	G	VP	F	F	P	VG	F	F	G	F
CDC Copeland	8	2	R	107	108	M	G	F	F	VP	P	P	F	F	G	F
CDC Kendall	11	2	R	101	102	M	G	F	G	VP	P	P	P	G	P	F
Newdale	6	2	R	112	113	M	G	F	G	F	P	VP	G	G	G	F
Lacey	4	6	S	101	101	M	G	VP	F	VG	P	F	G	G	G	VP
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

Malting acceptance: Under Test

Bentley	3	2	R	114	113	L	G	P	VG	F	P	P	G	F	G	P
CDC Landis	3	2	R	109	108	M	G	F	VG	F	P	VP	G	P	G	F
CDC Meredith	3	2	R	116	110	L	G	P	VG	P	P	VG	G	F	G	F
Merit 16	3	2	R	104	100	M	G	VP	F	VP	P	VP	G	G	VP	F
Merit 57	3	2	R	109	105	L	G	P	VG	P	P	VP	F	G	F	P
Norman	3	2	R	104	103	M	G	P	VG	VP	P	VP	VP	P	VP	F
CDC Reserve	3	2	R	110	107	M	G	VP	VG	P	P	VP	P	F	P	P
CDC Select	7	2	R	103	104	M	G	P	G	P	P	P	G	P	F	P
CDC Battleford	6	6	S	108	108	M	G	P	VG	VG	P	P	G	G	G	VP
CDC Clyde	7	6	S	112	105	M	VG	F	G	G	P	F	VG	G	G	VP
CDC Kamsack	3	6	R	102	105	M	G	VP	F	G	P	F	VG	P	G	VP
CDC Laurence	6	6	S	117	110	M	G	P	G	F	P	P	G	P	P	VP
CDC Mayfair	3	6	R	104	105	M	G	P	G	F	P	VP	VG	P	G	P

Other ***

Harrington	11	2	R	95	89	M	F	VP	P	VP	P	P	P	F	P	G
Merit	9	2	R	109	110	L	F	F	G	P	P	P	G	F	F	F
Excel	10	6	S	102	104	M	VG	VP	F	G	P	P	F	G	G	VP
Robust	8	6	S	94	97	M	G	VP	P	G	P	F	F	F	G	VP
CDC Springside	4	6	S	112	103	M	F	VP	F	VG	P	G	F	F	P	VP
CDC Yorkton	8	6	S	100	107	M	G	F	G	G	P	P	G	G	G	VP

* These categories are established annually by the Canadian Malting Barley Technical Centre (Call 204-984-4399 for more information)

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

** There are two forms of net blotch, the net-form (*Pyrenophora teres f. teres*) and spot-form (*Pyrenophora teres f. maculata*). Generally, in Saskatchewan the net-form is more prevalent.

*** Although not on the CMBTC list, a malting barley market may exist for these varieties.

Lines Under Evaluation 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 2009-10

These recommendations are based on the varieties expected to be selected by grain and malting companies for both domestic and export markets from the 2009 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 selected in 2008.

Recommended Two-Row Barley Varieties

VARIETY	DOMESTIC	EXPORT	MARKET DEMAND
AC Metcalfe₄	Established	Established	Stable, High Demand
CDC Copeland₄	Established	Established	Stable Demand
CDC Kendall₁	Established	Established	Stable Demand
Newdale₃	Limited	Limited	Limited Demand

CDC Select, Bentley, CDC Meredith, CDC Reserve, CDC Landis, CDC Polarstar, Norman, Merit 16 and Merit 57 are not yet being grown for the commercial market. Production is limited to quantities required for testing and market development.

Recommended Six-Row Barley Varieties

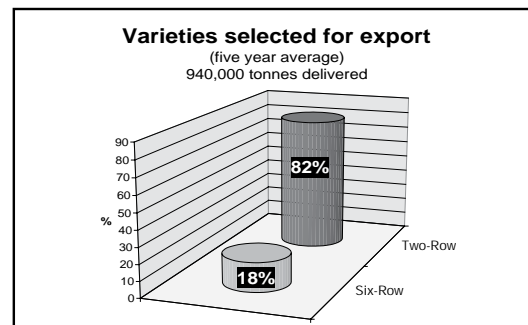
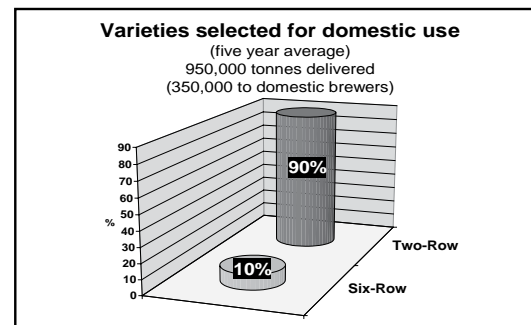
VARIETY	DOMESTIC	EXPORT	MARKET DEMAND
Legacy_{1,2,3}	Established	Established	Stable Demand
Tradition_{1,2,3}	Growing	Growing	Increasing Demand
Lacey₃	Limited	Limited	Declining Demand

CDC Clyde, CDC Mayfair, CDC Kamsack and CDC Laurence are not yet being grown for the commercial market. Production is limited to quantities required for testing and market development. Please talk to local malting company selector in regards to demand for 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 CMBTC recommends the use of CERTIFIED seed to ensure varietal purity and to increase opportunity for selection.

The following companies have PEDIGREED seed distribution rights for those varieties that are footnoted:
1-Viterra; 2- BARI-Canada; 3 - FP Genetics; 4 - SeCan;



CMBTC Members: Alfred C. Toepfer (Canada) Ltd., Busch Agricultural Resources-Canada, Canadian Wheat Board, Canadian Grain Commission, Cargill AgHorizons, InBev, Richardson International, Parrish and Heimbecker, Prairie Malt Limited, the Public Barley Breeders, Rahr Malting Canada, SeCan and Viterra.

Other organizations providing input to this list: BMBRI and FP Genetics

Questions? Call your selector, seed company, grain handling company or the Canadian Wheat Board, or contact the CMBTC at 204-984-4399 (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 as % of AC Metcalfe		Relative Maturity*	Lodging	Net-Form Net Blotch**	Spot-Form Net Blotch	Resistance to:							
				Area 1 & 2	Area 3 & 4					Scald	Loose Smut	Other Smuts	Root Rot	Stem Rust	Fusarium Head Blight		
Feed																	
CDC Bold	7	2	R	111	112	L	G‡	VP	F	VP	G	P	G	G	G	VP	
Champion ☉	6	2	R	116	114	M	G	VP	F	P	VP	VP	VG	G	F	F	
CDC Coalition ☉	6	2	R	111	114	M	VG	VP	G	F	P	VG	G	F	G	F	
CDC Cowboy ☉	5	2	R	98	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	
Formosa	3	2	R	100	103	---	---	---	---	---	---	---	---	---	---	---	
CDC Helgason ☉	7	2	R	105	106	M	G	G	G	F	P	VG	G	F	F	P	
McLeod ☉	6	2	R	108	114	M	G	VP	F	VP	P	VP	VG	F	P	F	
CDC Mindon ☉	5	2	R	105	103	M	G	VP	G	F	VP	VG	VG	F	F	G	
Niobe ☉§	6	2	R	100	105	M	F	P	VG	VP	F	P	G	P	F	P	
Ponoka ☉§	7	2	R	107	117	L	G	P	G	P	G	VG	VG	F	VP	F	
CDC Trey ☉	5	2	R	104	110	M	VG	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	
Alston ☉	6	6	S	114	109	M	G	F	G	G	P	P	VG	F	F	VP	
Chigwell ☉	3	6	S	107	110	M	G	F	G	F	G	P	VG	VP	P	VP	
AC Lacombe ☉§	11	6	S	106	108	M	G	P	G	F	P	P	G	P	G	VP	
Manny	7	6	S	111	107	M	F	P	F	P	VG	P	VG	P	P	P	
Niska §	6	6	S	105	110	L	F‡	VP	G	G	G	P	G	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	
Trochu ☉§	6	6	S	105	110	M	F	VP	G	F	F	P	G	G	G	F	
Vivar ☉§	6	6	R	106	107	L	G‡	VG	G	F	F	F	VG	G	G	VP	
Hulless																	
CDC McGwire ☉	8	2	R	98	99	M	G	F	G	F	F	P	G	G	F	G	

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

** There are two forms of net blotch, the net-form (*Pyrenophora teres f. teres*) and spot-form (*Pyrenophora teres f. maculata*). Generally, in Saskatchewan the net-form is more prevalent.

‡ semi-dwarf

Forage Barley

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

Hulless

In hulless varieties the hull is left in the field, therefore, comparable yields are 9-12 percent lower. Hulless seed is more susceptible to damage than hulled seed, so handling should be minimized.

