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Field Crops
Alberta
AGRICULTURE, FOOD AND RURAL DEVELOPMENT

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Agdex 100/32

Varieties of Cereal and Oilseed Crops for Alberta – 1994

Prepared by the Cereal and Oilseed Advisory Committee of Alberta Agriculture

Explanatory

The information used in this publication is supplied by the University of Alberta, Agriculture and Agri-Food Canada, Canadian Seed Growers Association, cereal and oilseed commodity groups, the Canadian Seed Trade Association and Alberta Agriculture, Food and Rural Development. This publication provides information on individual varieties and indicates cereal and oilseed production areas within the province. Important agronomic characteristics are given in tabular form for varieties of wheat, oats, barley, flax, canola, triticale, and rye. The Production areas, based primarily upon precipitation and length of growing season, are indicated on the map. With this information farmers can choose varieties that may be best suited to their own particular farming programs. The varieties are tested under medium management conditions and may change their response if tested under very high or very low management.

Yields

The tables show relative yields for six production areas. In area 1, irrigated yields expressed as a per cent of dryland yields are: C.W. Wheat 185, barley 160, oats 180, flax 210, canola 125. In area 2, irrigated yields expressed as a per cent of dryland yields are: C.W. wheat 130, barley 125, oats 120, flax 145, canola 120. For further information on irrigated variety response, see *Irrigated Crop Recommendations for Alberta*, Agdex 100/32-1

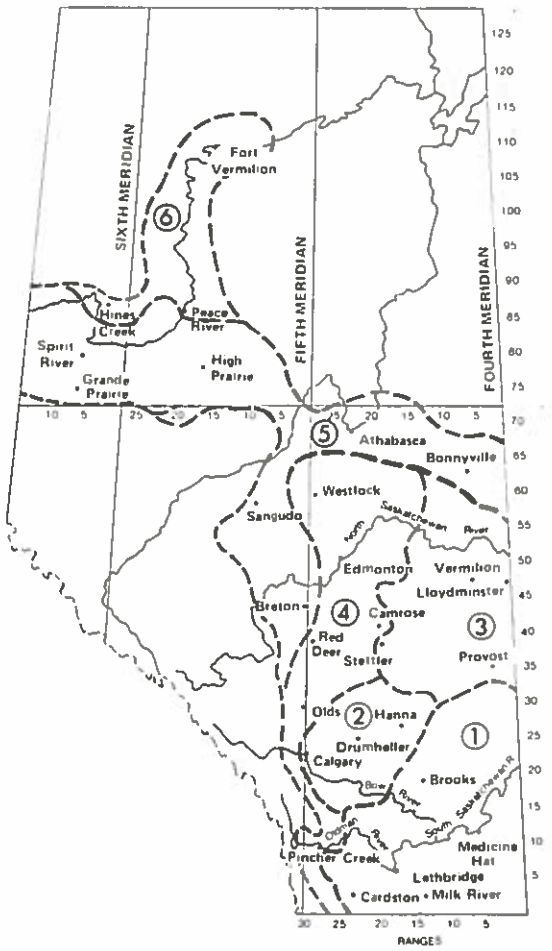
Maturity

The relative classifications refer specifically to the crop being considered. For example, an early-maturing wheat variety could require more days to reach maturity than a late-maturing variety of barley.

In areas 2, 3, and 5 of Alberta the following may be used as a guide for estimating maturity in actual days from seeding to harvest when the crops are seeded on fallow land: Neepawa wheat - 120 days, Park - 116, Grizzly oats - 114, Jasper - 106, Galt barley - 105, Harrington – 106, Jackson - 94, McGregor flax - 130, Flanders - 120, Westar canola - 112, and Tobin - 95 days. In area 6 the longer daylight hours usually reduce the number of days to maturity required. Area 4 has the longest requirement in the province for days to maturity. In southern Alberta, Neepawa can be expected to mature in 100 to 105 days and other crops are similarly earlier maturing. The comparison among varieties within crops, however, tend to remain fairly uniform regardless of where the crops are grown.

Disease, seed treatment

- Seed of rye and flax should be treated to control seedling blight and seed of canola to control flea beetles, seedling blight and the seedborne phase of virulent blackleg.
- Cereal smuts can be controlled with systemic seed treatment fungicides. See Alberta Agriculture publication *Seed Treatment of Cereal and Oilseed Crops*, Agdex 100/632.



