

Varieties of grain crops 1999



Saskatchewan
Agriculture
and Food

Crop Production Areas

The cropland of Saskatchewan has been divided into four areas based roughly on climate, vegetation and soil type. The relative yields of crop varieties tend to vary from area to area. In choosing a variety farmers will want to consider the yields in their area and special requirements such as early maturity, disease resistance or sawfly resistance.

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 sawflies may be problems in the western and central sections of the area. Cereal rust may be a problem in the southeastern section.

Area 3: 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 northwestern and northeastern sections.

Area 4: Rainfall is usually adequate for



crop production. However, early fall frosts and wet harvest weather are frequent problems.

Note About Dividing Lines:

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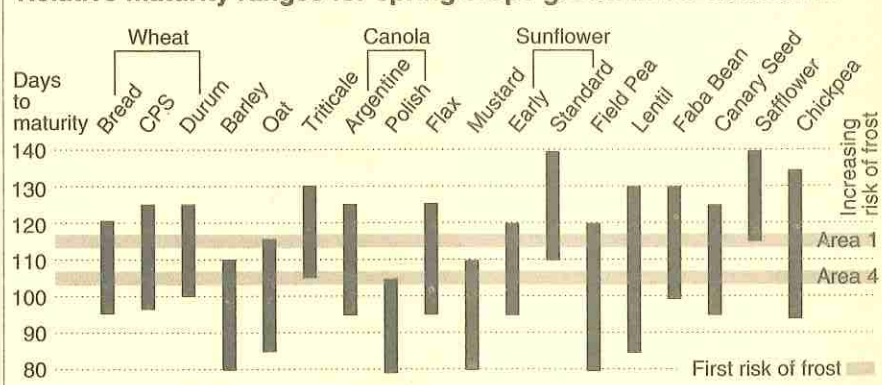
The dividing lines do not represent distinct changes over a short distance. The change from one area to another is gradual.

Relative Maturity Ratings

Relative maturity ratings are average number of days from seeding to swathing ripeness. The actual number of days to reach maturity depends on local climate and to some extent on management practices.

Some of the following tables 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). Medium applies to the most widely grown check variety which appears at the top of each table. The limits for each category vary from crop to crop. In barley, for example, Harrington would be medium with L and E varieties + or -1-2 days and VL and VE varieties beyond these, e.g. L-Manley, M-Harrington, E-CDC Fleet, VE-TR129.

Relative maturity ranges for spring crops grown in Saskatchewan



Comparisons

The relative maturity of varieties of different crops is important when making plans for seeding. The above table compares the relative maturity ranges for crops grown in Saskatchewan.

Maturity is measured from seeding to

swathing ripeness. 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.

Cereal Crops

Wheat

Main characteristics of varieties

Type & Variety	Years tested	Yield as % of Katepwa					Relative maturity in days	Protein	Lodging	Shattering	Sprouting	Resistance to*						
		Area 1	Area 2	Area 3	Area 4	Irrigation						Stem rust	Leaf rust	Loose smut	Bunt	Leaf spot	Root rot	FHB**
Bread Wheat																		
Katepwa	12	100	100	100	100	100	98	14.3	F	G	F	G	F	G	G	P	F	F
AC Abbey	5	100	100	106	100	109	+1	-0.4	F	G	P	G	F	F	G	P	F	P
AC Barrie	8	103	107	112	109	113	+2	+0.4	G	G	G	G	G	G	F	F	F	F
AC Cadillac	6	105	110	110	104	110	+1	+0.3	F	G	F	G	G	VG	VG	P	F	P
Columbus	10	99	101	102	96	92	+5	+0.2	F	F	VG	F	G	F	VG	P	F	P
AC Cora	8	101	103	103	102	104	0	+0.2	F	G	F	G	VG	G	G	P	F	F
AC Domain	8	95	96	100	97	98	0	+0.7	G	G	VG	G	VG	VG	F	VP	F	P
AC Eatonia	7	95	99	98	94	97	+2	+0.7	P	G	VG	G	F	F	G	P	F	--
AC Elsa	6	106	110	113	102	108	+1	+0.4	F	G	F	G	G	G	G	F	F	VP
AC Intrepid	5	105	106	112	106	113	-1	+0.1	G	G	P	G	G	F	G	P	F	--
Invader	6	102	105	105	104	96	+3	+0.4	G	F	F	G	G	G	F	P	F	P
Laura	12	103	107	105	105	93	+3	+0.2	F	G	F	G	G	F	P	P	G	--
AC Majestic	7	97	103	105	101	97	+4	+0.3	G	F	VG	G	G	F	VG	F	F	F
CDC Makwa	10	101	103	101	101	100	+1	0	F	G	F	G	F	G	F	P	F	--
McKenzie	5	106	109	108	99	121	0	-0.1	F	G	VG	G	VG	VP	VG	P	F	F
AC Michael	7	102	103	99	100	98	+1	0.0	F	G	F	G	F	G	P	F	F	--
Pasqua	10	101	102	100	100	92	+2	+0.1	F	G	G	G	G	F	F	P	F	P
Prodigy	4	99	108	113	98	107	+3	+1.0	G	F	F	G	VG	F	VG	P	F	P
Roblin	12	92	93	97	96	99	-1	+0.5	G	G	P	G	G	G	P	P	G	VP
AC Splendor	6	94	97	100	93	98	-2	+0.8	F	G	P	G	VG	F	G	VP	F	P
CDC Teal	10	100	102	108	103	105	0	+0.4	G	G	P	G	G	G	F	P	F	VP
Canada Prairie Spring Wheat																		
Red Seeded																		
AC Crystal	6	123	137	135	125	132	+5		VG	VG	P	G	G	F	G	F	F	VP
Cutler	5	93	101	101	96	---	+1		G	F	VP	G	P	F	VP	---	F	--
AC Foremost	7	123	131	131	125	123	+4		G	G	F	G	G	F	G	P	F	VP
AC Taber	9	121	131	130	123	131	+6		VG	VG	P	G	G	P	G	F	F	VP
White Seeded																		
AC Karma	8	122	133	133	131	125	+4		G	G	P	G	G	F	G	P	F	P
AC Vista	6	125	134	135	121	134	+3		G	G	F	G	G	G	G	P	F	VP
Canada Western Extra Strong																		
Bluesky	8	96	93	95	99	---	+1		F	G	P	G	F	VG	F	P	G	--
Glenlea	9	100	107	115	102	110	+4		F	G	P	G	G	VG	F	P	G	P
Laser	6	101	110	115	109	104	+1		F	G	P	P	P	VG	VP	P	G	P
Durum Wheat																		
Yield as % of Kyle																		
Kyle	13	100	100	100	100	100	+5	13.6	P	VG	F	VG	VG	P	VG	P	F	VP
AC Avonlea	5	102	105	111	---	110	+4	+0.2	F	VG	F	VG	VG	P	VG	P	F	--
AC Melita	7	95	96	101	---	110	+3	-0.2	F	VG	F	VG	VG	P	VG	VP	F	VP
AC Morse	6	101	100	108	---	111	+5	-0.2	G	VG	F	VG	VG	VP	VG	VP	F	VP
AC Navigator	3	103	102	98	---	---	+5	-0.4	G	VG	F	VG	VG	VP	VG	VP	F	VP
AC Pathfinder	3	99	98	105	---	---	+4	-0.8	F	VG	F	VG	VG	P	VG	VP	F	VP
Plenty	12	101	106	107	108	109	+4	-0.1	F	VG	F	VG	VG	P	VG	F	G	VP
Sceptre	13	96	97	99	100	112	+2	-0.6	G	VG	P	VG	VG	P	VG	P	G	VP

* Resistance ratings: VG = very good; G = good; F = fair; P = poor; VP = very poor.

++ This variety might not be described in 1999.

--- No data available.

** Fusarium head blight



Progress through Research

AT TIME OF PRINTING:

Protected by Breeders' Rights: AC Barrie, AC Elsa, AC Cadillac, AC Crystal, AC Karma, AC Vista, Invader.

Applied for Protection: AC Abbey, AC Avonlea, AC Intrepid, AC Majestic, AC Morse, AC Navigator, AC Pathfinder, AC Prodigy, AC Splendor

Additional Information

Response of varieties to Fusarium head blight has been added to the table. Durum wheat varieties are more susceptible than CWRs varieties and CPS varieties are intermediate.

Seed of varieties rated poor and very poor for bunt and loose smut should be treated.

Please refer to the Seed Treatment section of this pamphlet or *Seed Treatments and Foliar Fungicides, 1999* pamphlet.

Most of the varieties have been rated for their relative resistance to pre-harvest sprouting. During wet harvest weather grades drop more rapidly due to sprouting in swathed than in standing crops.

Canada Western Red Spring Wheat

Seed of new varieties AC Abbey, AC Intrepid, and Prodigy, won't be available in 1999.

AC Abbey is resistant to wheat stem sawfly, has semidwarf stature and an awned head.

Prodigy has exceptionally heavy test weight.

AC Cadillac has a large seed size and an

exceptionally heavy test weight.

AC Eatonia is resistant to wheat stem sawfly and has good resistance to pre-harvest sprouting.

AC Intrepid has much larger seed size than **Katepwa**.

McKenzie has an awned head and may also be identified by its ability to develop a purplish stem. Limited quantities of seed will be available in 1999.

Invader and **Laura** are awned.

Canada Prairie Spring Wheat

AC Karma, **AC Vista**, **AC Crystal** and **AC Foremost** have resistance to loose smut, except the new race T9. In order to prevent the spread of this new race, all Canada Prairie Spring seed produced in northeast Saskatchewan should be treated with a systemic fungicide. Please refer to the Seed Facts section or to the *Crop Protection Guide 1999*.

AC Vista has higher protein content, and stronger gluten than **AC Karma**. **AC Vista** has an interim registration to facilitate test-mar-

keting. Seed may not be available in 1999.

AC Crystal has improved quality compared to **AC Foremost** and **AC Taber**.

Limited quantities of seed of **Cutler** will be available in 1999.

Biggar and **Genesis** will be deregistered in 2000.

Canada Western Amber Durum

All durum varieties are susceptible to two new races of loose smut. Seed can be treated to provide control. See the Seed Facts section for details.

Kyle receives better grades than other varieties even under adverse harvesting conditions.

AC Avonlea has higher pigment content and shorter stronger straw than **Kyle**. Seed will not be available in 1999.

AC Morse has short strong straw like **Sceptre**, and has lower test weight than **Kyle**.

Under some conditions, the stems of **Plenty** break off near ground level.

