



Revised  
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## Varieties of Cereal and Oilseed Crops for Alberta – 1993

Agdex 100/32



Prepared by the Cereal and Oilseed Advisory Committee of Alberta Agriculture

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### Explanatory

The information used in this publication is supplied by the University of Alberta, Agriculture Canada, Canadian Seed Growers Association, cereal and oilseed commodity groups, the Canadian Seed Trade Association and Alberta Agriculture. 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*

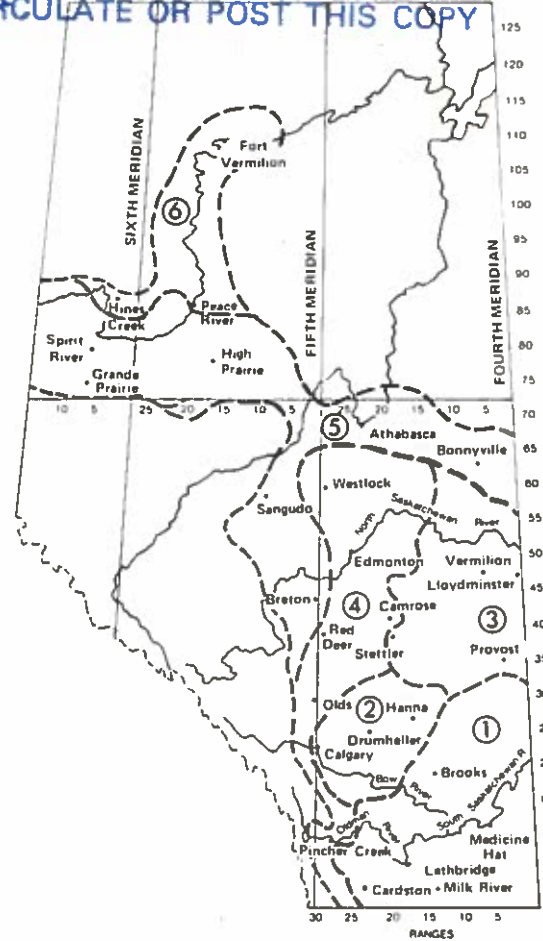
### Maturity

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, Otal - 94, McGregor flax - 130, Noralta - 117, 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 of 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, 7000 - 113 Street, Edmonton, Alberta T6H 5T6 or Alberta Agriculture's District Offices.

## COMPARISON OF VARIETIES

### WHEAT

Variety	Irr. 1 & 2	Area (See Map)						Rel Mat	T. Wt.	K. Wt.	Resistance to:				Com.	
		1	2	3	4	5	6				Ldg.	Shat.	Loose Smut	Bunt	Rt.	Rot
<b>Yield as % of Neepawa</b>											<b>ELIGIBLE FOR C.W. RED WHEAT GRADES</b>					
AC Minto	94	104	101	99	101	102	103	M-L	76	35	G	G	R	R	I	I
CDC Makwa	102	100	103	93	101	97	103	M	75	32	G	G	R	I	S	S
Columbus	96	99	97	99	100	98	101	M-L	76	35	G	G	I	R	I	I
Conway	98	99	98	98	99	97	99	M	76	32	G	G	R	I	I	I
Katepwa	99	97	99	94	97	92	95	M	76	33	G	G	R	R	I	I
Kenyon	100	99	100	92	99	95	97	M	76	32	G	G	I	I	I	I
Lancer	92	95	88	91	-*	-*	-*	M-L	76	34	P	G	R	R	I	I
Laura	102	104	103	98	103	102	106	M-L	76	33	G	G	I	S	R	R
Leader	92	97	96	93	-*	-*	-*	M-L	77	31	G	G	I	R	S	S
Neepawa	100	100	100	100	100	100	100	M	76	32	G	G	R	I	I	I
Park	-*	-*	101	87	95	92	96	E	77	32	F	G	R	I	I	I
Pasqua	99	105	100	101	98	100	102	M	76	34	G	G	S	I	S	S
Roblin	99	92	102	92	102	94	99	M-E	75	35	G	G	R	S	R	R

**Remarks:** LEADER & LANCER – recommended for sawfly areas only. COLUMBUS & LAURA – late maturing in Areas 3, 4, 5 and 6.