- Treated seed must not be fed to livestock or poultry or sold for feed. Refer to label for maximum period for storing treated seed. Storage periods for fungicide-insecticide combination products are fairly short. Small quantities of excess seed can be buried at regional landfills. Do not expose treated seed to wildlife!

Good seed

- In relation to total farm input expenses, the cost of GOOD SEED, a most important factor, is very small.
- The only way to be absolutely sure of obtaining a particular variety is by the use of PEDIGREED SEED.
- Pedigreed seed may be purchased in bulk from authorized suppliers.

Copies of this and related publications may be obtained from the Print Media Branch, Alberta Agriculture, Food and Rural Development, 7000 - 113 Street, Edmonton, AB T6H 5T6 or District Offices of the Department.

WHEAT

Variety	Irr. 1 & 2	Area (See Map) 1	2	3	4	5	6	Rel Mat	Te. Wt.	Kn. Wt.	Resistance to: Ldg.	Shat.	Loose Smut	Bunt	Com. Rt.	Com. Rot
	Yield as % of Neepawa										ELIGIBLE FOR C.W. RED WHEAT GRADES					
AC Minto	92	102	101	100	101	103	102	M-L	76	36	G	G	R	R	I	
CDC Makwa	101	101	100	97	102	98	100	M	75	33	G	G	R	I	S	
CDC Merlin	103	99	102	97	105	100	106	M	75	36	G	G	I	R	I	
CDC Teal	110	108	109	98	104	102	105	M-E	75	34	G	G	I	I	I	
Columbus	95	102	95	99	101	98	99	M-L	76	34	G	G	I	R	I	
Conway	97	101	97	98	99	97	98	M	76	32	G	G	R	I	I	
Katepwa	100	99	102	96	98	94	97	M	76	33	G	G	R	R	I	
Kenyon	98	98	99	92	99	94	98	M	76	31	G	G	I	I	I	
Lancer	92	99	87	91	–*	–*	–*	M-L	76	34	P	G	R	R	I	
Laura	100	107	102	98	104	102	100	M-L	76	33	G	G	I	S	I	
Leader†	91	100	95	94	–*	–*	–*	M-L	77	31	G	G	I	R	S	
Neepawa	100	100	100	100	100	100	100	M	76	33	G	G	R	I	I	
Park	–*	–*	99	92	96	93	93	E	77	32	F	G	R	I	I	
Pasqua	98	102	97	98	97	99	98	M	76	34	G	G	S	I	S	
Roblin	100	92	100	94	102	95	97	M-E	75	35	G	G	R	S	I	

Remarks: LEADER & LANCER – recommended for sawfly areas only. COLUMBUS & LAURA – late maturing in Areas 3, 4, 5 and 6. NEEPAWA – difficult to thresh. AC DOMAIN, COLUMBUS, LEADER, LANCER & PASQUA – have sprouting resistance. LAURA, ROBLIN & PASQUA – require a systemic fungicide seed treatment. AC DOMAIN, AC EATONIA, GRANDIN & INVADER – insufficient test data to describe. AC EATONIA – seed not available in 1994. AC DOMAIN & INVADER – seed supply limited in 1994. C.W. Red Spring Wheat grown under irrigation tends to have lower grades. GRANDIN – received a one year interm registration renewable in 1994.

	Yield as % of Biggar										ELIGIBLE FOR CANADA PRAIRIE SPRING WHEAT GRADES					
AC Taber	102	96	105	109	106	91	102	V-L	77	38	G	G	S	R	I	
Biggar	100	100	100	100	100	100	100	V-L	77	37	G	G	S	S	I	
Cutler	78	82	93	78	94	78	81	V-E	76	37	G	G	S	S	I	
Genesis	89	99	97	97	94	85	104	V-L	74	40	P	G	I	S	I	
Oslo	84	81	87	86	95	82	78	M	73	39	Ex	G	S	I	I	

Remarks: All CPS wheats require a systemic fungicide seed treatment. OSLO & CUTLER – less drought tolerant than Biggar. BIGGAR, CUTLER OSLO & AC TABER – red-seeded, semi-drawf varieties. GENESIS – white-seeded, standard height variety which may be subject to yield and quality reduction due to lodging, late maturity and sprouting susceptibility in high rainfall areas. BIGGAR – yields about 20% higher than Neepawa.