Hulless Food

CDC Alamo, CDC Candle, CDC Fibar, and CDC Rattan are high beta-glucan waxy starch varieties for specialty markets.
CDC McGwire and Millhouse are two-row normal starch hulless barleys suitable for food use. For further information contact SeCan or FP Genetics, respectively.

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 and should consider semi-dwarf varieties.

Feed and Food Barley (cont'd)

General Comments

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 percent 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 as % of CDC Dancer		Test Weight (g/0.5L)	% Hull	% Plump	Relative Maturity*	Resistance to:			
		Area 1 & 2	Area 3 & 4					Lodging	Stem Rust	Leaf Rust	Smut
CDC Dancer ☺	9	100	100	253	19.8	70	M	G	F	F	VG
Calibre	8	97	99	246	23.6	39	M	F	VP	VP	P
SW Betania ☺	6	105	105	245	22.0	67	M	G	VP	F	G
CDC Boyer	8	99	100	232	23.3	71	M	G	F	F	P
Derby	8	98	102	247	22.9	65	M	G	VP	VP	P
Furlong ☺	6	102	104	245	21.6	76	L	G	F	P	VG
HiFi ☺	5	99	97	253	22.4	55	M	G	F	VG	P
Jordan ☺	6	110	118	238	22.4	76	VL	G	F	P	VG
Leggett ☺	7	103	104	256	22.0	71	L	G	F	VG	VG
Lu	6	102	103	248	25.2	47	E	G	VP	VP	G
CDC Minstrel ⚡	4	108	109	245	21.0	75	L	VG	F	P	VG
AC Morgan	8	104	108	236	25.1	54	L	VG	VP	VP	F
AC Mustang	9	105	111	244	29.9	62	L	G	VP	VP	P
CDC Orrin ☺	6	108	109	253	23.2	74	L	G	VP	VP	VG
Pinnacle ☺	8	113	109	244	23.6	70	VL	F	F	P	VG
CDC Pro-Fi	4	98	92	245	19.8	72	M	G	F	P	F
Ronald ☺	7	96	99	249	22.4	55	L	VG	F	P	VG
CDC Sol-Fi ☺	6	93	94	246	22.2	50	M	F	VP	VP	G
Triactor ⚡	4	109	116	240	22.8	66	L	G	P	G	VG
CDC Weaver ☺	7	108	111	245	19.2	71	L	F	F	P	VG

* Maturity Rating M = 96 days

Additional Information

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

Furlong has brown hulls.

Forage Oat

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

Hulless Oat

Boudrias, **Bullion**, **AC Gwen**, and **Lee Williams** 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 should be stored at less than 12% moisture.

Clubroot

By Saskatchewan Ministry of Agriculture

Canola growers in Saskatchewan have seeded an average of over 5 million acres per year in the last 10 years, with canola crops reaching over 7 million each year in 2007 and 2008. Increased acreage means more ground to cover when scouting for canola diseases, such as blackleg, sclerotinia stem rot, fusarium wilt, and aster yellows. It is important to further investigate any suspicious stunting, wilting, and yellowing of canola during late rosette to early podding, or premature ripening at later stages. The cause may be a familiar disease or perhaps a result of drought conditions or a nutrient deficiency. However, it is important to rule out another impending disease threat known as clubroot.

Symptoms

Clubroot is a soil-borne disease caused by a fungal-like protist that infects roots of crucifers (canola, mustard, camelina, and related vegetables). The pathogen overwinters as resting spores, which can survive in soil for up to 20 years. Spore germination, infection, and disease development are favoured by warm soil temperatures, high soil moisture, and acidic soils. Invasion of the interior of host roots alters hormone balance and leads to increased cell division and growth, resulting in characteristic clubroot galls. These deformed roots have a reduced ability to absorb water and nutrients, leading to stunting, wilting, yellowing, and premature ripening. The cause of these above-ground symptoms can be confirmed by digging up suspicious plants to check roots for gall formation. Clubroot affects yield and quality of canola, likely to a similar degree as other diseases affecting water and nutrient uptake. Infected roots will eventually disintegrate, releasing resting spores back into the soil, which is then transported by wind, water erosion, animals/manure, shoes/clothing, vehicles/tires, or earth tag on agricultural or industrial field equipment. Clubroot is primarily a soil-borne disease; it does not infect seed but it may be found in soil attached to seed or other plant parts.

Distribution

Clubroot is a disease that affects crucifers worldwide, and was first reported on canola in Canada in 2003, when it was identified near Edmonton, Alberta. Since then, clubroot has been confirmed in 14 counties in Alberta, and was declared a pest under Alberta's Agricultural Pests Act in 2007. Many counties in Alberta have

surveyed local fields for clubroot and in some cases agriculture fieldmen are planning to check every canola field in their county on an annual basis. Alberta's clubroot legislation empowers municipal authorities to enforce clubroot management strategies, including potentially restricting canola crop rotations in clubroot infested fields. Clubroot has not yet been reported in Saskatchewan and is not a legislated pest in this province. It was not observed in any of the 130 canola fields surveyed during the canola disease survey conducted by a group plant pathologists and agronomists across the province in 2008. Without economical or practical control options, it is even more important to prevent establishment and spread of clubroot in Saskatchewan. This means avoiding buying seed contaminated with soil from infected regions, and ensuring agricultural and industrial field equipment has been properly cleaned and sanitized. Crop rotations should include canola no more than once every 4-5 years. Responsible crop rotations are extremely important in management of all canola diseases, and are particularly important to prevent an increase of clubroot spores in the soil, should the disease be inadvertently introduced into a field.

Control

Currently there are no fungicides registered in Canada for clubroot control on canola and available Canadian canola varieties are all considered susceptible to clubroot. Previous experience with clubroot on vegetables and canola in other parts of the world has provided western Canadian researchers with some basic knowledge about the disease as well as potential genetic sources of clubroot resistance. Several private companies have reported upcoming varieties with improved clubroot resistance. Researchers at the University of Alberta (U of A) and Alberta Agriculture and Rural Development (AARD) have also been studying clubroot resistance and control options. Saskatchewan researchers at Agriculture and Agri-Food Canada in Saskatoon have recently initiated collaborations with U of A, AARD, University of Guelph, and Ibaraki University, Japan to isolate, screen, and discover indigenous microorganisms for biological control of clubroot on canola. The research is part of an integrated disease management approach supported by Saskatchewan Canola Development Commission, Alberta Canola Producers Commission, and Canola Council of Canada.

Scout canola fields diligently this summer and contact Saskatchewan Ministry of Agriculture if you suspect clubroot.

For more information on clubroot please visit www.clubroot.ca or the Saskatchewan Ministry of Agriculture website at www.agriculture.gov.sk.ca or contact the Agriculture Knowledge Centre at 1-866-457-2377.

Ergot

By Saskatchewan Ministry of Agriculture

Ergot is a fungal disease that affects most cereals and grasses in Canada. It is a particularly damaging disease of rye, and has also been observed sporadically over the years on wheat, durum, and triticale in Saskatchewan, with significant levels reported in 1999, 2005, and most recently 2008. After an ergot outbreak, crop residue and soil become contaminated with a higher load of ergot bodies, placing nearby grasses and cereal crops at greater risk of infection in the following seasons. This risk increases further when cool moist weather conditions promote ergot spore production and/or when cereals experience an extended period of flowering or an induction of floret sterility due to any of a variety of agronomic or environmental factors. Once ergot is present, little can be done to control the disease in the field, so prevention is important. Planting seed contaminated with ergot bodies can potentially spread disease to previously clean fields and there are no seed treatments registered; therefore only clean, healthy seed should be used. During the field season, nearby grasses may be mowed to remove additional hosts. Prior to harvest, fields should be scouted to determine where ergot has developed, such as headlands, and those areas should be combined separately. The viability of ergot bodies decreases after 1-2 years, however because ergot bodies contain toxic alkaloids, they should never be consumed by humans or fed to animals.

For more information on ergot see the Saskatchewan Agriculture publication *Ergot of Cereals and Grasses* on the Saskatchewan Agriculture website <http://www.agriculture.gov.sk.ca>.

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 in Saskatchewan*.

Canary Seed

Main Characteristics of Varieties

Variety	Type	No. of Trials	Yield as % of CDC Maria*	Days to Heading	Days to Maturity	Height (cm)	Test Weight (kg/hL)**	Seed Weight (g/1000)
CDC Maria	glabrous	69	100	55	97	96	71	7.3
CDC Togo 	glabrous	58	110	2	1	1	-1	0.7
CDC Bastia	glabrous	53	111	1	1	2	0	0.0
Keet	hairy	69	117	1	1	4	-6	-0.3
Cantate***	hairy	12	117	0	2	-2	-6	0.3

* Yield data not collected by Area

** multiply by 0.8 = lb per bushel

*** 2004-2008 data only

No seed of **CDC Bastia** will be available in 2009.