AC Navigator and **AC Pathfinder** have extra strong gluten properties. **AC Navigator** is a semidwarf. They may be grown only

under contract with Saskatchewan Wheat Pool.

Canada Western Extra Strong

Laser has an interim registration.

Bluesky, **Wildcat**, and **Laser** have weaker gluten strength than **Glenlea**.

Soft White Spring Wheat

AC Reed and **AC Phil** have similar yield potential to **Fielder** and mature about 2 days earlier. **AC Reed** and **AC Phil** are moderately resistant to shattering, powdery mildew, and common root rot, moderately susceptible to leaf and stem rust, and susceptible to common bunt. **AC Phil**, generally, has less black point than **AC Reed** and **Fielder**. **AC Nanda** has improved resistance to common bunt, powdery mildew and black point. It yields about the same as **Fielder** and is 2 days later maturing. Seed of **AC Nanda** will not be available in 1999. Soft-white spring wheats are susceptible to pre-harvest sprouting.

Winter Wheat

Main characteristics of varieties

Variety	Years tested	—Grain yield as % of CDC Kestrel—				Resistance to*				
		Areas 1 & 2	Areas 3 & 4	Irrigation	Protein	Lodging	Winter Kill	Stem Rust	Leaf Rust	Bunt
CDC Kestrel	13	100	100	100	10.9	G	G	P	P	P
CDC Clair	8	103	103	99	11.7	G	G	P	P	P
CDC Osprey	8	102	101	91	11.7	G	G	P	P	P
CDC Harrier	5	105	100	108	10.9	G	G	G	P	P

* Resistance rating: G - good; P - poor.

Detailed agronomic information may be found in the *Winter Wheat Production Manual* available from Winter Cereals Canada.

Triticale

Main characteristics of varieties

Variety	Years tested	Yield as % of Frank					Test wt. (kg/hl)	Maturity ⁺	Lodging	Resistance to*			
		Area 1	Area 2	Area 3	Area 4	Irr**				Stem rust	Leaf rust	Bunt	Root rot
Frank	14	100	100	100	100	100	70	M (105 days)	G	VG	VG	VG	F
AC Alta	7	100	100	101	---	109	68	L	G	VG	VG	VG	G
Banjo	11	93	96	98	97	100	68	L	G	VG	VG	VG	G
AC Certa	7	98	97	101	---	101	75	M	G	VG	VG	VG	G
AC Copia	9	97	95	95	99	100	73	M	G	VG	VG	VG	G
Pronghorn	7	96	99	102	---	108	69	E	G	VG	VG	VG	G
Sandro	4	94	98	94	---	---	73	E	G	VG	VG	VG	G
Wapiti ⁺⁺	14	97	102	97	90	106	67	L	G	VG	VG	VG	G

* Resistance ratings: VG = very good; G = good; F = fair; P = poor; VP = very poor.

** Relative yields under irrigation are based on limited data.

+ Relative maturity: VE = very early; E = early; M = medium; L = late; VL = very late.

++ This variety might not be described in 2000.

-- Limited data.

Additional Information

Triticale matures 2-3 days later than **AC Taber** wheat, therefore, should be seeded as early as possible. Triticale matures very late in Area 4. Test

weight of **AC Certa** is superior to other varieties. The seeding rate for triticale must be increased at least 30 percent to have the same number of plants per square foot as CWRS wheat.

Susceptibility to fusarium head blight is at least as great in triticale as in spring wheat. **Pika** is the only winter triticale and has winter hardiness equal to that of winter wheat.

Malting Barley

Main characteristics of varieties

Type & variety	Years tested	Rough or 2 or 6 row	Yield as % of Harrington				Relative maturity rating [†]	Straw††	Lodging	Resistance to**						
			Area 1	Area 2	Area 3	Area 4				Leaf spots		Loose smut	Other smuts	Root rot	Stem rust	
Two Row																
Harrington	17	2	R	100	100	100	100	M	N	F	VP	P	P	P	F	P
AC Oxbow	9	2	R	97	99	103	105	M	N	VG	F	P	VG	G	P	G
B 1215	7	2	R	103	105	108	110	L	N	G	VP	P	P	P	P	P
Manley	12	2	R	106	111	112	112	L	N	G	F	P	P	VG	F	G
AC Metcalfe [△]	6	2	R	104	108	110	114	M	N	G	F	P	VG	F	F	G
Stein	11	2	R	105	107	108	109	M	N	F	F	P	P	G	P	G
Six Row																
B1602	8	6	R	90	101	99	100	M	N	G	F	P	P	G	VG	G
Tankard	4	6	S	101	106	107	103	M	N	G	F	P	P	P	G	G
Excel	4	6	S	101	112	112	115	M	N	VG	F	P	P	G	G	G
Robust	4	6	S	91	104	104	109	M	N	G	F	P	P	F	G	G
Stander [△]	6	6	S	99	114	115	123	M	N	VG	F	P	P	P	G	G
Interim Registered																
Two Row																
CDC Lager	6	2	R	100	112	112	114	M	N	G	F	P	P	P	F	G
CDC Stratus	6	2	R	104	112	116	115	M	N	G	F	P	F	F	F	G
TR129	6	2	R	88	101	96	88	VE	SD	VG	F	G	F	F	F	G
TR139 [△]	6	2	R	107	112	113	121	M	N	G	F	VP	P	P	G	G
TR145 [△]	5	2	R	102	104	107	--	M	N	G	P	G	P	F	F	G
TR243	5	2	R	105	110	117	--	M	N	F	F	P	VG	VG	F	G
Merit [△]	4	2	R	109	118	129	--	L	N	F	F	P	P	G	F	G
Six Row																
CDC Sisler [△]	4	6	S	102	111	116	118	M	N	F	P	P	P	P	F	G
Foster [△]	6	6	S	103	111	114	112	M	N	VG	F	P	P	F	G	G
BT 435 [△]	4	6	S	101	105	115	115	M	N	G	F	P	P	P	F	G

* Relative maturity: The relative maturity of the check, Harrington is M (on average, 91 days from seeding to swathing ripeness). †† N = Normal; SD = Semidwarf. VE = very early; E = early; M = medium; L = late; VL = very late. ** Resistance ratings: VG = very good; G = good; F = fair; P = poor; VP = very poor. -- Limited data



AT TIME OF PRINTING:

Protected by Breeders' Rights: AC Metcalfe, CDC Sisler, Foster, Stander Applied for Protection: BT435, TR139, TR145, Merit

Lines under Interim Registration for Evaluation of 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 subsequently brewed. The beer is then given the ultimate test - a taste panel. This process will normally take a minimum of three years. A

crop grown in 1999 will be malted in January-February, 2000. It will be brewed in May-June, 2000, aged and tasted in October-November 2000. A crop grown in 2000 will be tasted in October-November, 2001.

To facilitate this testing, "Interim Registration" has been established as a special category. This registration is granted for up to three years. It allows seed increase and marketing in a normal manner but automatically expires if performance of the line is not satisfactory. If performance is satisfactory then a full registration is granted. Production of

the carload lots for evaluation is done by contract through the Canadian Wheat Board.

Additional Information

Six-rowed white aleurone malting varieties cannot be distinguished from feed varieties. Therefore, they should be grown under contract to ensure purity and eligibility for malting consideration.

Growers are reminded that the industry is cautious about using new varieties.

Growers are cautioned that malting varieties, especially two rows, are very susceptible to sprouting.

Rye

Main characteristics of varieties

Variety	Years tested	Yield as % of Musketeer				Maturity**	Resistance to*			
		Area 1	Area 2	Area 3	Area 4		Winter killing	Shattering	Lodging	Stem rust
Musketeer ⁺	22	100	100	100	100	M	VG	F	G	G
Dakota	3	--	117	--	--	L	VG	--	G	--
Prima	19	107	108	105	108	M	VG	F	F	G
AC Rifle	10	126	102	98	--	M	VG	VG	VG	G

* Resistance ratings: VG = very good; G = good; F = fair; P = poor; VP = very poor; + This variety might not be described in 2000.

** Relative maturity ratings: VE = very early; E = early; M = medium; L = late; VL = very late. -- Limited data.

Additional Information

Danko and **Kodiak** are very susceptible to winter killing in Saskatchewan; therefore, should be considered for

production using some form of conservation tillage. **AC Rifle** is a semi-dwarf. **Gazelle** and **ROGO** are the only registered varieties of spring rye.

ROGO has yielded 6% more grain than **Gazelle** in 11 site years of testing. Seed supplies of **ROGO** will be limited in 1999.

Feed and Food Barley

Main characteristics of varieties

Type & variety	Years tested	—Yield as % of Harrington—							Resistance to**								
		2 or 6 row	Rough or smooth awns	Area 1	Area 2	Area 3	Area 4	Relative maturity rating*	Straw††	Lodging	Leaf spots				Root rot	Stem rust	
											Net blotch	Scald	Loose smut	Other smuts			
Feed																	
Brier	8	6	S	112	115	115	118	M	N	F	G	F	P	VG	VP	G	
CDC Dolly	5	2	R	111	116	114	115	M	N	G	P	G	P	G	F	G	
CDC Fleet	6	2	R	92	100	95	100	E	N	VG	F	G	P	VP	P	G	
CDC Guardian	4	2	R	99	106	107	113	M	N	F	F	G	P	VG	P	G	
AC Harper [△]	6	6	S	107	107	114	117	M	N	G	F	G	P	F	F	G	
AC Lacombe [△]	8	6	S	103	112	113	117	M	N	G	F	F	P	VG	F	G	
AC Rosser [△]	6	6	S	110	118	124	129	M	N	G	F	VP	P	VG	G	G	
Hulless																	
AC Bacon	4	6	--	--	106	101	--	M	N	G	P	G	P	F	F	G	
CDC Freedom [△]	4	2	R	--	95	94	--	M	N	G	F	P	--	G	P	G	
Condor	7	2	R	85	83	82	79	M	N	G	P	P	P	F	F	G	
CDC Dawn	6	2	R	95	101	100	104	M	N	F	F	G	P	F	F	G	
Falcon [△]	6	6	S	74	88	85	90	M	SD	VG	F	G	P	F	F	G	
CDC Gainer	5	2	R	---	102	106	---	M	N	F	F	G	P	F	F	G	
AC Hawkeye [△]	6	6	S	88	101	103	107	M	N	F	F	G	P	F	G	P	
Phoenix [△]	6	2	R	82	94	94	94	M	N	G	P	P	P	F	G	P	
CDC Silky	6	6	--	85	101	99	101	M	SD	VG	F	G	P	F	G	G	
Tercel [△]	5	2	R	--	93	91	--	M	N	F	P	P	P	F	F	G	
Intensive Management																	
CDC Earl	6	6	R	101	111	110	113	L	SD	VG	G	G	P	G	G	G	
Kasota [△]	4	6	S	98	109	101	110	E	SD	G	F	G	P	G	P	G	
Mahigan [△]	4	6	S	--	108	107	--	E	SD	VG	F	G	P	G	P	G	
Stetson	5	6	S	---	106	---	---	L	SD	VG	F	G	P	G	F	?	
Tukwa	6	6	S	94	113	120	120	E	SD	G	G	G	P	VG	F	G	

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

VE = very early; E = early; M = medium; L = late; VL = very late

--- Limited data

** Resistance ratings: VG = very good; G = good; F = fair; P = poor; VP = very poor.

†† N = Normal; SD = Semidwarf



AT TIME OF PRINTING:

Protected by Breeders' Rights: AC Harper, AC Hawkeye, AC Lacombe, AC Rosser, Falcon, Kasota, Phoenix, HB803, Merlin

Applied for Protection: Mahigan, Tercel, CDC Freedom

Additional Information

Hulless

In hulless varieties the hull is left in the field, therefore, comparable yields are 10-15 percent lower. Hulless seed is more susceptible to damage than hulled seed, so handling should be minimized.