	Yield as % of Fielder										ELIGIBLE FOR C.W.SOFT WHITE SPRING WHEAT GRADES					
AC Reed	113	–*	–*	–*	–*	–*	–*	L	77	36	G	G	S	S	S	
Fielder	100	–*	–*	–*	–*	–*	–*	L	76	34	G	F	S	S	S	

Remarks: FIELDER & AC REED – semi-dwarf varieties requiring a systemic fungicide seed treatment. AC REED – is resistant to stripe rust. FIELDER – yields about 11% higher than Neepawa in areas of adaptation.

	Yield as % of Wakooma										ELIGIBLE FOR C. W. AMBER DURUM WHEAT GRADES					
Kyle	103	106	100	–*	–*	–*	–*	L	76	42	P	G	S	R	I	
Medora	109	102	99	–*	–*	–*	–*	M-L	77	42	G	G	I	R	I	
Plenty	112	119	109	–*	–*	–*	–*	M-L	77	39	G	G	S	R	I	
Sceptre	111	106	108	–*	–*	–*	–*	M	77	40	G	G	S	R	I	
Wakooma	100	100	100	–*	–*	–*	–*	M-L	76	40	P	G	I	R	I	

Remarks: All Durum Wheat varieties should be grown only in Area 1 and 2 and the southeastern portion of Area 3 because of late maturity. WAKOOMA – yields about 10% more than Neepawa in areas of adaptation. SCEPTRE – Lowest incidence of kernel smudge.

	Yield as % of Norstar										ELIGIBLE FOR C. W. RED WINTER WHEAT GRADES					
Norstar	100*	100	100	XX	100	XX	XX	E	80	32	P	G	S	S	S	
CDC Kestrel	124	118	101	XX	101	XX	XX	E	78	34	F	G	S	S	S	
Norwin	106	101	77	XX	77	XX	XX	E	79	32	G	F	S	S	S	
AC Readymade	103	109	72	XX	72	XX	XX	E	79	34	G	F	S	I	S	

Remarks: Varieties listed with the most winter hardy at the top. Winter survival is best in southern Alberta. NORWIN – has very short straw, sensitive to drought. AC READYMADE – has high protein, resistant to piebald. Winter wheats are susceptible to Russian wheat aphids.

Symbols used: †Denotes variety may not be described in 1995; *Denotes variety not generally suited to area; XX Denotes insufficient test data to describe.
Abbreviations used: Rel Mat=Relative maturity; V-L=Very-late, L=Late, M-L=Medium-late, M=Medium, M-E=Medium-early, E=Early; Te. Wt.=Test weight (kg/hl). Multiply kg/hl by 0.8 to get pounds per bushel; Kn. Wt.=Kernel weight (grams/1000 kernels); Ldg.=Lodging; Shat.=Shattering; Ex=Excellent, G=Good, F=Fair, P=Poor; Com. Rt. Rot=Common root rot; R=Resistant, I=Intermediate, S=Susceptible.