NEEPAWA – difficult to thresh. COLUMBUS, LEADER, LANCER & PASQUA – have sprouting resistance. LAURA, ROBLIN & PASQUA – require a systemic fungicide seed treatment. CDC TEAL & CDC MERLIN – insufficient test data to describe. CDC MERLIN – seed not available in 1993.

CDC TEAL – seed supply limited in 1993. C.W. Red Spring Wheat grown under irrigation tends to have lower grades.

Variety	Irr.	Area (See Map)						Rel Mat	T. Wt.	K. Wt.	Resistance to:				Com.	
		1	2	3	4	5	6				Ldg.	Shat.	Loose Smut	Bunt	Rt.	Rot
<b>Yield as % of Biggar</b>											<b>ELIGIBLE FOR CANADA PRAIRIE SPRING WHEAT GRADES</b>					
AC Taber	104	98	108	111	106	94*	112*	V-L	77	38	G	G	S	R	I	I
Biggar	100	100	100	100	100	100*	100*	V-L	77	37	G	G	S	S	I	I
Cutler	80*	84*	93	75*	98	78	84	V-E	76	37	G	G	S	S	I	I
Genesis	97*	99	95	98	93*	85*	105*	V-L	74	40	P	G	I	S	I	I
Oslo	86	79*	87	87	97	88	80	M	73	39	Ex	G	S	I	I	I

**Remarks:** All CPS wheats require a systemic fungicide seed treatment. OSLO – less drought tolerant than Biggar. BIGGAR, CUTLER OSLO & AC TABER – red-seeded, semi-dwarf 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.

Variety	Irr.	Area (See Map)						Rel Mat	T. Wt.	K. Wt.	Resistance to:				Com.	
		1	2	3	4	5	6				Ldg.	Shat.	Loose Smut	Bunt	Rt.	Rot
<b>Yield as % of Fielder</b>											<b>ELIGIBLE FOR C.W.SOFT WHITE SPRING WHEAT GRADES</b>					
AC Reed	112	-*	-*	-*	-*	-*	-*	L	77	36	G	G	S	S	S	S
Fielder	100	-*	-*	-*	-*	-*	-*	L	76	34	G	F	S	S	S	S
SWS-52†	95	-*	-*	-*	-*	-*	-*	L	74	30	G	G	S	S	S	S

**Remarks:** SWS-52 – received a one year interim registration renewable until 1993. FIELDER, SWS-52 & AC REED – semi-dwarf varieties requiring a systemic fungicide seed treatment. SWS-52 & AC REED are resistant to stripe rust. FIELDER – yields about 11% higher than Neepawa in areas of adaptation. AC REED – seed supply limited in 1993.

Variety	Irr.	Area (See Map)						Rel Mat	T. Wt.	K. Wt.	Resistance to:				Com.	
		1	2	3	4	5	6				Ldg.	Shat.	Loose Smut	Bunt	Rt.	Rot
<b>Yield as % of Wakooma</b>											<b>ELIGIBLE FOR C. W. AMBER DURUM WHEAT GRADES</b>					
Kyle	102	109	99	102*	-*	-*	-*	L	76	42	P	G	S	R	I	I
Medora	106	102	101	101*	-*	-*	-*	M-L	77	42	G	G	I	R	I	I
Plenty	108	118	110	XX	-*	-*	-*	M-L	77	39	G	G	S	R	I	I
Sceptre	108	106	109	100*	-*	-*	-*	M	77	40	G	G	S	R	I	I
Wakooma	100	100	100	100*	-*	-*	-*	M-L	76	40	P	G	I	R	I	I

**Remarks:** KYLE, MEDORA, PLENTY & WAKOOMA, – 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.

Variety	Irr.	Area (See Map)						Rel Mat	T. Wt.	K. Wt.	Resistance to:				Com.	
		1	2	3	4	5	6				Ldg.	Shat.	Loose Smut	Bunt	Rt.	Rot
<b>Yield as % of Norstar</b>											<b>ELIGIBLE FOR C. W. RED WINTER WHEAT GRADES</b>					
Norstar	100*	100	XX	XX	XX	XX	XX	E	79	30	P	G	S	S	S	S
CDC Kestrel	XX	113	XX	XX	XX	XX	XX	E	78	32	F	G	S	S	S	S
Norwin	116	104	XX	XX	XX	XX	XX	E	80	30	F	F	S	S	S	S
AC Readymade	XX	110	XX	XX	XX	XX	XX	E	80	32	G	F	S	I	S	S