Hulless Waxy

CDC Candle, HB803[△] and Merlin[△] are waxy starch varieties for specialty markets. For further information contact the Prairie Pools.

Irrigation

Under irrigation, disease resistance,

straw strength and maturity are more critical.

Growers should select early, strong-strawed, disease resistant varieties and should consider semi-dwarf varieties.

General comments

A race of stem rust which attacks all of our previously resistant varieties has appeared in the eastern prairies and the northern great plains. It is not clear how persistent this race will be over time.

Early sowing is the only practical measure which can be taken at this time.

None of the current two-rowed varieties have good field resistance to all

types of net blotch. Therefore, growers who must plant barley on barley stubble should select six-rowed varieties which are more tolerant.

Most of the available varieties are susceptible to one or more types of smut. Therefore, seed should be treated 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 seeding or malting purposes.

Two-row barley varieties are generally more resistant to shattering than are six-row 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. Pollination is required to maximize yield. 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 some 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.

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 extremely limited.

Oat

Main characteristics of varieties

Variety	Years tested	— Yield as % of Calibre —				Test wt. (kg/hl)	% Hull	% Plump	Maturity rating*	Lodging	Resistance to**		
		Area 1	Area 2	Area 3	Area 4						Stem rust	Leaf rust	Smut
Calibre	17	100	100	100	100	50.0	22.9	44	M _(96 days)	G	VP	VP	P
AC Assiniboia [△]	7	94	98	98	97	47.9	22.9	74	M	VG	VG	VG	VG
CDC Boyer	8	100	103	101	101	47.2	22.6	81	E	G	VG	F	P
Derby	13	100	101	103	103	50.1	22.2	74	M	G	VP	VP	P
AC Juniper [△]	8	102	105	103	103	48.7	23.9	60	E	G	VP	VP	P
AC Medallion [△]	6	100	106	103	100	48.2	24.1	71	L	F	VG	VG	VG
AC Mustang	8	102	108	112	109	49.5	29.0	70	L	G	VP	VP	P
CDC Pacer	5	104	109	108	103	48.9	23.7	71	M	G	VP	VP	F
AC Preakness [△]	9	98	104	103	102	48.8	22.6	66	L	G	VG	F	VG
AC Rebel	4	100	105	104	101	48.8	23.1	67	L	G	VG	VP	VG
Triple Crown [△]	5	93	101	110	---	47.6	24.7	67	L	VG	VP	VG	P
AC Belmont [△] #	7	75	79	81	80	52.0	n/a	n/a	M	G	VG	F	VG

* Maturity rating: E = early; M = medium; L = late.

** Resistance ratings: VG = very good; G = good; F = fair; P = poor; VP = very poor.

Hulless variety



Progress through Research

AT TIME OF PRINTING:

Protected by Breeders Rights: AC Assiniboia, AC Belmont, AC Juniper[△], AC Preakness, Triple Crown

Applied for Protection: AC Medallion

Additional Information

AC Assiniboia has brown hulls. While not as leaf rust resistant as AC Assiniboia, AC Medallion or Triple Crown, CDC Boyer may be considered for the

oat rust area of southeast Saskatchewan, but should be planted early to avoid late disease infection. All other varieties are susceptible to oat rusts and may be at risk if grown in the oat-rust area.

HULLESS OAT: 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.

Other Crops

Canary Seed

The seed of annual canarygrass, more commonly called canary seed, is used as food for caged and wild birds. Three registered varieties are available. **Elias** and **Keet** are similar in yield, but **Keet** is earlier maturing and more resistant to lodging. A new hairless variety, **CDC Maria**, is available for 1998. Seeds and plants of **CDC Maria** do not have the small sharp hairs that cause irritation when canary seed is threshed and handled. The maturity requirements are equal to wheat. Canary seed plants have a dense shallow root system and thus growing the crop on sandy soils is not recommended. Summerfallow is generally used, but canary seed may be grown successfully on stubble, providing adequate moisture is available for rapid germination and emergence.

Sow at the same optimum date as spring wheat at 34 kg/ha (30 lb/a) (germination greater than 85 percent). Early seeding may lower yields in some cases. Plant the seed 3.5 to 5 cm deep into a firm seedbed.

Fertilizer requirements are similar to those for cereal crops.

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 August and may require an insecticide application to prevent yield loss. Information from the United States indicates that infestations of 10-20 aphids per stem may cause enough damage to warrant insecticide application. The aphids often hide in the dense head of canary seed. Damage may occur at populations below these levels; data do not exist to support the suggested action threshold.

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 should not be seeded on land that was treated with trifluralin or ethalfluralin the previous year.

Canary seed is resistant to shattering. It may be straight-combined or swathed when fully matured.

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 shallow but into a firm moist seedbed at about 30 kg/ha (27 lbs/A). **Saffire** has moderate resistance to *Sclerotinia* head rot and *Alternaria* leaf spot. Contract production is advisable.

AC Stirling has acceptable birdseed quality and higher oil content compared to **Saffire**. **AC Sunset** has the earliness of **Saffire** combined with higher oil content and resistance to *Sclerotinia* head rot.

Oilseed Crops

Argentine Canola

Main characteristics of varieties

Variety	Yield as a % of AC Excel (years in test)			Average % Oil	Average maturity in days	Resistance to*	
	Area 2	Area 3	Area 4			Lodging	Blackleg**
AC Excel (check)	100 (11)	100 (11)	100 (11)	45.8	98	G	F
AC Tristar (TT)	75 (4)	79 (4)	67 (4)	43.8	97	P	VP
220	118 (3)	117 (3)	—	45.9	99	VG	G
44A89△	—	—	—	45.3	95	G	G
45A51 (RR)△	—	—	—	45.9	103	F	F
45A71 (SM)△	113 (3)	107 (3)	108 (3)	45.4	98	F	F
46A05△	—	—	—	45.7	98	F	F
46A65△	113 (3)	115 (4)	123 (3)	46.6	98	F	VG
46A72 (SM)△	108 (3)	105 (3)	—	45.8	99	G	F
46A73 (SM)△	—	—	—	45.2	101	G	G
46A74 (SM)△	—	—	—	45.0	100	G	G
AC-H102	—	—	—	45.6	99	G	G
Agassiz	—	—	—	—	103	VG	F
Battleford△	—	109 (3)	111 (3)	45.9	98	G	G
BEACON	—	103 (3)	—	45.8	97	G	G
BRIGADE	—	—	—	45.5	99	VG	G
CHALLENGER	—	115 (3)	—	45.0	99	G	G
CLAVET△	106 (4)	107 (4)	—	45.5	98	F	G
CORONET	—	—	—	45.8	99	F	G
Crusher△	—	—	—	46.7	101	VG	F
Delta	108 (8)	111 (9)	117 (7)	44.2	99	G	F
EAGLE△	—	114 (3)	—	45.7	97	G	G
Ebony△	—	—	—	46.5	100	VG	G
Exceed (LL)	—	—	105 (3)	48.2	99	F	F
Garrison△	—	—	—	45.1	100	VG	G
Goliath△	104 (4)	98 (4)	—	47.5	98	G	F
Hudson△	117 (3)	116 (3)	—	45.6	96	G	G
Hyola 401	102 (3)	121 (3)	107 (3)	44.1	98	G	P
IMPULSE△	108 (3)	121 (4)	112 (3)	45.4	100	G	VG
Independence (LL)△	—	—	—	45.7	96	F	F
Innovator (LL)△	102 (3)	97 (3)	93 (3)	45.4	96	F	F
Jewel△	—	—	—	45.5	97	P	G
Legacy△	—	117 (3)	112 (3)	45.1	98	G	F
LG3220△	110 (3)	104 (3)	—	45.1	96	VG	G
LG3260	106 (3)	106 (3)	—	47.8	96	F	P
LG3295 (RR)△	—	—	—	44.3	96	G	F/G
LG3310△	99 (3)	110 (3)	—	46.0	99	G	VG
LG3333△	—	113 (3)	104 (3)	47.7	99	G	G
LG3430△	104 (3)	111 (3)	—	45.8	100	G	VG
OAC DYNAMITE△	—	114 (3)	—	45.6	97	G	VG
OAC Springfield	100 (3)	110 (3)	—	45.8	95	VP	P
Option 500	109 (3)	112 (3)	—	46.8	99	F	G
Hyper Star 100	—	—	—	46.0	100	VG	F
Q2	—	—	—	45.0	97	G	VG
Quantum△	107 (3)	124 (3)	111 (3)	44.3	98	G	VG
Quest (RR)△	111 (4)	106 (4)	—	46.3	98	G	F
Sentry	97 (5)	101 (5)	—	44.5	98	G	VG
Seville	—	—	—	45.0	101	G	F
Sprint△	97 (5)	97 (5)	97 (3)	44.8	94	G	G
SW ARROW (RR)△	106 (3)	108 (4)	—	44.3	97	F	F
Trailblazer△	109 (3)	111 (3)	—	46.5	100	G	G
Vanguard	105 (5)	99 (5)	91 (5)	45.2	99	F	F
WILDCAT△	—	119 (3)	115 (3)	45.7	97	VG	—

* Resistance ratings: VG-very good; G-good; F-fair; P- poor; VP- very poor.