Additional Information:

The seed of annual canarygrass, more commonly called canary seed, is used as food for caged and wild birds. In head to head testing **Elias**, **Keet** and **Cantate** are similar in yield. **Elias** pedigreed seed has not been produced in recent years. Seeds and plants of **CDC Maria**, **CDC Togo** and **CDC Bastia** do not have the small sharp hairs that cause irritation when canary seed is threshed and handled and are called glabrous.

Canary seed plants have a dense, shallow root system and growing the crop on sandy soils is not recommended. Canary seed 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) (germination greater than 85 per cent). Plant the seed 3.5 to 5 cm deep into a firm seedbed.

Canary seed 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 canary seed plant. Damage may occur at populations below these levels.

Canary seed leaf mottle is a foliar disease that can cause yield losses. Leaf mottle is caused by a fungus, *Septoria triseti*, that only affects canary seed. 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. Canary seed is resistant to shattering. It may be straight-combined or swathed when fully mature. For more information on canary seed, consult the Saskatchewan Agriculture publication, *Canary Seed in Saskatchewan*.

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 in Saskatchewan*.

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 Saskatchewan 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.

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.

Reuse of Hybrid Variety Seed

Seed grown from a hybrid variety (regardless of crop or variety) should not be reused since a 20 to 25% 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% seed infection is acceptable in the Brown and Dark Brown Soil Zones, but 0% 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%. In pea, up to 10% seed infection with ascochyta is acceptable. In chickpea, 0% 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% ergot is considered poisonous and should not be used for food. Refer to Saskatchewan Agriculture publication, *Ergot of Cereals and Grasses*.

Seed Inoculation

Legume crops obtain much of their nitrogen (N) 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. Refer to the Saskatchewan Agriculture publication, *Wheat Midge*.

Pulse Crops

2008 Regional Variety Trials

In 2008, 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 \$100,000 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.

In 2008, field pea, lentil, chickpea, and dry bean variety trials were conducted at 8-14 locations per crop in their target areas of adaptation in Saskatchewan. The number of entries per trial was 26 for pea, 24 for lentil, 24 for chickpea, and 16 for dry bean.

Lentil

Main Characteristics of Varieties

Market class	Variety	Years Tested*	Yield % CDC Milestone		Height (cm)	Days to Flower	Maturity Rating	Resistance to:		Cotyledon Colour	Seed Weight (g/1000)
			Area 1 & 2	Area 3 & 4				Ascochyta Blight	Anthracnose Race 1		
Small green	CDC Milestone	13	100	100	31	49	E	G	VP	yellow	37
	CDC Viceroy	8	103	111	34	49	E	G	G	yellow	33
	Eston	12	88	89	30	48	E	VP	VP	yellow	33
Medium green	CDC Impress CL	3	97	79	34	50	M	G	P	yellow	52
	CDC Meteor	9	111	102	34	50	M	G	VP	yellow	51
	CDC Richlea	11	101	94	35	50	M	VP	VP	yellow	51
Large green	Laird	12	76	77	41	53	VL	VP	VP	yellow	67
	CDC Glamis	11	84	83	39	54	VL	G	VP	yellow	60
	CDC Grandora	10	78	84	40	53	VL	G	VP	yellow	69
	CDC Greenland	7	103	90	38	52	ML	G	VP	yellow	64
	CDC Improve CL	4	91	86	39	51	M	F	VP	yellow	67
	CDC Plato	9	96	93	38	52	ML	G	P	yellow	62
	CDC Sedley	9	81	85	39	51	M	F	VP	yellow	68
	CDC Sovereign	10	90	89	40	52	L	G	P	yellow	66
French green	CDC LeMay	6	91	92	35	48	E	F	VP	yellow	32
Small red	CDC Blaze	9	84	82	30	47	E	G	P	red	34
	CDC Impact CL	4	87	84	30	47	E	G	P	red	34
	CDC Maxim CL	3	102	107	34	51	EM	G	G	red	40
	CDC Redberry	6	100	107	34	50	EM	G	G	red	42
	CDC Red Rider	5	104	98	34	52	EM	G	F	red	45
	CDC Rouleau	6	104	107	33	52	M	G	G	red	37
Extra small red	CDC Impala CL	3	89	99	30	51	E	G	G	red	31
	CDC Robin	11	86	91	30	49	E	G	G	red	30
	CDC Rosetown	7	101	107	31	52	E	G	G	red	31
	CDC Imperial CL	5	88	87	30	49	E	G	G	red	30

* Co-op and Regional Trials in Saskatchewan since 1995. Comparisons to CDC Milestone.

CL indicates Clearfield variety.

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 are limited for **CDC Impress CL**, **CDC Maxim CL**, **CDC Red Rider** and **CDC Impala CL**. **Indianhead** lentil is a black-seeded variety for green manure use. **Redchief** is a large red lentil with a green seed coat.

Field Pea

Main Characteristics of Varieties

Variety	Years Tested*	Yield as % Cutlass			Leaf Type	Relative Maturity	Vine Length (cm)	Resistance to:							Seed Weight g/1000	
		1.2 & South 3	North 3 & 4	Irrigation				Mycosphaerella Blight	Powdery Mildew	Fusarium Wilt	Seed Coat Breakage	Lodging	Bleaching	Seed Coat Dimpling*		Green Seed Coat
Yellow																
Cutlass	9	100	100	100	SL	M	75	F	VG	F	F	G	n/a	F	G	220
Agassiz	4	106	112	119	SL	M	85	F	VG	F	G	G	n/a	F	G	230
Canstar	5	96	101	98	SL	M	85	P	VG	G	F	G	n/a	G	G	240
Carneval	7	81	79	105	SL	M	75	F	P	P	F	G	n/a	---	---	230
CDC Bronco	6	108	104	106	SL	M	75	F	VG	F	G	G	n/a	G	G	230
CDC Centennial	5	106	112	117	SL	E	70	F	VG	F	G	F	n/a	G	F	270
CDC Golden	6	107	102	110	SL	M	85	F	VG	F	G	G	n/a	G	G	230
CDC Handel	5	103	93	110	SL	L	75	P	VG	F	G	F	n/a	G	F	220
CDC Mozart	7	104	101	108	SL	M	70	F	VG	F	G	F	n/a	G	F	220
CDC Meadow	6	105	109	108	SL	E	85	F	VG	F	G	G	n/a	G	G	220
CDC Minuet	5	100	101	---	SL	M	70	F	VG	F	F	F	n/a	G	F	190
CDC Prosper	4	97	105	89	SL	E	80	F	VG	G	G	G	n/a	F	G	150
Delta	4	93	92	---	SL	E	70	P	P	---	G	F	n/a	---	---	250
DS Admiral	5	93	103	95	SL	E	80	F	VG	F	G	G	n/a	G	G	240
Eclipse	9	97	99	101	SL	M	80	F	VG	P	G	G	n/a	F	G	250
Fusion	5	92	93	104	SL	M	75	F	VG	P	F	G	n/a	F	G	260
Miser	5	99	106	90	SL	M	80	F	VG	F	G	F	n/a	G	G	190
Noble	4	99	97	106	SL	M	80	F	VG	F	F	G	n/a	F	G	250
Polstead	5	99	107	103	SL	M	75	P	VG	P	F	G	n/a	G	F	280
Reward	5	98	107	108	SL	M	90	F	VG	F	G	G	n/a	G	F	240
Sorento	3	100	101	---	SL	M	80	F	VG	F	G	F	n/a	F	G	260
SW Benefit	4	77	82	75	SL	E	80	F	VG	F	F	F	n/a	G	F	200
SW Carousel	5	94	106	106	SL	E	85	F	VG	F	F	G	n/a	G	G	250
SW Cartier	4	97	103	94	SL	E	75	F	VG	G	F	F	n/a	F	F	220
SW Circus	4	95	108	106	SL	E	75	F	P	F	F	G	n/a	F	G	220
SW Capri	4	94	101	---	SL	E	75	F	P	F	---	G	n/a	F	G	210
SW Marquee	5	95	97	102	SL	M	80	F	VG	F	G	G	n/a	G	G	220
SW Midas	5	96	91	105	SL	E	80	F	VG	F	G	G	n/a	G	G	220
Thunderbird	4	103	105	112	SL	M	85	F	VG	F	G	G	n/a	G	F	220
Topeka	6	103	96	87	SL	E	65	F	VG	P	G	F	n/a	G	G	260
Tudor	5	94	94	107	SL	M	80	P	VG	F	F	G	n/a	G	F	270
Green																
Bluebird	5	86	90	82	SL	E	65	F	VG	P	G	F	F	F	n/a	250
Camry	5	96	90	94	SL	M	65	F	VG	P	F	G	F	G	n/a	260
CDC Montero	6	91	89	90	SL	M	80	F	VG	F	G	F	F	F	n/a	230
CDC Patrick	4	94	104	101	SL	M	80	F	VG	G	G	G	G	G	n/a	190
CDC Sage	5	80	84	86	SL	M	80	F	VG	G	G	G	G	F	n/a	220
CDC Striker	9	90	100	99	SL	M	80	F	P	G	VG	G	G	G	n/a	230
Cooper	7	102	96	104	SL	L	80	F	VG	F	F	G	G	G	n/a	270
Majoret	5	72	70	94	SL	M	60	P	P	---	G	G	F	---	n/a	250
Nitouche	7	86	91	95	SL	M	75	F	P	F	G	G	G	F	n/a	250
Stratus	7	105	99	104	SL	M	70	F	VG	P	G	F	F	G	n/a	270
SW Parade	5	91	85	101	SL	M	70	F	VG	G	G	F	F	G	n/a	220
SW Sergeant	5	88	87	90	SL	M	80	F	VG	F	G	G	G	G	n/a	200
Tamora	5	92	87	87	SL	M	80	F	VG	P	F	G	F	G	n/a	290
Toledo	4	80	89	---	SL	M	70	P	P	P	G	G	F	F	n/a	280
Venture	4	89	82	---	SL	E	75	P	P	P	G	F	F	F	n/a	220
Maple																
CDC Acer	3	100	94	---	SL	L	60	F	VG	---	G	F	n/a	VG	n/a	170
CDC Rocket	3	93	104	100	SL	M	75	F	VG	---	G	F	n/a	VG	n/a	210
Courier	4	90	86	78	SL	M	75	F	P	---	F	P	n/a	VG	n/a	210
Silage																
CDC Sonata	4	102	94	---	N	L	85	F	VG	---	G	F	n/a	F	F	220
CDC Leroy	2	96	97	86	SL	M	95	F	VG	---	G	G	n/a	G	G	150
CDC Tucker	3	99	99	88	SL	M	100	F	VG	---	G	G	n/a	G	F	170
Trapper	7	68	68	---	N	L	115	P	P	---	G	P	n/a	---	---	130
40-10	2	83	94	---	N	L	120	P	P	---	G	P	n/a	G	---	160