**Remarks:** Varieties listed with the winter hardiest at the top. Winter survival is best in southwestern Alberta. NORWIN – has very short straw, sensitive to mid-season drought; not recommended for light soils, dry fall conditions or where yields lower than 40 bu/ac (2.5 t/ha) are common. Winter wheats are susceptible to Russian wheat aphids. AC READYMADE & CDC KESTREL – limited seed available in 1993.

**Symbols used:** † Denotes variety may not be described in 1994; \* 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; T. Wt.=Test weight (kg/ha). Multiply kg/ha by 0.8 to get pounds per bushel; K. 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							Resistance to:												
	Irr. 1&2	Area (See Map)					Rel Mat	No. of Row	Awn Type	T. Wt.	K. Wt.	FL & Com.								Net Blt.
		1	2	3	4	5						6	Ldg.	Shat.	Smut	Loose Smut	Cov. Smut	Root Rot	Scald	
<b>ELIGIBLE FOR GENERAL PURPOSE GRADES ONLY</b>																				
Abee	86	105	96	96	98	105	96	L	2	R	65	42	F	G	S	I	I	S	S	
AC Lacombe	101	103	117	110	111	107	105	M	6	S	60	41	G	F	S	R	S	I	I	
AC Stacey	87*	90*	102*	90*	92	96	95	E	6	R	61	34	F	F	S	R	S	R	I	
Bridge	99	107	98	100	101	105	94	L	2	R	66	45	G	F	S	I	I	S	S	
Brier	99	110	110	107	106	120	112	M	6	S	60	38	F	F	S	R	S	I	I	
CDC Guardian	85	105	99	101	99	103	93	M	2	R	62	42	G	F	S	R	I	R	I	
Galt	100	100	100	100	100	100	100	M	6	S	60	36	G	F	S	R	S	S	S	
Heartland	103	102	105	100	100	101	102	M	6	S	60	36	G	F	S	I	I	S	I	
Jackson	84*	83*	92*	85*	89	89	95	E	6	R	62	37	G	F	S	S	S	S	S	
Johnston	89	102	101	106	98	114	111	L	6	S	61	35	P	G	S	S	S	R	S	
Leduc	102	106	103	103	102	108	102	M	6	R	60	41	F	G	I	R	I	R	I	
Noble	101	108	106	102	104	107	109	M	6	S	60	37	G	F	S	I	S	S	S	
Virden	101	107	105	101	102	107	111	L	6	S	58	43	G	G	I	I	R	S	I	
Winthrop	91	98	95	99	100	103	97	M	2	R	66	42	G	F	S	R	S	S	S	
<b>SEMI-DWARF</b>																				
Duke	97	100	106	96	106	101	102	L	6	R	61	38	Ex	F	S	I	I	R	S	
Samson†	94	93	99	91	100	94	97	L	6	R	59	35	Ex	G	S	I	I	S	S	
Winchester†	100	97	101	90	94	93	91	M	6	S	60	41	Ex	G	S	R	I	R	I	
<b>HULLESS</b>																				
CDC Buck	86	80	86	85	92	82	92	M	6	R	71	33	G	G	S	S	I	S	S	
CDC Richard	79	93	85	87	87	89	84	M	2	R	74	38	P	G	S	I	I	R	S	
Condor	80	89	79	78	78	81	82	M	2	R	75	36	G	G	S	S	I	S	S	
<b>ELIGIBLE FOR MALTING GRADES</b>																				
AC Oxbow	97	93	92	91	94	95	97	M	2	R	64	43	G	F	R	I	I	S	S	
Argyle	93	90	97	96	96	94	96	M	6	S	60	35	G	F	S	S	I	S	S	
Bonanza	90	93	97	94	93	94	93	M	6	S	60	36	G	F	S	S	I	S	S	
B1215	92	102	96	97	100	100	91	M	2	R	65	40	G	F	S	I	I	S	I	
B1602	96	97	98	92	95	98	94	M	6	R	63	36	G	F	S	I	I	S	S	
Creme	93	95	105	102	101	100	100	M	6	R	60	37	P	F	S	I	I	S	S	
Duel	99	100	105	106	103	104	104	M	6	S	60	37	G	F	S	I	I	S	S	
Harrington	92	100	91	95	88	103	95	M	2	R	63	42	G	F	S	S	I	S	S	
Manley	90	100	97	99	97	105	101	V-L	2	R	64	42	G	F	S	I	I	S	S	
Stein	92	101	93	97	96	103	95	M	2	R	64	42	G	F	S	I	I	S	S	
Tankard	95	95	100	96	96	100	103	M	6	S	61	36	G	F	S	S	I	S	I	