** A minimum of 3 years between canola crops (4 year rotation) is essential to reduce the incidence of blackleg.

— Insufficient data.

Herbicide tolerant varieties identified as: LL (Liberty Link), RR (Roundup Ready), SM (Smart Canola); TT (Triazine tolerant)



AT TIME OF PRINTING:

Protected by Breeders' Rights: 44A89, 46A05, 46A65, 45A71, 46A72, LG3220, LG3295, LG3310, LG333, LG3430, OAC DYNAMITE, Crusher, Ebony, Garrison, Jewel, Legacy, Quantum, Sprint, Independence, Innovator, Quest, Trailblazer

Applied for Protection: 45A51, 46A73, 46A74, Battleford, CLAVET, EAGLE, Goliath, Hudson, IMPULSE, SW ARROW, WILDCAT

Polish Canola

Main characteristics of varieties

Variety	Yield as a % of AC Parkland (years in test)			Average % Oil	Average maturity in days	Resistance to*	
	Area 2	Area 3	Area 4			Lodging	White rust
AC Parkland (check)	100 (12)	100 (12)	100 (12)	44.2	84	G	VG
1000 SP	102 (3)	98 (4)	—	44.4	83	F	G
1007 Δ	104 (3)	106 (3)	—	44.5	85	VG	G
41P04	—	—	—	43.4	85	G	G
41P55	103 (3)	107 (3)	—	42.9	84	F	F
41P95 Δ	102 (3)	107 (3)	—	44.1	84	G	VG
AC Boreal	99 (5)	97 (5)	100 (4)	45.1	83	F	VG
AC Sunbeam	104 (5)	105 (5)	101 (4)	43.5	83	G	VG
AC Sunshine	102 (4)	108 (4)	97 (3)	44.2	84	F	VG
Cash	97 (3)	109 (3)	110 (3)	43.9	84	G	F
CHINOOK Δ	99 (4)	103 (4)	108 (3)	43.4	84	G	F
Eclipse	100 (7)	93 (6)	89 (5)	43.9	84	G	F
FAIRVIEW	104 (3)	107 (3)	—	44.3	84	G	G
Foothills Δ	105 (3)	100 (3)	—	43.5	84	G	VG
Goldrush Δ	112 (4)	103 (4)	98 (4)	42.6	85	G	G
Horizon	106 (6)	102 (7)	98 (6)	43.4	84	G	VP
Hysyn 100	107 (3)	108 (3)	111 (3)	43.6	85	G	F
Hysyn 110	109 (5)	108 (5)	121 (5)	42.9	84	G	F
Hysyn 111	103 (3)	107 (4)	—	42.8	85	G	G
Hysyn 120 CS	—	103 (3)	—	44.0	84	G	G
MAVERICK	103 (3)	110 (3)	—	44.8	83	G	F
NORWESTER	105 (4)	109 (4)	109 (3)	43.3	85	G	G
Reward	104 (8)	103 (8)	100 (6)	44.4	84	F	VG
Spectrum Δ	—	—	—	43.6	85	VG	VG
WESTWIN	105 (3)	109 (3)	106 (3)	44.6	84	G	G
ZSC4042	—	—	—	43.8	84	VG	G

* Resistance ratings: VG-very good; G-good; F-fair; P-poor; VP-very poor.
Use of capital letters in variety names is as they were registered.
— Insufficient data.



AT TIME OF PRINTING:

Protected by Breeders' Rights: CHINOOK, Goldrush

Applied for Protection: 1007, 41P95, Foothills, Spectrum

Argentine canola

Argentine varieties yield about 20 percent more than Polish varieties, mature 10 to 14 days later than Polish varieties, and are therefore better suited to the longer season growing areas of Saskatchewan.

Argentine varieties are black seeded and have very good (VG) resistance to white rust (staghead).

Blackleg disease, which is now wide spread in Saskatchewan, can cause severe yield losses in varieties that have poor resistance.

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. Late maturing varieties should therefore be planted early to reduce green seed counts. All Argentine varieties are susceptible to Sclerotinia stem rot. Some new varieties may be missing from the table (i.e. 2153, 2163 and 3880) because they were not

tested in the Saskatchewan Regional trials.

Polish canola

Polish varieties are yellow brown seeded and mature approximately two weeks earlier than Argentine varieties.

All varieties are susceptible to Sclerotinia stem rot and blackleg.

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.

Polish canola varieties are less likely to produce green seed owing to their early maturity, and may yield more than Argentine varieties under drought conditions or early fall frost.

Polish varieties are more shatter resistant than Argentine varieties and are therefore well suited to straight combining. Performance data may be different than in previous years, because entries are compared to AC Parkland, rather than Tobin.

Herbicide Tolerant (HT) Canola

HT varieties should be considered when severe weed infestations are expected.

Specialty oil

High erucic acid is needed for special industrial oil markets.

Argentine type, high erucic acid varieties have been developed for these markets. These varieties are typically lower yielding than standard canola varieties but have very good blackleg and lodging resistance. Low linolenic acid Argentine type canola varieties have been developed. The oil is used as a premium vegetable oil for human consumption. Information on the contract production of these specialty oil rapeseed and canola varieties should be obtained from companies that contract such production.

Irrigation

Argentine varieties respond well to irrigation. Only varieties that are highly resistant to lodging and blackleg should be grown under these conditions. Irrigation may delay maturity by one week or more under certain conditions.

Sunflower (Oilseed)

Main characteristics of varieties

Type and Variety	Years tested	Yield as % of IS 6111	Average maturity in days	Oil %
IS 6111	8	100	121	46.5
SF 128	6	99	124	44.9
SF 187	9	97	125	42.8
SF 270	8	106	121	47.6
6230	8	96	122	46.6
XF 361	3	113	123	48.5
IS 5077	3	109	122	47.9
IS 5757	3	119	121	50.3

EMSS	Years tested	Yield as % of P6150	Average maturity in days	Oil %
P6150	6	2125 kg/ha	115	46.2

Additional Information

Sunflower requires 120-125 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) variety **P6150** is adapted to production in most areas of Saskatchewan.

Additional Information

Mustard is grown in the drier regions of Saskatchewan because of the better seed quality obtained under these conditions. Oriental and Brown mustards are usually swathed, but straight combining is also possible. Yellow mustard should be straight combined because of possible losses due to wind damage in the swath. Any mixtures of rapeseed or canola in mustard, due to volunteer plants in the field, or to improper handling on the farm, cause substantial losses through grade reductions. All mustard varieties have very good resistance to blackleg. **AC Vulcan** and **Cutlass** are resistant to white rust (staghead), while **Forge** and commercial **Brown** are highly susceptible.

Yellow mustard varieties are large seeded, and the seed is light yellow in color. The yield of yellow mustard is approximately 30 percent less than that of Oriental mustard. Differences in seed yield between these two

Mustard

Main characteristics of varieties

Type & Variety	Yield as % of Cutlass	Average maturity in days
Oriental		
Cutlass	100	93
Forge	100	95
Lethbridge 22A	88	94
AC Vulcan	103	94
Brown commercial	90	95

	Yield as % of Ochre	Average maturity in days
Yellow		
Ochre	100	94
AC Base	105	94
AC Pennant	106	95
Gisilba	97	95
Tilney	99	95
Viscount [®]	98	96

	Yield as % of Ochre	Average maturity in days
Yellow		
Ochre	100	94
AC Base	105	94
AC Pennant	106	95
Gisilba	97	95
Tilney	99	95
Viscount [®]	98	96

species is normally compensated for by price. Mustard is normally grown under contract production.



AT TIME OF PRINTING:
Applied for Protection: Viscount

Flax

Main characteristics of varieties

Type & Variety	Years tested	Yield as % of Vimy				lrr	Maturity ¹	Seed size ²	Resistance to Lodging ³
		Area 1	Area 2	Area 3	Area 4				
Vimy	13	100	100	100	100	100	M	L	P
CDC Arras	4	105	112	104	--	118	M	L	F
CDC Bethune [Ⓢ]	4	109	118	112	--	127	M	M	G
AC Emerson	5	96	97	94	91	98	M	L	F
Flanders	10	93	97	96	97	109	L	S	G
AC Linora	8	84	91	95	93	102	L	M	G
AC McDuff [Ⓢ]	6	92	94	95	93	102	VL	M	VG
NorLin	17	91	96	96	99	105	M	M	G
CDC Normandy	4	94	99	100	102	108	M	M	F
Somme	10	94	97	98	97	109	M	M	F
CDC Triffid	4	88	97	92	--	115	M	M	G
CDC Valour [Ⓢ]	5	99	106	100	--	112	E	M	G
AC Watson [Ⓢ]	5	91	97	101	--	123	M	M	G
Solin									
Linola [™] 989 [Ⓢ]	4	94	92	94	97	96	L	M	G

-- Limited data.

- 1) Relative Maturity: The relative maturity of the check, Vimy, is M (on average 103 days from seeding to swathing ripeness). VE-very early; E-early; M-medium; L-late; VL-very late.
- 2) Seed size: S-small; M-medium; L-large.
- 3) Resistance ratings: VG-very good; G-good; F-fair; P-poor; VP-very poor.



AT TIME OF PRINTING:
Protected by Breeders' Rights: AC McDuff, Linola[™]989.
Applied for Protection: AC Watson, CDC Valour, CDC Bethune.

Additional Information

All varieties are resistant to rust and moderately resistant to Fusarium wilt.

CDC Arras and **CDC Bethune** are newly registered varieties and no seed will be available in 1999.

CDC Triffid is a genetically engi-

neered variety tolerant to soil residues of sulfonylurea herbicides. Seed of **CDC Triffid** will not be available in 1999.

Solin is defined as a type of flax with less than 5% linolenic acid in its oil and having a yellow seed coat. Solin varieties produce a food quality oil and, as such,

cannot be sold in traditional flax markets. **Linola[™] 989** is available only for contract production.

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.

Pulse Crops

Lentil

Main characteristics of varieties

Variety	Years tested*	Yield as % of Laird	Height (cm)	Days to first flower	Relative maturity rating**	—Resistance to***—		Seed size	Seeding rates+ kg/ha (lb/a)
						Ascochyta blight	Anthraco-nose		
Laird	20	100	41	53	VL	VP	VP	large	90-100 (80-90)
CDC Glamis	3	105	39	54	VL	VG	VP	large	90-100 (80-90)
Eston	18	117	30	48	E	VP	VP	small	45-50 (40-45)
CDC Milestone	3	132	31	49	E	VG	VP	small	45-50 (40-45)
CDC Richlea	8	117	35	50	M	VP	VP	medium	60-70 (53-62)
CDC Vantage	3	122	33	49	M	VG	VP	medium	60-70 (53-62)
CDC Redwing**	5	109	30	50	E	VG	VP	small	45-50 (40-45)

* Co-op and Regional Trials - minimum of 28 comparisons with Laird over 3 years for all varieties.