* Co-op and regional trials in Saskatchewan

• N=normal leaf type; SL = semi-leafless

♣ Seed coat dimpling: VG = 0-5%; G = 6-20%; F = 21-50%

♦ Green seed coats: Good = 0-10%; Fair = 11-25%

The following varieties have purple flower colour and tannin containing seed coats: **CDC Acer**, **CDC Rocket**, **Courier**, and **40-10**; all other varieties have white flower colour and colourless seed coats.

Additional Information

For detailed production information consult the *Pulse Production Manual* published by Saskatchewan Pulse Growers.

The relative maturity of the check variety Cutlass 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

Characteristics of Kabuli and Desi Chickpea Varieties

KABULI Variety	Years Tested	Yield (% Amit)		Leaf Type**	Ascochyta Blight ***	Height (cm)	Days to Flower	Maturity	Seed Weight (g/1000)
		Area 1*	Area 2*						
Amit (B-90) ☼	11	100	100	F	F	46	57	L	261
Sanford	9	69	68	U	VP	50	57	VL	415
CDC ChiChi	5	76	84	F	P	45	53	L	385
CDC Chico	7	95	101	F	P	45	51	M	265
CDC Diva	4	69	71	U	VP	45	52	L	490
CDC Frontier	8	105	106	F	F	44	56	L	360
CDC Xena	9	75	81	U	VP	44	54	L	464
CDC Yuma	7	78	79	F	P	50	53	VL	410
CDC Luna	6	100	103	F	F	38	54	ML	380

DESI Variety	Years Tested	Yield (% Myles)		Leaf Type**	Ascochyta Blight	Height (cm)	Days to Flower	Maturity	Seed Weight (g/1000)	Seed Shape♦	Seed Coat Colour▼
		Area 1*	Area 2*								
Myles	12	100	100	F	F	42	52	M	184	A	T
CDC Anna	8	108	113	F	F	40	52	L	210	P	T
CDC Cabri	10	113	115	F	F	47	51	M	297	P	T
CDC Desiray	7	97	108	F	F	35	49	M	210	P	LT
CDC Nika	6	97	104	F	F	40	50	L	320	P	T
CDC Vanguard	6	121	125	F	F	40	53	M	218	P	T

* Area 1: brown soil zone; Area 2: dark brown soil zone

** Leaf type: F = fern; U = unifoliate

*** Ascochyta Blight: F = fair; P = poor; VP = Very poor

♦ Seed shape: P = plump; A = angular

▼ Seed coat colour: T = tan; LT = light tan

Additional Information

Certified Seed of **CDC Frontier**, **CDC Yuma**, **CDC Xena**, **CDC Chico**, **CDC Diva**, **CDC Desiray**, **CDC Anna**, **CDC Nika** and **CDC Cabri**, and registered seed of **CDC Vanguard** will be available in 2009. For more details on production consult the *Pulse Production Manual* published by the Saskatchewan Pulse Growers (website: www.saskpulse.com).

Soybean

Main Characteristics of Varieties

Variety *	Years Tested	Site Years Tested	Yield (% OAC Prudence)	Corn Heat Units**	Days to Maturity ♦	Plant Height (cm)	Lodging ▼	Type
OAC Prudence	2	20	100	2450	120	87	1.9	Conventional
24-51R	2	20	109	2450	120	79	1.5	Roundup Ready
90M01	2	20	99	2575	122	82	1.6	Roundup Ready
Apollo RR	2	20	108	2375	115	79	1.3	Roundup Ready
NSC Tyndall RR	2	20	113	2400	115	74	1.4	Roundup Ready
RR Rosco	2	20	109	2450	117	83	1.7	Roundup Ready

*Other varieties are commercially available. For complete list see Seed Manitoba 2009 (www.seedmb.ca).

**Corn Heat Unit ratings are assigned by individual companies to assist growers select varieties suitable for their area; growers should not rely on only one source for judging maturity.

♦ Days to maturity was determined in Hamiota and Boissevain from 2007 to 2008. Over the 2 years, maturity ranged from 5 days earlier to 12 days later. Moist summers results in delayed maturity.

▼ Lodging scale is 1=no lodging to 5=completely lodged.

Additional Information

Saskatchewan test sites were Saskatoon, Rosthern, Oxbow, Outlook dryland, and Outlook irrigated.

Manitoba test sites were Hamiota, Boissevain, Roblin, Carberry dryland and Carberry irrigated.

Soybeans are not native to the Canadian Prairies and so crop must be inoculated with soybean inoculant that contains *Bradyrhizobium japonicum* bacteria.

Dry Bean

Main Characteristics of Varieties

Variety	Type	Years Tested*	Yield % of CDC Pintium			Days to Flower	Maturity Rating	% Pod Clearance▲	Seed Weight (g/1000)	Growth Habit‡
			Irrigation	Area 2	Area 3					
CDC Pintium	pinto	11	100	100	100	50	E	80	350	I
Envoy	navy	6	73	79	86	53	M	73	184	I
Cruiser	navy	5	73	85	97	54	L	69	164	II
AC Polaris	great northern	6	96	98	95	52	L	70	310	III
AC Redbond	small red	7	95	102	97	51	M	65	290	II
AC Black Diamond	black	6	102	95	94	54	M	70	250	II
CDC Espresso	black	10	65	78	74	47	M	87	191	I
CDC Jet	black	7	74	89	95	58	L	80	175	II

* Co-op and regional trials grown in narrow rows. Direct comparisons to **CDC Pintium** since 1996

Maturity ratings based on E=100 days L= 110 days for May 20 planting to swathing maturity but maturity can be much earlier in dry years, much later in cool wet years. See page 2 for more information.

▲ Pod clearance: percentage of pods that completely clear the cutterbar at time of swathing.

‡ Growth habit: I = determinate bush; II = indeterminate bush; III = indeterminate vine

Faba Bean

Main Characteristics of Varieties

Variety	Years Tested	Yield % CDC Fatima	Maturity in days	Seed Weight (g/1000)
Coloured Flower				
CDC Fatima	11	100	105	520
Taboar ☼	2	98	107	480
CDC Blitz	6	101	109	410
Orion	6	92	103	350
White Flower				
Snowbird ☼	3	104	104	495

Additional Information

Faba bean regional trials were started again beginning in 2006 to accommodate growing interest in this crop as a nitrogen-fixing high protein feed grain in moist areas where producers experience problems with pea diseases. White-flowered types are zero tannin. **Snowbird** is the only white-flowered (zero tannin) variety with wide seed availability for spring of 2009. 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 maturity but will vary depending on seeding date and weather conditions.