**Remarks:** Smuts can be controlled with systemic seed treatment fungicides. Semi-Dwarfs respond to high levels of management and can yield up to 50% more than Galt. ARGYLE – shows primarily head breakage while the other varieties show primarily kernel shattering. AC LACOMBE, AC OXBOW & B1215 – seed supply limited in 1993.

## SPRING TRITICALE

Variety	Yield as % of Wapiti							Resistance to:								
	Irr. 1 & 2	Area (See Map)					Rel Mat	T. Wt.	K. Wt.	Shat-ter			Loose		Com.	
		1	2	3	4	5				6	Lodging	ter	ing	Smut	Bunt	Rt.
Frank†	88	102	95	95	91	-*	-*	V-L	67	37	G	G	R	R	S	
Wapiti	100	100	100	100	100	-*	-*	V-L	66	43	G	G	R	R	I	

**REMARKS:** FRANK & WAPITI – 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. BANJO – insufficient test data to describe, limited seed available in 1993.

## 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.

**WINTER TRITICALE – PIKA, TRILLIUM & WINTRI** – yield similar to Norstar. Pika is similar in winter survival to Norstar, but Trillium and Wintri are about 5% to 10% lower.

**Symbols used:** † Denotes variety may not be described in 1994; \* 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=Medium, E=Early; T. Wt.=Test weight (kg/hl). Multiply kg/hl by 0.8 to get pounds per bushel; K. 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.

## OATS

Yield as % of Cascade

Resistance to:

Variety	Irr. 1 & 2	Area (See Map)						Rel Mat	T. Wt.	K. Wt.	Resistance to:		
		1	2	3	4	5	6				Ldg.	Shat.	Smuts
Athabasca	97	89	84	82	81	82	89	E	50	35	G	F	S
Calibre	100	106	100	98	93	99	96	L	50	36	F	G	S
Cascade	100	100	100	100	100	100	100	M-L	48	35	G	G	S
Derby	102	106	103	107	101	103	99	M-L	51	37	G	G	S
Foothill	92	95	87	93	87	90	88	L	48	31	F	G	S
Grizzly	97	88	91	91	92	91	95	L	50	35	F	G	S
Jasper	106	97	97	96	91	94	92	E	51	34	F	G	S
Robert	101	95	92	96	83	94	85	M-L	47	38	G	G	R
Waldern	107	103	107	104	101	106	108	M-L	46	43	G	G	S

### HULLESS

Terra <sup>†</sup>	81	68	71	75	70	70	70	E	54	28	G	G	S
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**Remarks:** ROBERT & TERRA – seed supply limited in 1993. 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, AC MARIE & AC HILL – inadequate test data to describe, seed not available in 1993.

## FALL RYE

Yield as % of Kodiak

Variety	Irr. 1 & 2	Area (See Map)						Rel Mat	T. Wt.	K. Wt.	Straw Strength	Stem Smut
		1	2	3	4	5	6					
Musketeer	XX	110	101	XX	106	100	XX	M	72	32	F	R
Prima	XX	114	107	XX	105	106	XX	M	72	30	F	I
Kodiak	XX	100	100	XX	100	100	XX	M	69	31	F	R
Danko	XX	106	113	XX	104	XX	XX	M-L	73	34	G	XX

**Remarks:** Stem smut – Use systemic fungicides in high risk areas on all varieties. Varieties listed with the winter hardiest at the top. Yield information is based on limited data. DANKO – has winter hardiness between fall rye and Norstar winter wheat.