** Relative maturity ratings: E - early; M - medium; VL - very late.

*** Resistance ratings: VG - very good; G - good; F - fair; P - poor; VP - very poor.

+ Equivalent to 12 seeds/sq. foot (=132 seeds/sq. m) ++ Red cotyledons, other varieties have yellow cotyledons.

Additional Information

Indianhead lentil is a black-seeded variety released for green manure use.

CDC Matador is a brown-seeded variety with yellow cotyledons.

Detailed agronomic information may

be found in the *Pulse Production Manual* available from the Saskatchewan Pulse Growers.

Dry Bean

Main characteristics of varieties

Variety	Type	Years tested*	—Yield as % of Othello—			Days to flower	Maturity rating**	Pod clearance (%)	Seed weight (g/1000)	Growth habit+
			Irrigation	Area 2	Area 3					
Othello	pinto	7	100	100	100	52	L	51	323	III
92235	pinto	5	96	109	113	53	L	67	352	III
92802	pinto	4	86	--	--	47	E	64	357	III
AC Burrito	pinto	5	95	103	99	53	M	64	307	II
CDC Camino	pinto	5	87	86	95	52	L	81	323	I
Earliray	pinto	5	73	90	90	50	E	65	349	I
Fargo	pinto	5	98	95	105	50	M	53	341	III
92074	great northern	5	103	99	103	52	L	69	365	I
CDC Nordic	great northern	5	72	80	86	52	L	62	319	I
US 1140	great northern	4	99	101	99	51	L	53	289	III
CDC Espresso	black	5	58	82	89	47	M	87	191	I
CDC Nighthawk	black	5	66	69	75	58	L	77	165	II
UI906	black	5	81	97	79	60	L	76	148	II
AC Skipper	navy	5	68	69	80	54	L	77	206	I
GTS 523	navy	5	71	90	87	51	M	75	147	I

* Co-op and regional trials -- insufficient data - less than 6 total sites. ** Maturity ratings: L-late; M - medium; E - early.

+ Growth habit: I - determinate bush; II - indeterminate bush; III - indeterminate vine.

Additional Information

Dry bean can be grown under irrigation in Saskatchewan in regions with a warm, long growing season (110 days from seeding after May 20). On dryland, yields are generally lower but maturity is usually earlier. Dry bean crops on dryland do best in the longer season black soil zones and greatly benefit from rainfall in late July/early August. In Dark Brown soils (Area 2), the crop may do better on fallow in dry cycles. Early maturity is more critical in Area 3 where cooler weather may create quality problems due to fall frost damage. Data for yield, flowering, maturity, pod clearance and seed weight are based on direct comparisons with the check variety **Othello**. Varieties with high rat-

ings for pod clearance (% of pods completely clearing the cutterbar at harvest) are easier to swath or direct harvest. Navy beans are more susceptible to cold soil injury. All beans are purchased on the basis of appearance, damage, and in many cases, cooking quality. Seed stocks of **CDC Camino**, **CDC Nordic**, **92802**, **92235**, and **92074** will be limited in spring of 1999.

The crop does not tolerate frost, flooding or salt-affected soils. Seed in late May when soil temperature at seeding depth is 15° C or higher. Seed at a rate of 80-100 kg/ha (70-100 lb/a) for pinto bean and 25% less for black and navy beans. Plant seed 6 cm deep in a firm, moist seedbed. Minimize seed damage by using a hoe or press drill with a meter-

ing mechanism suitable for large seeds.

The plants are short and pods may hang to ground level, especially some pinto and great northern varieties. The field should be smooth, level and rock-free to facilitate swathing or direct harvesting with a flex header equipped with an air reel. Field rolling must be done within 4 days of seeding. Row crop production (22 or 30-inch spacing) requires an undercutter and a windrower for harvest. Seed should be free of bacterial diseases such as halo blight or common blight. Colour, size and condition of seeds are important quality characteristics affecting marketability. For more details on production consult the *Pulse Production Manual* published by Saskatchewan Pulse Growers.

Field Pea

Main characteristics of varieties

Type & Variety	Years tested*	Yield as % of GRANDE			Relative maturity**	Vine length (cm)	Resistance to+					Seed weight (g/1000)
		Areas 1, 2 & South 3	Areas 4 & North 3	Irrigation			Ascochyta blight	Powdery mildew	Seed coat breakage	Lodging	Bleaching	
Food Type Yellow-Seeded												
GRANDE (N)△	7	100	100	100	L	90	P	P	P	F		260
AC Melfort	3	114	106	--	M	70	P	VG	P	P		280
Alfetta△	5	107	110	107	M	72	P	P	P	F		290
Anno	4	73	85	115	E	63	P	P	P	F		250
Baccara△	3	112	115	--	E	65	P	P	P	F		300
CANIS△	5	98	102	--	E	80	P	P	P	F		270
Carneval△	7	95	93	114	E	72	F	P	P	G		250
Carrera△	6	106	108	115	E	55	VP	VP	P	P		270
CDC Winfield (N)	5	101	98	NR	M	62	VP	VP	P	F		260
Cresta	3	113	117	--	E	70	P	P	P	F		290
CROMA△	3	108	114	--	E	70	P	P	F	F		310
Delta△	4	108	108	--	E	72	P	P	F	F		270
Eiffel△	5	100	111	--	E	67	VP	VP	P	F		290
Exchequer△	4	94	101	--	E	73	P	P	P	F		220
Highlight△	5	90	92	104	E	66	P	VG	P	F		210
Mandy	4	94	103	103	M	57	VP	VP	P	F		270
Miami△	4	109	113	--	E	80	P	P	P	F		270
Montana△	6	89	96	106	E	55	P	P	G	P		300
MUSTANG	4	94	86	105	E	60	P	P	F	P		210
Nicole	3	115	119	--	M	65	P	P	P	F		290
PROFI△	5	96	94	102	E	72	P	P	P	F		270
Scorpio (N)	4	83	75	94	E	56	P	P	P	P		280
TENOR△	5	101	107	108	E	72	VP	VP	P	F		260
Trapper (N)	7	79	80	--	L	95	P	P	P	P		140
Victoria (N)	7	86	85	--	M	84	P	P	P	P		190
YORKTON (N)	4	98	97	97	M	72	P	P	P	F		270
Food Type Green-Seeded												
Adagio	3	98	95	--	M	70	P	P	P	F	F	270
Ascona	4	81	71	124	M	50	P	P	P	F	P	300
Astuce	3	89	97	--	E	65	P	VP	P	F	P	290
CDC Peko (N)	5	88	81	NR	L	65	F	P	F	P	F	220
CPB PHANTOM	5	94	78	101	M	48	P	P	P	F	P	310
Clipper (N)△	4	96	82	100	M	59	P	P	P	F	F	300
Danto	4	73	56	100	M	52	P	P	F	F	F	290
Espace△	4	103	111	--	M	75	P	P	P	F	F	250
Explorer△	5	91	98	--	M	81	F	P	F	P	G	260
Keoma	6	90	86	100	M	53	P	P	P	F	G	240
MAJORET △	5	84	82	109	M	59	P	P	F	G	F	250
Millenium△	4	113	109	--	E	65	P	VP	P	F	F	280
Obelisque	4	100	98	--	E	62	VP	VP	P	F	F	310
Olivin (N)△	4	93	101	95	M	64	VP	VP	F	P	F	270
Pekisko△	4	89	91	--	VE	75	VP	VP	F	F	F	210
Princess (N)	5	77	60	91	E	58	P	P	G	P	G	200
Radley	6	77	75	91	M	57	F	P	F	F	G	210
Scuba△	4	88	96	--	E	80	P	P	P	F	F	260
TOTEM (N)	4	94	84	93	M	47	P	P	P	F	F	240
Coloured flower types												
CDC April	4	88	77	--	L	53	F	P	G	F		140
CDC Vienna	5	92	89	--	L	61	F	P	G	F		170
Sirius (N)	3	76	75	--	M	96	P	P	G	P		240
Whero (N)	3	64	63	--	L	110	P	P	G	P		210

* Co-op and regional trials in Saskatchewan.

** Relative maturing ratings compared to Grande: VE-very early; E-early; M-medium; L-late

+ Relative disease ratings, seed coat breakage ratings, lodging ratings and bleaching ratings (for green-seeded types); VG-very good; G-good; F-fair; P-poor; VP-very poor

-- Insufficient data available - less than 6 sites over 3 years.

NR Not recommended.

(N) Indicates variety with normal leaf type - all others are semi-leafless



Progress through Research

AT TIME OF PRINTING:

Protected by Breeders' Rights: Alfetta, Carneval, Carrera, Delta, GRANDE, Highlight, MAJORET, Montana, Pekisko

Applied for Protection: Baccara, CANIS, Clipper, CROMA, Eiffel, Espace, Exchequer, Explorer, Miami, Millenium, Olivin, PROFi, Scuba, Tenor

Additional Information

Field pea is best adapted to all areas of Saskatchewan. Production in the Dark Brown and Brown soil zones is more reliable if moisture is not limiting and the crop is seeded early. Early seeding will usually result in late August maturity and increase the likelihood of harvesting high quality seed. Seed splitting can be reduced by harvesting tough and drying in an aeration bin. The recommended seeding rate for **Grande** is 170 kg/ha (150 lb/ac). Other varieties should be sown at seeding rates in proportion to seed weight. Choose varieties based on expectations for food or feed markets.

Under dry conditions, short vine types (< 80 cm) and semi-leafless varieties may provide poor weed competition and may be difficult to harvest. On the other hand, the semi-leafless characteristic may facilitate harvest, as vines do not lay as flat on the ground if a good stand is achieved. Lodging in field pea can be caused by thin stands, early development of foliar and stem diseases such as ascochyta blight in the lower canopy, and strong winds and pounding rain prior to harvest. Long vine varieties are prone to early lodging.

Green-seeded varieties are often lower-yielding than yellow-seeded varieties.

Many green varieties will bleach if moist conditions before harvest are followed by warm sunny weather. Varieties differ in resistance to seed coat damage during threshing and cleaning. Damaged and uncleaned seed of all varieties is considered low quality and is only suitable for the feed market. If the target market is feed, select varieties with small seed size and high yield potential. If the target market is food, marketability will be affected by seed size, seed shape and seed colour. These qualities can be discussed in more detail with food pea marketers prior to seeding.