BARLEY

Variety	Yield as % of Galt: Irr. 1&2	Area (See Map): 1	2	3	4	5	6	No. of Row	Awn Type	Comp Mat	Te. Wt.	Kn. Wt.	Ht. cm	Resistance to: Ldg.	Shat.	Loose Smut	FL & Cov. Smut	Com. Root Rot	Scald	Net Blt.
ELIGIBLE FOR GENERAL PURPOSE GRADES ONLY																				
Abee	84	104	98	97	97	107	95	2	R	+1	65	42	77	G	G	S	I	I	S	S
AC Albright	81*	83*	97*	94*	86	93	92	6	R	-6	62	33	82	P	F	S	S	S	S	S
AC Lacombe	103	105	117	113	111	111	107	6	S	0	60	40	82	VG	F	S	R	S	I	I
AC Stacey	85*	91*	104*	91*	92	94	93	6	R	-5	61	33	72	F	F	S	R	S	R	I
Bridge	98	105	99	104	100	108	93	2	R	+2	66	45	76	G	F	S	I	I	S	S
Brier	101	111	113	111	106	120	109	6	S	0	60	38	82	F	F	S	R	S	I	I
CDC Guardian	89	106	101	107	98	107	94	2	R	+1	62	43	77	F	F	S	R	I	R	I
Galt	100	100	100	100	100	100	100	6	S	-1	60	36	78	VG	F	S	R	S	S	S
Heartland†	102	101	104	103	99	101	101	6	S	0	60	36	74	VG	F	S	I	I	S	I
Jackson	85*	88*	95*	89*	89	89	95	6	R	-6	62	37	68	G	F	S	S	S	S	S
Johnston	87	103	101	107	97	113	110	6	S	+2	61	35	89	P	G	S	S	S	R	S
Leduc	99	105	106	105	100	108	101	6	R	-2	60	41	79	F	G	I	R	I	R	I
Noble†	101	105	108	107	103	108	109	6	S	+1	59	37	82	G	F	S	I	S	S	S
Seebe	78	96	96	104	93	104	96	2	R	+3	65	45	85	G	G	S	R	I	R	S
Virden	100	105	106	102	101	106	110	6	S	+4	58	42	86	G	G	I	I	R	S	I
Winthrop	94	98	98	101	100	107	96	2	R	0	65	42	78	Ex	F	S	R	S	S	S
SEMI-DWARF																				
CDC Earl	102	106	122	118	98	103	106	6	R	+1	61	36	71	Ex	G	S	R	I	R	I
Duke	96	98	109	103	104	102	101	6	R	+2	61	37	74	Ex	F	S	I	I	R	S
Tukwa	103	96	103	115	100	108	98	6	S	-1	62	35	73	VG	G	S	R	I	I	I
HULLESS																				
CDC Buck	87	86	90	85	92	85	93	6	R	-1	71	33	84	G	G	S	S	I	S	S
CDC Richard	79	93	87	89	85	93	85	2	R	0	74	38	80	VP	G	S	I	I	R	S
Condor	79	87	81	83	78	84	81	2	R	0	75	35	75	VG	G	S	S	I	S	S
Falcon	90	83	98	87	88	90	90	6	S	-1	71	33	66	Ex	F	S	R	I	R	S
Phoenix	77	87	85	95	83	94	82	2	R	-2	73	35	82	F	G	S	I	I	S	S
ELIGIBLE FOR MALTING GRADES																				
AC Oxbow	95	93	94	95	94	99	96	2	R	0	64	43	81	G	F	R	I	I	S	S
Argyle	92	88	99	98	95	98	97	6	S	-1	60	35	93	G	F	S	S	I	S	S
Bonanza	88	94	98	95	91	96	91	6	S	-1	60	35	93	F	F	S	S	I	S	S
B1215	91	102	98	102	100	101	91	2	R	+2	65	40	75	G	F	S	I	I	S	I
B1602	96	96	102	96	94	98	95	6	R	-1	63	36	83	G	F	S	I	I	S	S
Duel	99	97	109	108	102	107	103	6	S	0	60	37	89	G	F	S	I	I	S	S
Harrington	86	100	94	95	86	102	94	2	R	97	64	42	76	F	F	S	S	I	S	S
Manley	90	103	98	102	97	107	100	2	R	+3	64	42	78	G	G	S	I	I	S	S
Stein	92	104	95	102	95	108	95	2	R	0	64	42	75	F	F	S	I	I	S	S
Tankard	92	92	101	97	96	98	101	6	S	+1	61	36	89	G	F	S	S	I	S	I

Remarks: Only systemic seed treatment will control true loose smut. Varieties with excellent straw strength can respond to high levels of fertilizer with less lodging. Numerical data for maturity and height have been included in this table for the first time. The values are averages for the province. Like yield, they are strongly influenced by environmental conditions such as rainfall, soil fertility and temperatures. The maturities are stated in mean days plus or minus of Harrington. CDC EARL, PHOENIX & TUKWA – no seed available in 1994. FALCON – limited seed available in 1994.

SPRING TRITICALE

Variety	Yield as % of Wapati: Irr. 1 & 2	Area (See Map): 1	2	3	4	5	6	Rel Mat	Te. Wt.	Kn. Wt.	Resistance to: Lodging	Shattering	Loose Smut	Bunt	Com. Rt. Rot
Banjo	93	103	87	97	93	–*	–*	V-L	66	43	G	G	R	R	S
Frank†	88	102	95	95	91	–*	–*	V-L	67	37	G	G	R	R	S
Wapiti	100	100	100	100	100	–*	–*	V-L	65	43	G	G	R	R	I

Remarks: All varieties are late maturing and should not be grown for seed production in areas 5 and 6. WAPITI – yields about 25% greater than Neepawa in areas of adaptation. AC COPIA – insufficient test data to describe, seed not available in 1994.