Oilseed Crops

Flax

Main Characteristics of Varieties

Variety	Years Tested	Yield as % of CDC Bethune*			Relative Maturity♣	Seed Size	Resistance to		
		Area 1 & 2	Area 3 & 4	Irrigation			Lodging	Powdery Mildew	Fusarium Wilt
CDC Bethune ☼	10	100	100	100	L	M	G	F	F
CDC Arras	10	95	92	92	M	L	F	P	F
Hanley ☼	4	90	90	93	M	M	G	F	G
Lightning ☼	6	92	92	93	L	M	G	F	G
Macbeth ☼§	4	91	93	94	L	M	G	F	G
CDC Mons	4	99	96	93	L	S	G	F	F
CDC Normandy	6	91	93	89	M	M	F	P	F
Prairie Blue ☼	4	99	92	97	L	S	VG	F	F
Prairie Grande ☼	6	93	94	95	M	M	VG	F	F
Prairie Thunder ☼	7	96	94	100	M	M	VG	F	G
CDC Sorrel ☼	7	100	104	93	L	L	G	F	F
Taurus ☼	6	94	99	94	M	M	G	F	F
Vimy	10	94	90	85	M	L	P	P	F
AC Watson ☼	6	88	93	92	M	M	G	F	F

* Data from Regional and Co-op trials

♣ Relative maturity: The relative maturity of the check, **CDC Bethune**, is L (on average 101 days from seeding to swathing ripeness)

Additional Information:

All varieties are resistant to rust.

No seed of **Prairie Grande** will be available in 2009.

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

Sunflower (Oilseed)

Main Characteristics of Varieties

Variety	Years Tested	Yield (kg/ha) (2 yr avg.)	Average Maturity	Oil %*
63M40**	2	4293	126	44.8
63M80**	2	4422	123	50.9

* Dry Basis

**Mid oleic NuSun

Sunflower (Oilseed) EMSS

Main Characteristics of Varieties

Variety	Years Tested	Yield (kg/ha) (10 yr avg.)	Average Maturity	Oil %*
63A21	10	2373	113	46.5

* Dry Basis

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. The earlier maturing, short stature (EMSS) varieties are adapted to production in most areas of Saskatchewan.

The Saskatchewan Sunflower Committee has been conducting trials in Saskatchewan for the purpose of registration and demonstration since 1983. Varieties that have been tested in official Saskatchewan Sunflower Committee trials for three years, continue to be tested and are registered for production in Canada are placed on the list.

The Committee has been testing NuSun, a sunflower with a fatty acid profile desired by major frying companies. Listed results are from the Saskatchewan Sunflower Committee Trials.

Mustard

Main Characteristics of Varieties*

Type and Variety	Yield % of AC Pennant	Plant Height (cm)	Mucilage‡ cS*ml/g seed	Protein % Seed	Fixed Oil % Seed	Seed Weight (g/1000)
Yellow						
AC Pennant	100	95	40.5	34.9	29.2	5.64
AC Base	100	100	37.2	34.9	29.1	5.82
Ace	99	100	45.0	35.5	28.9	5.47
Andante	100	100	50.0	35.8	28.1	6.05

Type and Variety	Plant Height (cm)	Allyl GSL▼ mg/g seed	Protein % Seed	Fixed Oil % Seed	Seed Weight (g/1000)
Brown Yield % of Duchess					
Duchess	100	115	9.3	28.8	38.2
Centennial Brown	100	115	10.1	30.0	36.6
Amigo**	99	115	13.0	30.7	34.8

Type and Variety	Plant Height (cm)	Allyl GSL▼ mg/g seed	Protein % Seed	Fixed Oil % Seed	Seed Weight (g/1000)
Oriental Yield % of Cutlass					
Cutlass	100	115	11.3	29.2	41.0
Forge	96	125	12.1	29.8	38.7
AC Vulcan	98	115	12.2	29.7	40.6

* Data from 1999-2007 Co-operative Mustard Test.

** New variety, registered August 28, 2008; data from 2004-2007 Co-operative Mustard Test (adjusted).

‡ Mucilage in yellow mustard is a measurement of viscosity of aqueous extracts from seed.

▼ Allyl GSL = allyl glucosinolate

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 90 to 92 days.

All four yellow mustard varieties have similar yield. **AC Pennant** has shorter straw (95 cm) while newer varieties are slightly taller. 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 the highest mucilage content. High protein content is of importance for yellow mustard flower as an ingredient in meat products. The protein contents of **Andante** and **Ace** are significantly higher than **AC Pennant** and **AC Base**, with corresponding lower fixed oil content. **Andante** and **AC Base** have significantly higher seed weight than **AC Pennant**, with **Ace** having smaller seed.

Brown mustard is grown primarily for the Dijon mustard market. **Amigo** is a new brown mustard variety with yield and plant height similar to **Duchess**. **Amigo** is the first brown mustard variety highly resistant to white rust race 2a, but susceptible to race 2v. **Centennial Brown** and **Duchess** are highly susceptible to white rust disease (staghead). **Amigo** has very high allyl glucosinolate content, much higher than **Centennial Brown** or **Duchess**. It also has greater protein and much reduced fixed oil content. Its seed weight is somewhat lower than that of the other brown mustard varieties. **Amigo** was registered on August 28, 2008 and about 100 kg of Breeder Seed produced in 2007.

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

The canola table and report, as presented, was provided by the Canola Council of Canada.

Canola

Main Characteristics of Varieties

Canola Main Characteristics of Varieties: The canola table and report, as presented, was provided by the Canola Council of Canada															
Variety B. napus (Argentine)	2006 Yield % of 46A65 All Zones Avg	2007 Yield % of 45H21, 5020 All Zones Avg	2008 Yield % of 45H21, 5020 Zones (Station Years)				Days to Maturity +/- days to 45H21, 5020 Zones				Height +/- inches	Lodging rating +="better"	Blackleg Rating	Organization	
			Short (6)	Mid (14)	Long (7)	All Zone Average	short	mid	long	All Zones					
Checks	Type														
45H21, 5020	Hyb	100	100	100	100	100	0	0	0	0	0	0			
Conventional															
46A65	OP	100	83	82	83	73	80	2	1	1	1	-2	0	R	Pioneer Hi-Bred
Clearfield															
5505 CL	Hyb			92	93	89	91	3	2	2	2	3	0	MR	Brett-Young Seeds
71-30 CL	Hyb			98	94	93	95	-1	0	0	0	1	0	R	DEKALB
45H73	Hyb	123	98	97	100	98	99	1	1	2	1	1	0	R	Pioneer Hi-Bred
45P70	Hyb	121	102	97	99	97	98	1	1	0	1	1	0	R	Viterra
Liberty-tolerant															
5020	Hyb	127	101	106	105	107	105	-1	0	-1	0	0	0	R	Bayer CropScience
1143 **	Hyb		98	98	98	101	99	2	1	0	1	0	0	R	Bayer CropScience
1144 **	Hyb			107	103	108	105	0	1	0	1	0	0	MR	Bayer CropScience
5030	Hyb	129	114	105	106	114	108	-1	0	0	0	5	1	R	Bayer CropScience
5440	Hyb		115	109	108	115	110	1	2	1	1	4	1	R	Bayer CropScience
8440	Hyb		107	108	106	113	108	1	1	0	1	0	1	R	Bayer CropScience
9590	Hyb	127	107	100	106	112	106	-2	0	0	0	1	0	R	Bayer CropScience
Roundup-tolerant															
45H21	Hyb	120	99	94	95	93	95	1	0	1	0	0	0	R	Pioneer Hi-Bred
4414 RR	Hyb			90	90	84	88	1	1	1	1	2	0	R	Brett-Young Seeds
4424 RR	Hyb			92	96	83	92	3	2	1	2	4	0	MR	Brett-Young Seeds
4434 RR	Hyb			88	90	85	88	3	2	1	2	2	0	MR	Brett-Young Seeds
997RR	OP			89	88	84	87	2	1	1	1	1	0	R	Brett-Young Seeds
v1037 **	Hyb			92	97	90	94	0	0	0	0	2	0	R	Cargill
v2018 **	Hyb		96		95	92	94	2	2	2	2	1	0	MR	Cargill
v2030 **	Hyb				97	88	94	1	1	1	1	2	0	MR	Cargill
83S01 RR	Syn		91		86	85	85	0	-1	0	2	2	0	MR	FP Genetics
93H01 RR	Hyb		95		95	88	93	1	1	1	1	2	0	MR	FP Genetics
71-45 RR	Hyb	120		98	95	99	97	-1	-1	-1	-1	0	0	MR	DEKALB
43E01	Hyb			90			90	-3				-3	-4	MR	Pioneer Hi-Bred
43H57	Hyb		81		84		84	-3				-3	-1	MR	Pioneer Hi-Bred
45H26	Hyb	126	101	99	99	98	99	1	1	0	0	1	0	R	Pioneer Hi-Bred
45H28	Hyb			98	102	98	100	2	2	2	2	3	0	R	Pioneer Hi-Bred
D3150	Hyb			95	97	96	96	2	2	1	1	2	0	MR	DuPont
D3151	Hyb			94	96	93	95	1	0	0	0	0	0	MR	DuPont
Café	OP	98	76	83	82		82	-3	-3			-3	0	R	SeCan
Rugby	OP		89	88	89	79	86	1	1	0	1	-1	0	R	SeCan
9553	Hyb			100	98	94	97	1	0	-1	0	1	0	R	Viterra
9554	Hyb			96	100	102	99	1	1	0	1	2	0	MR	Viterra
46P50	Hyb	125	103	95	99	93	96	5	3	3	3	3	0	R	Viterra