Certified seed of **AC Melfort**, **Adagio**, **Astuze**, **Baccara**, **Cresta**, **Croma**, **Delta**, **Miami**, **Millenium**, **Nicole**, **Pekisko**, and **Scuba** and some other recently registered varieties will not be available in large quantities for 1999 planting. **Promar** is a green-seeded marrowfat variety sold in specialty food pea markets. **Whero** is a late-maturing long vine yellow-seeded, maple type (brown marbled seed coat) sold in specialty birdfeed markets. **Promar** and **Whero** yield about 60% of **GRANDE**.

Provided that adequate moisture is available, the field pea, like other legumes, offers considerable benefit when grown in rotation with other crops. Proper seed inoculation results in nitrogen fixation and can reduce input costs by

supplying most of the nitrogen required by a productive pea crop. In addition, succeeding crops require less nitrogen fertilizer to attain high yields. See seed inoculation section. For detailed information consult the *Pulse Production Manual* published by Saskatchewan Pulse Growers.

BLEACHING DATA were recorded for green-seeded varieties from 10 dryland sites in 1998. Tolerance to bleaching from best to worst was **Keoma** = **Explorer** > **Espace** > **Adagio** > **Scuba** > **Millenium** > **Pekisko** > **DP138694** > **Astuze**. GREEN SEEDCOAT RATINGS (percentage) were recorded for yellow-seeded varieties from 10 dryland sites in 1998. Ratings from high to low for percentage of seeds with greenish seed coat were **GRANDE** > **Miami** > **Baccara** > **Nicole** > **Delta** > **Cresta** > **AC Melfort** > **CROMA**. Data for PERCENT SEED DIMPLING were recorded in 1998. For yellows, dimpling percentage was low (0-5%) for **Grande**, **CROMA**, **Cresta**, **Miami**, **AC Melfort** and **Nicole**; intermediate (6-20%) for **Baccara** and **Delta**. For greens, dimpling percentage was low (0-5%) for **DP 136894** and **Pekisko**; intermediate (6-20%) for **Keoma**, **Adagio**, **Espace**, **Explorer**, **Millenium** and **Scuba**; high (over 20%) for **Astuze**.

Chickpea

Main characteristics of varieties

Variety	Type	Years tested	Yield as % Sanford		Ascochyta blight resistance*	Height (cm)	Days to flower	Days to maturity**	Seed weight (g/1000)	Leaf type
			Brown soil zone	Dark brown soil zone						
Sanford	kabuli	4	100	100	VG	49	56	L	425	unifoliolate
Dwellely	kabuli	3	86	88	VG	45	57	VL	490	unifoliolate
B-90	kabuli	3	118	121	VG	46	55	M	265	fern
CDC Yuma	kabuli	3	115	106	VG	45	53	M	410	fern
CDC Xena	kabuli	2	--	--	VG	44	52	M	470	unifoliolate
CDC Chico	kabuli	3	129	137	VG	44	51	E	265	fern
Myles	desi	3	113	126	VG	41	50	E	200	fern

* Disease ratings: VG - very good.

** Maturity ratings: E - early; M - medium; L - late; VL - very late. Maturity will be delayed in areas with a cool moist August.

-- Insufficient data (less than six sites over three years in regional testing).

Additional Information

Chickpea is best adapted to stubble production in the Brown and Dark Brown soil zones. **Ascochyta blight** can **COMPLETELY DESTROY** the crop. The varieties listed are resistant to ascochyta - **all others are susceptible to ascochyta blight and are high risk for complete crop failure**. **B-90** is a small-sized kabuli with round seed shape. **Myles** is a small-seeded desi (brown seed coat) variety. Seed supplies for **CDC Yuma**, **CDC Xena** and **CDC Chico** will be limited in spring 1999.

Chickpea will tolerate light frosts in the spring. Desi types can be seeded in late April or early May. Kabuli types should be seeded between May 10 and May 20 into a warm seedbed, preferably 10°C or more. This means that kabuli types are often later maturing. Kabuli types require a seed-feeding mechanism capable of handling large seeds. The large kabuli types are highly susceptible to seed damage and should be handled gently at all times. Seed treatment for root rot diseases and ascochyta is highly recom-

mended for kabuli types. Plant 6 cm deep. Seeding rates are 90-110 kg/ha (80-100 lb/A) for desi and 160 kg/ha (140 lb/A) for kabuli. Desi types are generally earlier maturing and higher yielding compared to the currently available kabuli types.

The crop stands well and can be swathed or straight cut at maturity. Thresh kabuli types gently to avoid splitting damage. For more details on production consult the *Pulse Production Manual* published by the Saskatchewan Pulse Growers.

Additional Information

Faba bean should be seeded early (late April to early May). It is best adapted to irrigated areas in the Dark Brown Soil Zone and that portion of the Black Soil Zone with the longest growing season.

Seed supplies of CDC Blitz, Scirocco and Cresta are limited.

Faba bean is a legume and thus is able to use nitrogen from the air provided the seed is inoculated with the proper bacteria prior to planting. Faba bean

Faba Bean

Main characteristics of varieties

Variety	Years tested	—Yield as % of Outlook—		Maturity in days	Average seed size
		(Northeast) Dryland	(South-central) Irrigated		
Outlook	15	100	100	109	360
Aladin	15	104	110	112	400
CDC Blitz	6	101	105	109	410
CDC Fatima	8	100	104	105	520
Cresta	3	92	101	105	630
Orion	6	95	94	103	350
Scirocco	3	96	110	107	550

requires a special strain of inoculum

which is different from other pulse crops.

Seed Facts

Pedigreed Seed

Use certified seed regularly, and especially when changing to a different variety. This assures that the seed has high genetic purity, high germination and is relatively free from weeds and other crop seeds. Some pedigreed seed may be paid for by an over-quota delivery of commercial grain. Ask your elevator agent or seed dealer for details.

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 percent 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 will also occur.

Seed Cleaning

Seed should be carefully cleaned to remove weed seeds, trash, small or broken kernels, ergot and sclerotia. **Country grain elevators are not equipped to clean grain to seed standards and the risk of mixing varieties and types of grain is very high.**

Seed Treatment

Use of seed from cereal crops infected with Fusarium head blight may result in poor emergence and is not recommended. Such seed should be treated with a fungicide containing carbathiin (e.g. Vitaflo) before planting.

Smuts that attack wheat, barley, oat and rye can be controlled by chemical seed treatments. If bunt or smut was observed in a crop which is being used for seed, the seed should be treated. **If the presence of smut is uncertain, then varieties rated VERY POOR should be treated every year, POOR every second year and FAIR every third year.**

Only systemic fungicides will control true loose smut of barley, and wheat and

stem smut of rye because the pathogens are present within the seed. The other types of smut (covered, false loose, oat, and bunt) are carried on the outside of the seed and may be treated with non-systemic seed treatments containing maneb or formaldehyde. However, use of formaldehyde may reduce seed germination.

The virulent form of blackleg is widespread on canola in Saskatchewan. Treatment of seed with a recommended fungicide can reduce the risk of disease and the risk of introducing the disease into unaffected areas. Growers with carryover stocks of treated seed should have these tested for germination.

Coating of canola with the appropriate seed dressing is a convenient alternative to on-farm seed treatment.

Various fungicides have been registered for the control of seedling disease. Flax, canola, rye and winter wheat seed should be treated to promote good seedling growth.

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

Seed-borne diseases of pulses

Lentil and chickpea growers should only plant seed that has been tested for seed-borne ascochyta disease and avoid planting next to the previous year's pulse residue. Consult the *Pulse Production Manual* (Saskatchewan Pulse Growers) for details of seed infection tolerances and seed treatment.

Read the label carefully before using any seed treatment or insecticide. Information on their use and recommended rates are found in the provincial publication Crop Protection Guide 1999. Treated seed must not be delivered to an elevator or used for feed.

Ergot

Ergot attacks all varieties of rye, triticale,

wheat and barley, as well as most common species of grass. Oat is rarely attacked and all broadleaved species are immune. Grain containing 0.1% ergot is considered poisonous and should not be used as food. Details of this disease are found in *Ergot of Grains and Grasses*, Publ. 1438.

Seed Inoculation

Legume crops obtain much of their nitrogen (N) requirement from the atmosphere 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 immediately prior to seeding with the proper strain of bacteria specific to that crop. For further details please refer to the *Inoculation of Pulse Crops* publication.

Damp and Frozen Seed

Seed which is stored damp or tough may be low in germination. Grain which is being saved for seed should be dried if necessary, soon after harvest. Drying temperature should be kept below 37°C for batchdriers, or 43°C for recirculating and continuous driers. Frozen grain should never be sown without a laboratory germination test. Such grain will frequently produce a high percentage of abnormal seedlings.

Production Notes

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 *Orange Wheat Blossom Midge* publication.

Residue of infected crops may harbor disease agents. Seeding into stubble of the same crop kind will increase disease risk, particularly in the higher rainfall areas.