Symbols used: †Denotes variety may not be described in 1995; *Denotes variety not generally suited to area; XX Denotes insufficient test data to describe.
Abbreviations used: Rel Mat=Relative maturity; V-L=Very-late, Comp Mat=Comparative Maturity to Harrington in days; Te. Wt.=Test weight (kg/hl). Multiply kg/hl by 0.8 to get pounds per bushel; Kn. Wt.=Kernel weight (grams/1000 kernels); Ldg.=Lodging; Shat.=Shattering; Ex=Excellent, VG=Very Good, G=Good, F=Fair, P=Poor, VP=Very Poor; Com. Rt. Rot=Common root rot; R=Resistant, I=Intermediate, S=Susceptible; Ht.cm.=Height in centimetres; Fl.&Cov. Smut=False loose & covered smuts; Net Blt.=Net blotch.

OATS

	Yield as % of Cascade										Resistance to:		
	Irr.	Area (See Map)						Rel	Te.	Kn.			
Variety	1 & 2	1	2	3	4	5	6	Mat	Wt.	Wt.	Ldg.	Shat.	Smuts
AC Marie	106	104	93	93	88	103	97	L	46	34	G	G	R
Athabasca	98	90	84	81	81	82	92	E	50	35	G	F	S
Calibre	98	105	100	97	95	101	98	L	51	36	F	G	S
Cascade	100	100	100	100	100	100	100	M-L	48	35	G	G	S
Derby	104	101	102	105	98	103	97	M-L	51	37	G	G	S
Foothill	94	95	85	93	89	91	89	L	48	30	F	G	S
Grizzly	97	90	91	91	93	89	94	L	50	35	F	G	S
Jasper	106	89	97	96	93	96	93	E	51	34	F	G	S
Robert	102	89	90	95	82	92	84	M-L	48	39	G	G	R
Waldern	108	106	106	104	100	109	112	M-L	47	43	G	G	S
						HULLESS							
AC Hill	62	68	57	68	55	58	61	M-L	56	30	G	G	R
Terra†	75	70	68	75	68	67	69	E	54	29	G	G	S

Remarks: AC BELMONT, AC HILL, AC MARIE, ROBERT & TERRA – seed supply limited in 1994. CALIBRE, DERBY, JASPER & ROBERT – thin hull. JASPER – high protein. FOOTHILL – forage variety. ROBERT – red (tan) kernels. WALDERN – large kernel, use a higher seeding rate. Hull removal equals 20-25% less weight. AC BELMONT – inadequate test data to describe.

FALL RYE

	Yield as % of Kodiak											
	Irr.	Area (See Map)						Rel	Te.	Kn.	Straw	Stem
Variety	1 & 2	1	2	3	4	5	6	Mat	Wt.	Wt.	Strength	Smut
Musketeer	XX	106	99	XX	104	100	XX	M	72	34	F	R
Prima	XX	111	106	XX	103	108	XX	M	72	32	F	I
Kodiak	XX	100	100	XX	100	100	XX	M	69	33	F	R
Danko	XX	108	109	XX	103	XX	XX	M-L	73	36	G	I

Remarks: Stem smut – Use systemic fungicides in high risk areas on all varieties. Varieties listed with the most winter hardy at the top. DANKO – has winter hardiness between fall rye and Norstar winter wheat.

OTHER CEREAL CROPS

SPRING RYE – GAZELLE – only available spring variety and has maturity similar to Neepawa wheat.
OTHER SPRING WHEATS – BLUESKY, GLENLEA & WILDCAT – eligible for Canada Western Extra Strong grades. BLUESKY & WILDCAT yield about 5% to 10% more than Neepawa, and maturity similar to Neepawa. GLENLEA – maturity about 5 days later than Neepawa.
WINTER TRITICALE – PIKA & WINTRI – yield similar to Norstar. Pika is similar in winter survival to Norstar, Wintri is about 5% to 10% lower.

FLAX

	Yield as % of NorLin									
	Irr.	Area (See Map)						Rel	Seed	Rust
Variety	1 & 2	1	2	3	4	5	6	Mat	Size	Resistance
AC Linora	XX	XX	XX	XX	XX	XX	XX	E-M	M-L	R
AC McDuff	97	118	110	XX	XX	XX	XX	M	M	R
Andro	93	101	97	104	105	107	97	M	M	R
Flanders	88	128	121	XX	XX	XX	XX	E-M	M	R
MacGregor	105	114	107	120	107	110	103	L	S	R
NorLin	100	100	100	100	100	100	100	M	M	R
Somme	106	112	109	115	XX	XX	XX	M	M	R
Vimy	98	109	106	97	102	100	99	M-L	L	R

Remarks: LINOLA 947 – insufficient test data to describe; AC LINORA & LINOLA 947 – limited seed available in 1994.