** Specialty oil
Type: OP - open pollinated; Syn - synthetic; and Hyb - hybrid

Additional Information

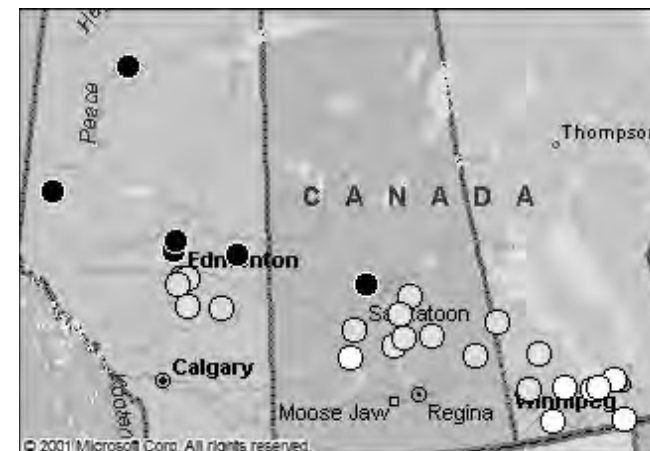
The Prairie Canola Variety Testing (PCVT) program entered its sixth year in 2008. The testing system unites the provincial variety testing programs to standardize protocol and improve trial consistency and quality. Now growers can look to a single source of information on how a canola variety performed in three different zones across western Canada. The Canola Council of Canada, canola seed industry, WCC/RRC, Saskatchewan Ministry of Agriculture, Manitoba Agriculture Food and Rural Initiatives, Alberta Agriculture and Rural Development, Agriculture and Agri-Food Canada contributed to the development and operation of the PCVT.

Trials were conducted by seed companies, government researchers and independent contractors in three growing zones across the prairies: short-, mid- and long-season zones (see map). Varietal characteristics appear in the table. Interpreting PCVT information:

Use the map to identify your zone of adaptation. For site-specific data please refer to the Canola Digest or the Canola Council of Canada website. Don't limit your search to the areas closest to you. Comparing local results to other locations with similar growing conditions can also be valuable.

The table shows variety yield as a percent relative to the check variety or varieties. Although variety trials are carefully conducted, small percentage differences (e.g. <5%) in yield are usually insignificant. The table includes information on maturity, resistance to lodging, blackleg resistance, varietal type (open-pollinated, hybrid, synthetic) and herbicide tolerance. Use this information in addition to yield to choose a variety.

2008 PCVT Locations:



- LONG SEASON
- ◐ MID SEASON
- SHORT SEASON

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 (S). 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 practice such as proper crop and herbicide rotation.

Polish Canola

Polish varieties mature approximately two weeks earlier than Argentine varieties and are therefore less likely to produce green seed. Polish varieties are more heat and drought tolerant than Argentine varieties. They are also more shatter resistant than Argentine varieties and are therefore well suited to straight combining.

In 2005, three varieties were tested in the PCVT. ACSunbeam is available through SeCan members. ACS-C7 is available through the Seidle Seed Farm or authorized seed dealers. ACS-C7 is a synthetic variety with fair resistance to blackleg. AC Sunbeam is an open-pollinated variety. SW SPIRITRIVER is an open-pollinated variety available through Peace Pedigreed Seed.

Brassica juncea Canola

Brassica juncea canola is a new class of canola that is especially well adapted to areas where hot, dry conditions are often encountered. It has very good resistance to blackleg and exhibits better heat and drought tolerance than other canola. Juncea canola has shattering resistance similar to Polish canola, and is therefore well suited to straight-cut combining. All production is contracted. The first commercial variety, Arid, yielded approximately 112% of AC Excel in the zone of adaptation. Two new varieties, XCEED™ 8570 and XCEED 8571, will be available from Viterra in limited quantities for 2009. These varieties yield about 119 and 116% of Arid respectively. They are the first juncea canola varieties designed for the CLEARFIELD® production system. Pioneer Hi-Bred launched 45J10, the first juncea hybrid, in 2008 and is available for sale through Pioneer sales reps. In registration trials, 45J10 yielded 119% of Arid.

The Canola POD

The Canola POD, or Performance On-line Database (<http://www.canola-council.org/pod>), was developed by the Canola Council of Canada to allow farmers to explore canola performance trial results from a broad range of sources in their own area. In addition to the Prairie Canola Variety Trial results, POD provides access to private seed company performance trial information which often includes more detailed information, such as notes on site management.

Breeding Institutions and Seed Distributors of Varieties Listed in this Publication

Crop Kind, Class & Variety	Breeding Institution	Distributor
WHEAT		
Bread Wheat		
AC Abbey	AAFC (Swift Current)	CANTERRA SEEDS
Alvena	AAFC (Swift Current)	SeCan Members
CDC Abound	U of S - CDC	Viterra / Proven Seed
CDC Alsask	U of S - CDC	Viterra / Proven Seed
AC Barrie	AAFC (Swift Current)	SeCan Members
CDC Bounty	U of S - CDC	CANTERRA SEEDS
AC Cadillac	AAFC (Swift Current)	FP Genetics
AC Elsa	AAFC (Swift Current)	SeCan Members
Fieldstar VB	AAFC (Winnipeg)	SeCan Members
CDC Go	U of S - CDC	Public
Goodeve VB	AAFC (Swift Current)	FP Genetics
Harvest	AAFC (Winnipeg)	FP Genetics
Helios	AAFC (Swift Current)	Friendly Acres Seed Farm Inc.
CDC Imagine	U of S - CDC	Viterra / Proven Seed
Infinity	AAFC (Swift Current)	CANTERRA SEEDS
AC Intrepid	AAFC (Swift Current)	CANTERRA SEEDS
KANE	AAFC (Winnipeg)	SeCan Members
Lillian	AAFC (Swift Current)	SeCan Members
Lovitt	AAFC (Swift Current)	CANTERRA SEEDS
McKenzie	Viterra / Proven Seed	Viterra / Proven Seed
CDC Osler	U of S - CDC	Public
Prodigy	Viterra / Proven Seed	Viterra / Proven Seed
Somerset	AAFC (Winnipeg)	SeCan Members
AC Splendor	AAFC (Winnipeg)	SeCan Members
Stettler	AAFC (Swift Current)	SeCan Members
Superb	AAFC (Winnipeg)	SeCan Members
CDC Teal	U of S - CDC	FP Genetics
Unity VB	AAFC (Winnipeg)	SeCan Members
Waskada	AAFC (Winnipeg)	SeCan Members
5601HR	Syngenta Seeds Canada Inc.	Viterra / Proven Seed
5602HR	Syngenta Seeds Canada Inc.	Viterra / Proven Seed

Canada Prairie Spring Wheat_Red		
AC Crystal	AAFC (Swift Current)	SeCan Members
AC Taber	AAFC (Swift Current)	SeCan Members
5700PR	Syngenta Seeds Canada Inc.	Viterra / Proven Seed
5701PR	Syngenta Seeds Canada Inc.	Viterra / Proven Seed
5702PR	Syngenta Seeds Canada Inc.	Viterra / Proven Seed

Canada Prairie Spring Wheat_White		
AC Vista	AAFC (Swift Current)	FP Genetics

Hard White Spring Wheat		
Kanata	AAFC (Winnipeg)	FP Genetics
Snowbird	AAFC (Winnipeg)	FP Genetics
Snowstar	AAFC (Winnipeg)	SeCan Members

Canada Western Extra Strong		
Burnside	AAFC (Winnipeg)	Faurschou Farms Ltd.
Glencross	AAFC (Winnipeg)	Faurschou Farms Ltd.
CDC Rama	U of S - CDC	FP Genetics
CDC Walrus	U of S - CDC	Public

Durum		
AC Avonlea	AAFC (Swift Current)	FP Genetics
Brigade	AAFC (Swift Current)	TBA
Commander	AAFC (Swift Current)	Viterra / Proven Seed
Eurostar	AAFC (Swift Current)	SeCan Members
Kyle	AAFC (Swift Current)	SeCan Members
Napoleon	AAFC (Winnipeg)	CANTERRA SEEDS
AC Navigator	AAFC (Swift Current)	Viterra / Proven Seed
Strongfield	AAFC (Swift Current)	SeCan Members
CDC Verona	U of S - CDC	Paterson Grain Ltd.