Breeding Institutions and Seed Distributors of Varieties Listed in this Publication

Crop kind, Class & Variety	Breeding Institution	Distributor	Crop kind, Class & Variety	Breeding Institution	Distributor
Wheat			Sandro	Swiss Fed Ag Res	Newfield Seeds
Bread Wheat			Wapiti	CIMMYT; Alta Ag	SeCan Members
AC Abbey	AAFC (Swift Current)	Canterra Seeds	Barley		
AC Barrie	AAFC (Swift Current)	SeCan Members	Malting		
AC Cadillac	AAFC (Swift Current)	Value Added Seeds	B1215	Busch Ag. Res. Inc.	Sask Wheat Pool
Columbus	AAFC (Winnipeg)	SeCan Members	B1602	Busch Ag. Res. Inc.	Sask Wheat Pool
AC Cora	AAFC (Winnipeg)	SeCan Members	Excel	U of Minnesota	Proven Seed, Others
AC Domain	AAFC (Winnipeg)	SeCan Members	Foster	NDSU	Proven Seed
AC Eatonia	AAFC (Swift Current)	Proven Seed	CDC Lager	U of S - CDC	Sask. Wheat Pool
AC Elsa	AAFC (Swift Current)	SeCan Members	Harrington	U of S - CDC	SeCan Members
AC Intrepid	AAFC (Swift Current)	Canterra Seeds	AC Metcalfe	AAFC (Brandon)	SeCan Members
Invader	Agripro Seeds Inc. & UGG	Proven Seed	Manley	U of S - CDC	SeCan Members
Katepwa	AAFC (Winnipeg)	SeCan Members	Merit	Busch Ag. Res. Inc.	Agricore
Laura	AAFC (Swift Current)	SeCan Members	AC Oxbow	AAFC (Winnipeg, Brandon)	SeCan Members
AC Majestic	AAFC (Winnipeg)	Cargill Seed	Robust	U of Minnesota	Cargill Seed, Others
CDC Makwa	U of S - CDC	SeCan Members	Stander	U of Minnesota	Sask. Wheat Pool
McKenzie	Sask. Wheat Pool	Sask. Wheat Pool	Stein	U of S - CDC	Proven Seed
AC Michael	AAFC (Lacombe)	SeCan Members	CDC Sisler*	U of S - CDC	Proven Seed
Pasqua	AAFC (Winnipeg)	SeCan Members	CDC Stratus	U of S - CDC	Performance Seeds
Prodigy	Sask. Wheat Pool	Sask Wheat Pool	TR 129	U of S - CDC	Value Added Seeds
Roblin	AAFC (Winnipeg)	SeCan Members	TR 139	U of S - CDC	SeCan Members
AC Splendor	AAFC (Winnipeg)	Cargill Seed	TR 145	U of S - CDC	Sask. Wheat Pool
CDC Teal	U of S - CDC	Value Added Seeds	TR 243	AAFC (Brandon)	Value Added Seeds
Canada Prairie Spring Wheat			BT 435	U of S - CDC	Proven Seed
AC Crystal	AAFC (Swift Current)	SeCan Members	Feed		
Cutler	University of Alberta	Canterra	Brier	U of S - CDC	SeCan Members
AC Foremost	AAFC (Swift Current)	SeCan Members	CDC Dolly	U of S - CDC	SeCan Members
AC Karma	AAFC (Swift Current)	SeCan Members	CDC Fleet	U of S - CDC	Value Added Seeds
AC Taber	AAFC (Swift Current)	SeCan Members	CDC Guardian	U of S - CDC	SeCan Members
AC Vista	AAFC (Swift Current)	Value Added Seeds	AC Harper	AAFC (Lethbridge)	SeCan Members
Canada Western Extra Strong			AC Lacombe	AAFC (Lacombe)	SeCan Members
Bluesky	AAFC (Beaverlodge)	SeCan Members	AC Rosser	AAFC (Brandon)	SeCan Members
Glenlea	University of Manitoba	Public	Hulless		
Laser	University of Alberta	Canterra Seeds	AC Bacon	AAFC (Brandon)	SeCan Members
Durum			Condor	AAFRD (Lacombe)	SeCan Members
AC Avonlea	AAFC (Swift Current)	Value Added Seeds	CDC Dawn	U of S - CDC	SeCan Members
Kyle	AAFC (Swift Current)	SeCan Members	Falcon	AAFRD (Lacombe)	Progressive Seeds
AC Melita	AAFC (Winnipeg)	SeCan Members	CDC Freedom	U of S - CDC	SeCan Members
AC Morse	AAFC (Winnipeg)	SeCan Members	CDC Gainer	U of S - CDC	Value Added Seeds
AC Navigator	AAFC (Swift Current)	SK Wheat Pool	AC Hawkeye	AAFC (Brandon)	Sask. Wheat Pool
AC Pathfinder	AAFC (Swift Current)	SK Wheat Pool	Phoenix	AAFRD (Lacombe)	Progressive Seeds
Plenty	U of S - CDC	SeCan Members	CDC Silky	U of S - CDC	Value Added Seeds
Sceptre	U of S - CDC	SeCan Members	Tercel	AAFRD (Lacombe)	Progressive Seeds
Soft White Spring Wheat			Intensive Management		
Fielder	University of Idaho & USDA;		Duke	U of S - CDC	SeCan Members
	AAFC (Lethbridge)	Public	CDC Earl	U of S - CDC	SeCan Members
AC Nanda	AAFC (Lethbridge)	Value-Added Seeds	Kasota	AAFRD (Lacombe)	SeCan Members
AC Phil	AAFC (Lethbridge)	Proven Seed	Mahigan	AAFRD (Lacombe)	SeCan Members
AC Reed	AAFC (Lethbridge)	SeCan Members	Stetson	Western Plant Breeders	Sask. Wheat Pool
			Tukwa	AAFRD (Lacombe)	SeCan Members
Winter Wheat			Oat		
CDC Clair	U of S - CDC	SeCan Members	AC Assiniboia	AAFC (Winnipeg)	Canterra Seeds, Proven Seed
CDC Kestrel	U of S - CDC	SeCan Members			SeCan Members
CDC Osprey	U of S - CDC	Canterra Seeds	AC Belmont	AAFC (Winnipeg)	SeCan Members
CDC Harrier	U of S - CDC	SeCan Members	CDC Boyer	U of S - CDC	SeCan Members
Winter Rye			Calibre	U of S - CDC	SeCan Members
Dakota	Agricore	Sask. Wheat Pool	Derby	U of S - CDC	Proven Seed
Danko		Agricore	AC Juniper	AAFRD (Lacombe)	Sask. Wheat Pool
Kodiak	University of Alberta	Agricore	AC Medallion	AAFC (Winnipeg)	Cargill Seed
Musketeer	AAFC (Swift Current)	SeCan Members	AC Mustang	AAFRD (Lacombe)	Sask Wheat Pool
Prima	AAFC (Swift Current)	SeCan Members	CDC Pacer	U of S - CDC	Value Added Seeds
AC Rifle	AAFC (Swift Current)	Proven Seed/Canterra	AC Preakness	AAFC (Winnipeg)	Proven Seed
Spring Rye					
Gazelle	U of S	Public	AC	- as a prefix to variety names Agriculture Canada, (Agriculture and Agri-Food Canada)	
ROGO	Svalöf Weibull AB	Agri-Tel Grain	AAFC	- Agriculture and Agri-Food Canada	
Triticale			CDC	- Crop Development Centre	
AC Alta	AAFC (Swift Current)	Progressive Seeds	AAFRD	- Alberta Agriculture Food and Rural Development, Lacombe, Alta.	
Banjo	University of Manitoba	Value Added Seeds	U	- University	
AC Certa	AAFC (Swift Current)	Progressive Seeds	U of S	- University of Saskatchewan, Saskatoon	
AC Copia	AAFC (Swift Current)	Value Added Seeds	USDA	- United States Department of Agriculture	
Frank	AAFC (Swift Current)	SeCan Members			
Pika	AAFRD (Lacombe)	Progressive Seeds			
Pronghorn	AAFRD (Lacombe)	Progressive Seeds			