Symbols used: †Denotes variety may not be described in 1995. XX Denotes insufficient test data to describe.
Abbreviations used: Rel Mat=Relative maturity; L=Late; M-L=Medium-late; M=Medium; E-M=Early-Medium; E=Early; Te. Wt.=Test weight (kg/hl). Multiply kg/hl by 0.8 to get pounds per bushel; Kn. Wt.=Kernel weight (grams/1000 kernels); Ldg.=Lodging; Shat.=Shattering; G=Good; F=Fair; Seed size, S=Small; M=Medium; M-L=Medium-Large; L=Large; R=Resistance; S=Susceptible.

CANOLA

Variety	Irr. 1 & 2	Area (See Map) 1	2	3	4	5	6	Comp Mat	Straw Strength	Comp Oil (%) Content	Resistance to: Black-leg	White Rust
	Yield as % of Tobin								POLISH TYPE *B. campestris*			
AC Parkland†	91	87	87	92	86	96	92	+1	F	+1.5	4	R
AC Sunshine	XX	XX	108	103	108	96	110	+1	F	+0.3	4	R
Colt	99	104	115	110	104	103	105	+1	F	+1.6	4	S
Eldorado	102	107	104	101	105	103	110	0	F	+1.8	4	S
Goldrush	101	XX	103	104	104	XX	109	+1	F	-0.2	4	R
Horizon	101	106	110	104	101	105	110	0	F	+1.3	4	S
Reward	103	XX	107	103	100	XX	105	+1	F	+1.9	4	R
Tobin	100	100	100	100	100	100	100	90	F	41.9	4	R
	Yield as % of Legend								ARGENTINE TYPE *B. napus*			
AC Elect	107	XX	XX	99	118	XX	135	+2	G	+1.4	3	R
AC Excel	103	104	98	92	108	92	125	+1	G	+1.3	3	R
Alto	99	93	96	95	111	100	103	-2	F	+1.5	5	R
Bounty†	107	XX	101	104	102	114	95	+2	G	0	4	R
Celebra	104	94	98	97	110	–*	–*	+2	G	+0.3	3	R
Crusher	104	XX	105	89	106	–*	–*	+4	Ex	+1.5	3	R
Cyclone	XX	XX	XX	XX	111	XX	XX	+2	Ex	+0.4	2	R
Delta	104	101	102	100	109	106	104	+3	Ex	+0.2	3	R
Garrison	113	XX	XX	104	120	–*	–*	+4	Ex	-0.2	2	R
Global†	103	–*	–*	–*	–*	–*	–*	+6	Ex	-0.6	2	R
Hyola 401	112	XX	112	107	122	XX	122	+1	Ex	+0.7	4	R
Impact	XX	XX	XX	XX	XX	XX	XX	+1	F	+0.1	3	R
Legacy	118	XX	XX	102	111	XX	129	0	G	+0.4	3	R
Legend	100	100	100	100	100	100	100	104	G	43.3	3	R
Profit	98	97	94	92	98	100	93	0	F	+1.9	3	R
Seville	XX	XX	XX	XX	XX	XX	XX	+3	G	-0.2	3	R
Stallion†	81	XX	73	76	91	XX	84	+2	G	-1.5	3	R
Trojan	XX	XX	XX	XX	XX	XX	XX	+1	F	-0.2	3	R
Vanguard†	102	96	98	100	104	103	99	+2	G	-0.3	3	R
Westar†	103	90	92	91	96	101	109	0	F	+1.0	5	R

Remarks: Polish varieties, on average, yield 20% less, are more susceptible to root maggot and root rot, and mature 2-3 weeks earlier than Argentine type. Argentine types shatter more readily than Polish when ripe and require early seeding. Argentine canola is risky in all zones if seeded late, especially Areas 5 and 6 because of late maturity. Mixtures of canola and mustard are inseparable and unacceptable. STALLION – Triazaine resistant variety. In blackleg prone areas, do not grow varieties that are susceptible to the disease.
Help prevent the spread of virulent blackleg to your farm, only use certified blackleg free and treated seed in a minimum 4-year rotation.

Symbols used: †Denotes variety may not be described in 1995; *Denotes variety not well suited to the area; XX Denotes insufficient test data available.
Abbreviations used: Comp Mat= Comparative Maturity in days; Ex=Excellent, G=Good, F=Fair; Disease Resistance; 1=tolerant, 2=moderately tolerant, 3=moderately susceptible, 4=susceptible, 5=highly susceptible; R=Resistant, S=Susceptible.

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