Soft White Spring Wheat		
AC Andrew	AAFC (Lethbridge)	SeCan Members
Bhishaj	AAFC (Lethbridge)	Tony Croymans

Crop Kind, Class & Variety	Breeding Institution	Distributor
Winter Wheat		
AC Bellatrix	AAFC (Lethbridge)	FP Genetics
CDC Buteo	U of S - CDC	SeCan Members
CDC Clair	U of S - CDC	SeCan Members
CDC Falcon	U of S - CDC	SeCan Members
CDC Harrier	U of S - CDC	SeCan Members
CDC Kestrel	U of S - CDC	SeCan Members
McClintock	U of M (Winnipeg)	CANTERRA SEEDS
CDC Osprey	U of S - CDC	CANTERRA SEEDS
Radiant	AAFC (Lethbridge)	CANTERRA SEEDS
CDC Raptor	U of S - CDC	SeCan Members
Winter Rye		
Hazlet	AAFC (Swift Current)	SeCan Members
Prima	AAFC (Swift Current)	SeCan Members
AC Remington	AAFC (Swift Current)	Viterra / Proven Seed
AC Rifle	AAFC (Swift Current)	Viterra / Proven Seed
Triticale		
AC Alta	AAFC (Swift Current)	Progressive Seeds
Bobcat	AAFRD (Lacombe)	Progressive Seeds
Bunker	AAFRD (Lacombe)	FP Genetics
AC Certa	AAFC (Swift Current)	Progressive Seeds
AC Copia	AAFC (Swift Current)	FP Genetics
Fridge	Elliot Plant Breeding	FP Genetics
Pika	AAFRD (Lacombe)	Progressive Seeds
Pronghorn	AAFRD (Lacombe)	Progressive Seeds
Sandro	Swiss Fed Ag Res	FP Genetics
Tyndal	AAFRD (Lacombe)	SeCan Members
AC Ultima	AAFC (Swift Current)	FP Genetics

MALTING BARLEY		
Two-Row		
Bentley	AARD (Lacombe)	Canterra Seeds Ltd.
CDC Copeland	U of S - CDC	SeCan Members
Harrington	U of S - CDC	SeCan Members
CDC Kendall	U of S - CDC	Viterra/Proven Seed
CDC Landis	U of S - CDC	TBA
CDC Meredith	U of S - CDC	SeCan Members
Merit	Bush Ag Res. Inc.	Viterra/Proven Seed
Merit 16	Bush Ag Res. Inc.	FP Genetics
Merit 57	Bush Ag Res. Inc.	Bush Ag Res. Inc.
AC Metcalfe	AAFC (Brandon)	SeCan Members
Newdale	AAFC (Brandon)	FP Genetics
Norman	AAFC (Brandon)U of S - CDC	FP Genetics
CDC Reserve	U of S - CDC	SeCan Members
CDC Select	U of S - CDC	Viterra/Proven Seed

Six-Row		
CDC Battleford	U of S - CDC	SeCan Members
CDC Clyde	U of S - CDC	Viterra/Proven Seed
Excel	U of Minnesota	Viterra/Others
CDC Kamsack	U of S - CDC	Canterra Seeds Ltd.
CDC Laurence	U of S - CDC	TBA
Lacey	U of Minnesota	FP Genetics
Legacy	Bush Ag Res. Inc.	Viterra/Proven Seed
CDC Mayfair	U of S - CDC	FP Genetics
Robust	U of Minnesota	Canterra Seeds Ltd.
CDC Springside	U of S - CDC	Cargill Seed, Others
Tradition	Bush Ag Res. Inc.	TBA
CDC Yorkton	U of S - CDC	Viterra/Proven Seed

Crop Kind, Class & Variety	Breeding Institution	Distributor
FEED BARLEY		
Feed		
Alston	Hyland Seeds	Viterra / Proven Seed
CDC Bold	U of S - CDC	CANTERRA SEEDS
Champion	Westbred, LLC	Viterra / Proven Seed
Chigwell	AAFC (Lacombe)	SeCan Members
CDC Coalition	U of S - CDC	CANTERRA SEEDS
CDC Cowboy	U of S - CDC	SeCan Members
CDC Dolly	U of S - CDC	SeCan Members
Formosa	ACS Ltd.	FP Genetics
CDC Helgason	U of S - CDC	SeCan Members
AC Lacombe	AAFC (Lacombe)	SeCan Members
Manny	AAFRD (Lacombe)	SeCan Members
McLeod	Westbred, LLC	Viterra / Proven Seed
CDC Mindon	U of S - CDC	SeCan Members
Niobe	AAFRD (Lacombe)	SeCan Members
Niska	AAFRD (Lacombe)	CANTERRA SEEDS
Ponoka	AAFRD (Lacombe)	SeCan Members
AC Rosser	AAFC (Brandon)	SeCan Members
Sundre	AAFRD (Lacombe)	Mastin Seeds
CDC Trey	U of S - CDC	FP Genetics
Trochu	AAFRD (Lacombe)	SeCan Members
Vivar	AAFRD (Lacombe)	SeCan Members
Xena	Viterra / W. Plant Breeders	Viterra / Proven Seed
Hullless		
CDC McGwire	U of S - CDC	SeCan Members
Forage		
Binscarth	AAFC (Brandon)	Wagon Wheel Seeds
CDC Cowboy	U of S - CDC	SeCan Members
Desperado	AAFC (Brandon)	FP Genetics
AC Ranger	AAFC (Brandon)	FP Genetics
Stockford	W. Plant Breeders	Viterra / Proven Seed
Food Barley		
CDC Alamo	U of S - CDC	Public
CDC Candle	U of S - CDC	Public
CDC Fibar	U of S - CDC	CANTERRA SEEDS
CDC McGwire	U of S - CDC	SeCan Members
CDC Rattan	U of S - CDC	CANTERRA SEEDS
Millhouse	AAFC (Brandon)	FP Genetics
OAT		
CDC Baler	U of S - CDC	FP Genetics
SW Betania	SW Seed Ltd.	Viterra / Proven Seed
CDC Boyer	U of S - CDC	SeCan Members
Boudrias	AAFC (Lacombe)	FP Genetics
Bullion	SW Seed Ltd.	Viterra / Proven Seed
Calibre	U of S - CDC	SeCan Members
CDC Dancer	U of S - CDC	FP Genetics / Cargill
Derby	U of S - CDC	Viterra / Proven Seed
Furlong	AAFC (Winnipeg)	CANTERRA SEEDS / Cargill
AC Gwen	AAFC (Winnipeg)	SeCan Members
HiFi	North Dakota State University	Seed Depot
Jordan	AAFC (Winnipeg)	SeCan Members
Lee Williams	AAFC (Lacombe)	CANTERRA SEEDS
Leggett	AAFC (Winnipeg)	FP Genetics
Lu	AAFC (Lacombe)	SeCan Members
CDC Minstrel	U of S - CDC	FP Genetics
AC Morgan	AAFC (Lacombe)	SeCan Members
Murphy	AAFC (Lacombe)	SeCan Members
AC Mustang	AAFC (Lacombe)	Mastin Seeds
CDC Orrin	U of S - CDC	FP Genetics
Pinnacle	AAFC (Winnipeg)	FP Genetics
CDC Pro-Fi	U of S - CDC	FP Genetics
Ronald	AAFC (Winnipeg)	SeCan Members
CDC Sol-Fi	U of S - CDC	Public
Triactor	Svalof Weibull AB	CANTERRA SEEDS
CDC Weaver	U of S - CDC	FP Genetics
CANARY SEED		
CDC Bastia	U of S - CDC	
Cantate		Hansen Seeds
Keet	U of Minnesota; U of S - CDC	Public
CDC Maria	U of S - CDC	C. Special Crops
CDC Togo	U of S - CDC	CANTERRA SEEDS