Crop kind, Class & Variety	Breeding Institution	Distributor	Crop kind, Class & Variety	Breeding Institution	Distributor
AC Rebel Triple Crown	AAFC (Winnipeg) Svalöf Weibull AB	Canterra Seeds Wheat City Seeds	Goldrush	Svalöf Weibull AB	Proven Seed
Canola			Hysyn 100	Zeneca Seeds	Zeneca Seeds
Argentine			Hysyn 110	Zeneca Seeds	Zeneca Seeds
220	NPZ-Svalöf Weibull AB	Cargill Seed	Hysyn 111	Zeneca Seeds	Zeneca Seeds
44A89	Pioneer Hi-Bred	Proven Seed	Hysyn 120C5	Zeneca Seeds	Cargill Seed
45A51	Pioneer Hi-Bred	Proven Seed	MAVERICK	Svalöf Weibull AB	Sask Wheat Pool
45A71	Pioneer Hi-Bred	Proven Seed	NORWESTER	Svalöf Weibull AB	Northstar Seeds,
46A05	Pioneer Hi-Bred	Proven Seed	AC Parkland	AAFC (Saskatoon)	SeCan Members
46A65	Pioneer Hi-Bred	Proven Seed	Reward	U of Manitoba	SeCan Members
46A72	Pioneer Hi-Bred	Proven Seed	Spectrum	Svalöf Weibull AB	
46A73	Pioneer Hi-Bred	Proven Seed	AC Sunbeam	AAFC (Beaverlodge)	SeCan Members
46A74	Pioneer Hi-Bred	Proven Seed	AC Sunshine	AAFC (Beaverlodge)	Western Grower
Agassiz	Pioneer Hi-Bred	Proven Seed			Seed Corp.
Battleford	DSV	Brett Young Seeds	WESTWIN	Svalöf Weibull AB	Brett-Young Seeds
BEACON	Svalöf Weibull	Sask. Wheat Pool	ZSC4042	Zeneca Seeds	Zeneca Seeds
		Farmers Co-op Seed			
BRIGADE	Svalöf Weibull AB	Plant, Rivers, Man.	Flax		
CHALLENGER	Svalöf Weibull AB	Sask. Wheat Pool	CDC Arras	U of S - CDC	Value-Added Seeds
CLAVET	Svalöf Weibull AB	Newfield Seeds	CDC Bethune	U of S - CDC	SeCan
CORONET	Svalöf Weibull AB	Cargill Seed	AC Emerson	AAFC (Morden)	SeCan Members
Crusher	Svalöf Weibull AB	Newfield Seeds	Flanders	U of S - CDC	SeCan Members
Delta	Svalöf Weibull AB	Brett-Young Seeds	Linola™989	CSIRO/UGG	Proven Seed
OAC DYNAMITE	U of Guelph	Proven Seed	AC Linora	AAFC (Morden)	SeCan Members
Eagle	Svalöf Weibull AB	Newfield Seeds	AC McDuff	AAFC (Morden)	Proven Seed
Ebony	Limagrains Canada Seeds Inc.	SeCan Members	NorLin	AAFC (Morden)	SeCan Members
		Limagrains Canada	CDC Normandy	U of S - CDC	SeCan Members
AC Elect	AAFC (Saskatoon)	SeCan Members	Somme	U of S - CDC	SeCan Members
AC Excel	AAFC (Saskatoon)	SeCan Members	CDC Triffid	U of S - CDC	Value Added Seeds
Exceed	AgrEvo/AAFC (Saskatoon)	Sask. Wheat Pool	CDC Valour	U of S - CDC	SeCan Members
Garrison	Svalöf Weibull AB	Proven Seed	Vimy	U of S - CDC	SeCan Members
Goliath	Danisco Seeds	Performance Seed	AC Watson	AAFC (Morden)	Sask. Wheat Pool
AC-H102	AAFC (Saskatoon)	SeCan Members			
Hudson	Danisco Seeds	Performance Seeds	Mustard		
Hyola 401	Zeneca Seeds	Zeneca Seeds	Brown		
IMPULSE	Svalöf Weibull AB	Newfield Seeds,	commercial		Trade
		Wheat City Seeds	Oriental		
Independence	AgrEvo/AAFC (Saskatoon)	InterAg,	Cutlass	AAFC (Saskatoon)	Trade
		Performance Seeds	Forge	Colman's of Norwich	Humboldt Flour Mills
Innovator	AgrEvo/AAFC (Saskatoon)	Sask. Wheat Pool	Lethbridge 22A	AAFC (Saskatoon)	Trade
Jewel	Limagrains Canada Seeds Inc.	Cargill Seed	AC Vulcan	AAFC (Saskatoon)	Sask. Wheat Pool
Legacy	Svalöf Weibull AB	Sask. Wheat Pool			
LG3220	Danisco Seeds	Limagrains Canada	Yellow		
		Seeds Inc.	AC Base		
LG3260	Limagrains Canada	Limagrains Canada	Gisilba	Kurt Behm GMBH	Northern Sales/ Klempnauer Seeds
	Seeds Inc.	Seeds Inc.			Trade
LG3295	Limagrains Canada	Limagrains Canada	Ochre	AAFC (Saskatoon)	Sask. Wheat Pool
	Seeds Inc.	Seeds Inc.	AC Pennant	AAFC (Saskatoon)	Proven Seed
LG3310	Limagrains Canada	Limagrains Canada	Tilney	Colman's of Norwich	Proven Seed
	Seeds Inc.	Seeds Inc.	Viscount	Colman's of Norwich/UGG	
LG3333	Limagrains Canada	Limagrains Canada			
	Seeds Inc.	Seeds Inc.	Sunflower		
LG3430	Limagrains Canada	Limagrains Canada	IS 5077	Interstate Seeds	
	Seeds Inc.	Seeds Inc.	IS 5757	Interstate Seeds	
OAC Springfield	U of Guelph	Value Added Seeds	IS 6111	Interstate Seeds	Sask. Wheat Pool
Option 500	Danisco Seeds	Zeneca Seeds	6230	Pioneer Hi-Bred	Pioneer Hi-Bred
Hy-Per Star 100	NPZ/LEMBKE	Performance Seeds	P6150	Pioneer Hi-Bred	Pioneer Hi-Bred
Q2	U. of Alberta	Sask. Wheat Pool	SF 128	Cargill Seed	Cargill Seed
Quantum	U of Alberta	Sask. Wheat Pool	SF 187	Cargill Seed	Cargill Seed
Quest	Alberta Wheat Pool	Sask. Wheat Pool	SF 270	Cargill Seed	Cargill Seed
Sentry	U of Manitoba	Value Added Seeds	SF 361	Pioneer Hi-Bred	Cargill Seed
Seville	Svalöf Weibull AB	Northstar Seeds			
Sprint	Agricore	Sask. Wheat Pool	Field Pea		
SW ARROW	Svalöf Weibull AB	Sask. Wheat Pool	Adagio	Blondeau	Performance Seeds
TRAILBLAZER	Limagrains Canada	Northstar Seeds	Alfetta	Cebeco	Performance Seed
	Seeds Inc.	Prairie Seeds	Anno	D.L.F. Trifolium-	
Vanguard	Svalöf Weibull AB	Newfield Seeds		Columbia Seeds	Performance Seed
WILDCAT	Svalöf Weibull AB	Brett-Young Seeds	CDC April	U of S - CDC	Value Added Seeds
			Ascona	Cebeco Zaden	St. Denis Seeds (AB)
Polish			Astuce	Blondeau	Brett-Young Seeds
41P04	Pioneer Hi-Bred	Proven Seed	Baccara	Forimond Desprez	St. Denis Seeds (AB)
41P55	Pioneer Hi-Bred	Proven Seed	CANIS	Svalöf Weibull AB	Newfield Seeds
41P95	Pioneer Hi-Bred	Proven Seed	Carneval	Svalöf Weibull AB	Sask. Wheat Pool
1000 SP	Zeneca Seeds	Canterra Seeds	Carrera	Cebeco Zaden	Canseed Ltd.
1007 CP	Svalöf Weibull AB	SeCan Members	Clipper	Selgen	Sask. Wheat Pool
AC Boreal	AAFC (Saskatoon)	Newfield Seeds	CPB PHANTOM	Cambridge Plant Breeders	SeCan Members
Cash	Svalöf Weibull AB	Limagrains Canada	Cresta	Sharpes Int. Seed Ltd.	
CHINOOK	Svalöf Weibull AB	Seeds Inc.	CROMA	Cebeco Zaden	Canterra Seeds
		Agricore	Danto	L. Dsenfeldt	Brett-Young Seeds
Eclipse	University of Alberta	Sask. Wheat Pool	Delta	Cebeco Zaden	Performance Seeds
FAIRVIEW	Svalöf Weibull AB	Sask. Wheat Pool	Eiffel	Danisco Seeds	Limagrains Canada
FOOTHILLS	Svalöf Weibull AB	Sask. Wheat Pool			Seeds Ltd.
			Espace	Cebeco Zaden	St. Denis Seeds AB
			Exchequer	Svalöf Weibull AB	Farmers Co-op
					Plant, Rivers, Man.

Crop kind, Class & Variety	Breeding Institution	Distributor	Crop kind, Class & Variety	Breeding Institution	Distributor
Explorer [△]	Svalöf Weibull AB	Newfield Seeds	Cresta	Saatban Linz	Agriprogress Inc.
GRANDE [△]	Svalöf Weibull AB	Sask. Wheat Pool	CDC Fatima	U of S - CDC	Roy Legumex (MB), Walker Seeds (SK)
Highlight [△]	Svalöf Weibull AB	Newfield Seeds	Orion	AAFC (Lacombe)	Roger Lee (AB)
Keoma	Anttila P.B. Farm	Sask. Wheat Pool	Outlook	U of S - CDC	Lyster Farms Ltd. (AB)
Mandy	Mansholt	Terramax	Scirocco	NPZ-Lembke	SeCan Members
MAJORET [△]	Svalöf Weibull AB	Newfield Seeds	Dry Bean		Agriprogress Inc.
AC Melfort	AAFC (Morden)	Canterra Seeds	AC Burrito	AAFC (Harrow)	
Miami [△]	Sharpes Intl. Seeds Ltd.		CDC Camino	U of S - CDC	Sask. Pulse Growers
Millenium [△]	Mansholt	Canseed (AB)	Fargo		Rogers Brothers Seed Co.
Montana [△]	Cebeco	Brett-Young Seeds	Othello	USDA/ARS (Prosser, WA)	Public
MUSTANG	Danisco Seeds		Earlray	Gen-Tec	Gen-Tec
Nicole	Sharpes Intl. Seeds Ltd.	Agriprogress Inc.	US 1140	USDA	public
Obelisque	Danisco Seeds	Terramax	CDC Espresso	U of S - CDC	Specialty Seeds
Olivin [△]	Slovisivo H.S.	Agricore	CDC Nighthawk	U of S - CDC	Value Added Seeds
Pekisko [△]	Agricore	SeCan Members	CDC Nordic	U of S - CDC	Sask. Pulse Growers
CDC Peko	U of S - CDC	Walker Seeds	GTS 523	Gen-Tec	Gen-Tec
Princess	Wilbur Ellis Co.	SeCan Members	AC Skipper	AAFC (Lethbridge)	Klempnauer Seeds
PROFI [△]	Danisco Seeds	Columbia Seeds (AB)	UI 906	University of Idaho	Public
Radley	Sharpes-Columbia Seeds	Brett-Young Seeds	92235	U of S - CDC	Sask. Pulse Growers
Ricardo	Cebeco	Brett-Young Seeds	92802	U of S - CDC	Sask. Pulse Growers
Scorpio	Cebeco	Performance Seeds	92074	U of S - CDC	Value Added Seeds
Scuba [△]	Sharpes Intl. Seeds Ltd.	Terramax	Chickpea		
Sirius	Inst. P.P.P., Czech Republic	Canterra Seeds	<i>Desi</i>		
TENOR [△]	Danisco Seeds	Newfield Seeds	Myles	USDA/Washington State U	Public
TOTEM	Svalöf Weibull AB	Public	<i>Kabuli</i>		
Trapper	AAFC (Morden)	Newfield Seeds	B-90	USDA/Washington State U	Terramax
Victoria	Svalöf Weibull AB	Public	Sanford	USDA/Washington State U	Public
CDC Vienna	U of S - CDC	Western Grower Seed Corp., Walker Seed	Dwellely	USDA/Washington State U	Public
Whero	Challenge Seeds	Newfield Seeds	CDC Chico	U of S - CDC	Sask. Pulse Growers
CDC Winfield	U of S - CDC	SeCan members	CDC Xena	U of S - CDC	Sask. Pulse Growers
YORKTON	Svalöf Weibull AB	Value Added Seeds	CDC Yuma	U of S - CDC	Sask. Pulse Growers
Lentil			Canary Seed		
Eston	U of S - CDC	SeCan Members	Ellias	U of Minnesota; U of S - CDC	Public
CDC Glamis	U of S - CDC		Keet	U of Minnesota; U of S - CDC	Public
Indianhead	U of S - CDC	SeCan Members	CDC Maria	U of S - CDC	Canadian Special Crops Association
CDC Milestone	U of S - CDC		Safflower		
Laird	U of S - CDC	SeCan Members	Saffire	AAFC (Lethbridge)	Jerry Kubic (AB)
CDC Redwing	U of S - CDC	Sask. Wheat Pool	AC Stirling	AAFC (Lethbridge)	SeCan Members
CDC Richlea	U of S - CDC	SeCan Members	AC Sunset	AAFC (Lethbridge)	Alberta Wheat Pool
CDC Vantage	U of S - CDC				
Faba Bean					
Aladin	University of Manitoba	Public			
CDC Blitz	U of S - CDC				

The Advisory Council on Grain Crops, a committee of the Saskatchewan Agricultural Services Co-ordinating Committee (SASCC), supervises, co-ordinates and reviews the collection, analysis and reporting of information in this pamphlet.

Membership of the Advisory Council on Grain Crops consists of representatives from:

- Agriculture and Agri-Food Canada
- Saskatchewan Agriculture and Food
- University of Saskatchewan
- Crop Development Centre
- Saskatchewan Wheat Pool
- Canadian Seed Trade Association
- Saskatchewan Seed Growers' Association
- Saskatchewan Association of Rural Municipalities
- Farmers
- Saskatchewan Irrigation Development Centre
- Representatives from Saskatchewan Seed Distributing Companies

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Contributing Agencies



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