Crop Kind, Class & Variety	Breeding Institution	Distributor
SAFFLOWER		
Saffire	AAFC (Lethbridge)	Jerry Kubic (AB)
AC Sunset	AAFC (Lethbridge)	Viterra / Proven Seed
LENTIL		
CDC Blaze	U of S - CDC	Sask. Pulse Growers
Eston	U of S - CDC	SeCan Members
CDC Glamis	U of S - CDC	Sask. Pulse Growers
CDC Grandora	U of S - CDC	Sask. Pulse Growers
CDC Greenland	U of S - CDC	Sask. Pulse Growers
CDC Impact CL	U of S - CDC	Sask. Pulse Growers
CDC Impala CL	U of S - CDC	
CDC Imperial CL	U of S - CDC	Sask. Pulse Growers
CDC Impress CL	U of S - CDC	
CDC Improve CL	U of S - CDC	Sask. Pulse Growers
Indian Head		
Laird	U of S - CDC	SeCan Members
CDC LeMay	U of S - CDC	Sask. Pulse Growers
CDC Robin	U of S - CDC	
CDC Rosetown	U of S - CDC	
CDC Rouleau	U of S - CDC	Sask. Pulse Growers
CDC Sedley	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
FIELD PEA		
40-10	SWS, Germany	FP Genetics
CDC Acer	U of S - CDC	Sask. Pulse Growers
DS Admiral	Danisco Seeds	FP Genetics
Agassiz	AAFC	CANTERRA SEEDS
SW Benefit	Svalof Weibull	Nordicks Norsask
Bluebird	Limagrains Nederland	Bob Park - Lacombe, AB
CDC Bronco	U of S - CDC	Sask. Pulse Growers
Camry	Limagrains Nederland	FP Genetics
Canstar	AAFC	Canseed
SW Capri	SW Seed Ltd.	CANTERRA SEEDS
Carneval	SW Seed Ltd.	Viterra / Proven Seed
SW Carousel	Svalof Weibull VB	FP Genetics
SW Cartier	Svalof Weibull	CANTERRA SEEDS
CDC Centennial	U of S - CDC	Sask. Pulse Growers
SW Circus	SW Seed Ltd.	SeCan Members
Cooper	Limagrains Nederland	CANTERRA SEEDS
Courier	NZ Crop & Food	CANTERRA SEEDS
Cutlass	AAFRD / CDC	Sask. Pulse Growers
Delta	Limagrains Nederland	FP Genetics
Eclipse	Limagrains Nederland	FP Genetics
Fusion	Limagrains Nederland	CANTERRA SEEDS
CDC Golden	U of S - CDC	Sask. Pulse Growers
CDC Handel	U of S - CDC	Sask. Pulse Growers
CDC Leroy	U of S - CDC	Sask. Pulse Growers
Majoret	Svalof Weibull BV	FP Genetics
SW Marquee	SW Seed Ltd.	Viterra / Proven Seed
CDC Meadow	U of S - CDC	Sask. Pulse Growers
SW Midas	Svalof Weibull BV	FP Genetics
Miser	AAFC	FP Genetics
CDC Minuet	U of S - CDC	Sask. Pulse Growers
CDC Montero	U of S - CDC	Sask. Pulse Growers
CDC Mozart	U of S - CDC	Sask. Pulse Growers
Nitouche	Limagrains Nederland	FP Genetics
Noble	Limagrains Nederland	FP Genetics
SW Parade	SW Seed Ltd.	Viterra / Proven Seed
CDC Patrick	U of S - CDC	Sask. Pulse Growers
Polstead	Limagrains Nederland	FP Genetics
CDC Prosper	U of S - CDC	Sask. Pulse Growers
Reward	AAFC (Lacombe)	SeCan members
CDC Rocket	U of S - CDC	Sask. Pulse Growers
CDC Sage	U of S - CDC	Sask. Pulse Growers
SW Sergeant	Svalof Weibull	FP Genetics
CDC Sonata	U of S - CDC	Sask. Pulse Growers
Sorento	Limagrains Nederland	FP Genetics

Crop Kind, Class & Variety	Breeding Institution	Distributor
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Field Pea (cont'd)

Stratus ☼	Limagrain Nederland	CANTERRA SEEDS
CDC Striker	U of S - CDC	Sask. Pulse Growers
Tamora ☼	Limagrain Nederland	FP Genetics
Thunderbird		AAFC
Toledo	Limagrain Nederland	Limagrain Nederland
Topeka ☼	Limagrain Nederland	Limagrain Nederland
Trapper	AAFC (Morden)	Public
CDC Tucker	U of S - CDC	Sask. Pulse Growers
Tudor ☼	Limagrain Nederland	FP Genetics
Venture	Axel Toft	Johnson Seeds (MB)

Chickpea

Desi

CDC Anna	U of S - CDC	Sask. Pulse Growers
CDC Cabri	U of S - CDC	Sask. Pulse Growers
CDC Desiray	U of S - CDC	Sask. Pulse Growers
Myles	USDA / Washington State U	Public
CDC Nika	U of S - CDC	Sask. Pulse Growers
CDC Vanguard	U of S - CDC	Sask. Pulse Growers

Kabuli

Amit (B-90) ☼		Viterra / Proven Seed
CDC Chico	U of S - CDC	Sask. Pulse Growers
CDC ChiChi	U of S - CDC	Sask. Pulse Growers
CDC Diva	U of S - CDC	Sask. Pulse Growers
CDC Frontier	U of S - CDC	Sask. Pulse Growers
CDC Luna	U of S - CDC	Sask. Pulse Growers
Sanford	USDA / Washington State U	Public
CDC Xena	U of S - CDC	Sask. Pulse Growers
CDC Yuma	U of S - CDC	Sask. Pulse Growers

Soybean

OAC Prudence		SeCan Memebers
24-51R		Monsanto Canada Inc.
90M01		Pioneer Hi-Bred Ltd.
Apollo RR		CANTERRA SEEDS
NSC Tyndall RR		North Star Genetics, MB
RR Rosco		Hyland Seeds

Dry Bean

AC Black Diamond		
Cruiser		
Envoy		
CDC Espresso	U of S - CDC	CANTERRA SEEDS
CDC Jet	U of S - CDC	B&J Martens Seeds
CDC Pintium	U of S - CDC	Sask. Pulse Growers
AC Polaris		
AC Redbond		

Faba Bean

CDC Blitz	U of S - CDC	
CDC Fatima	U of S - CDC	R.Legumex / Walker S.
Orion	AAFC (Lacombe)	Roger Lee, Lyster Farm
Snowbird ☼	Limagrain Nederland	Bob Park - Lacombe, AB
Taboar		Terramax Holding Corp.

Flax

CDC Arras	U of S - CDC	FP Genetics
CDC Bethune ☼	U of S - CDC	SeCan Members
Hanley ☼	AAFC (Morden)	SeCan Members
Lightning ☼	AAFC (Morden)	CANTERRA SEEDS
Macbeth ☼	AAFC (Morden)	Viterra / Proven Seed
CDC Mons	U of S - CDC	FP Genetics
CDC Normandy	U of S - CDC	SeCan Members
Prairie Blue ☼	AAFC (Morden)	SeCan Members
Prairie Grande ☼		SeCan Members
Prairie Thunder ☼	AAFC (Morden)	CANTERRA SEEDS
CDC Sorrel ☼	U of S - CDC	SeCan Members
Taurus ☼	Limagrain Nederland	FP Genetics
Vimy	U of S - CDC	SeCan Members
AC Watson ☼	AAFC (Morden)	Viterra / Proven Seed

Crop Kind, Class & Variety	Breeding Institution	Distributor
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Mustard

Brown		
Amigo	AAFC	
Centennial Brown	AAFC (Saskatoon)	Members of the Canadian Mustard Association
Duchess	Viterra / Proven Seed	Viterra / Proven Seed

Oriental

Cutlass	AAFC (Saskatoon)	Trade
Forge	Colman's of Norwich	Viterra / Proven Seed
AC Vulcan	AAFC (Saskatoon)	Trade

Yellow

Ace	John S. Hemingway	Viterra / Proven Seed
Andante	AAFC (Saskatoon)	Members of the Canadian Mustard Association
AC Base	AAFC (Saskatoon)	Trade
AC Pennant	AAFC (Saskatoon)	Trade

Sunflower

63A21	Pioneer Hi-Bred	Pioneer Hi-Bred
63M40		
63M80		

Canola - see Canola table VR20

Abbreviations used in this list

AC	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

Proposed List of Variety Registration Cancellations for January 1, 2009

Spring Canola (*Brassica napus*)

225RR	3235	33-95	35-85
MB41001	MB41007	LG3220	LG3222

Hybrid Spring Canola (*Brassica napus*)

375RR	AV 9440	AV 9505	AV 9512
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For a continuously updated list of proposed cancellations, please see: <http://www.inspection.gc.ca/english/plaveg/variet/dereg-lste.shtml>

For a list of varieties that are registered in Canada, please see: <http://www.inspection.gc.ca/english/plaveg/variet/regvare.shtml>