## FLAX

Yield as % of Noralta

Variety	Irr. 1 & 2	Area (See Map)						Rel Mat	Seed Size	Rust Resistance
		1	2	3	4	5	6			
Andro	101	109	103	98	105	107	100	M	M	R
Dufferin <sup>†</sup>	98	97	94	93	92	98	79	L	M	R
MacGregor	113	116	110	115	107	109	108	L	S	R
Noralta <sup>†</sup>	100	100	100	100	100	100	100	E	S	S
NorLin	105	101	105	97	108	99	102	M	M	R
Somme	124	129	125	121	XX	XX	XX	L	L	R
Vimy	111	113	108	93	102	100	95	M-L	L	R

**Remarks:** FLANDERS – insufficient test data to describe, limited seed available in 1993.

**Symbols used:** <sup>†</sup>Denotes variety may not be described in 1994. XX Denotes insufficient test data to describe.

**Abbreviations used:** Rel Mat=Relative maturity; L=Late, M-L=Medium-late, M=Medium, E=Early; T. Wt.=Test weight (kg/hl). Multiply kg/hl by 0.8 to get pounds per bushel; K. Wt.=Kernel weight (grams/1000 kernels); Ldg.=Lodging; Shat.=Shattering; G=Good, F=Fair; Seed size, S=Small, M=Medium, L=Large; R=Resistance, S=Susceptible;

## CANOLA

Variety	Irr. 1 & 2	Area (See Map)						Comp Mat	Comparative Resistance to:			
		1	2	3	4	5	6		Straw Strength	Oil (%) Content	Black- leg	White Rust
<b>Yield as % of Tobin</b>								<b>POLISH TYPE <i>B. campestris</i></b>				
AC Parkland	92	87	87	94	86	96	93	+1	F	+1.5	4	R
Colt	100	103	115	116	105	103	103	+1	F	+1.6	4	S
Eldorado	101	108	104	104	107	101	103	0	F	+1.8	4	S
Goldrush	XX	XX	109	108	106	XX	100	+1	F	-0.2	4	R
Horizon	102	108	110	112	101	104	108	0	F	+1.3	4	S
Reward	XX	XX	113	112	102	XX	105	+1	F	+1.9	4	R
Tobin	100	100	100	100	100	100	100	90	F	41.9	4	R
<b>Yield as % of Westar</b>								<b>ARGENTINE TYPE <i>B. napus</i></b>				
AC Elect	XX	XX	XX	XX	XX	XX	XX	+2	G	+0.4	3	R
AC Excel	101	XX	102	105	111	93	100	+1	G	+0.3	3	R
AC Tristar <sup>†</sup>	73	XX	XX	81	78	XX	64	+1	F	-1.0	5	R
Alto	97	XX	107	104	114	101	96	-1	F	0.0	5	R
Bounty	104	XX	112	114	105	116	89	+2	G	-1.0	4	R
Celebra	101	XX	110	115	116	-*	-*	+2	G	-0.7	3	R
Crusher	104	XX	XX	105	111	-*	-*	+4	Ex	+0.5	3	R
Cyclone	XX	XX	XX	XX	XX	XX	XX	+2	Ex	-0.6	2	R
Delta	101	XX	110	111	112	108	102	+3	Ex	-0.8	3	R
Garrison	XX	XX	XX	XX	XX	XX	XX	+4	Ex	-1.2	2	R
Global	100	-*	-*	-*	-*	-*	-*	+6	Ex	-1.6	2	R
Hyola 401	111	XX	XX	118	125	XX	91	+1	Ex	-0.3	4	R
Legend	97	XX	111	110	103	102	94	+1	G	-1.0	3	R
HC 120 <sup>†</sup>	109	XX	118	116	117	107	91	+2	Ex	+0.2	4	R
Profit	98	XX	102	99	98	98	81	+1	F	+0.9	3	R
Seville	XX	XX	XX	XX	XX	XX	XX	+2	G	-1.2	3	R
Stallion	81	XX	80	82	94	XX	67	+2	G	-2.5	3	R
Vanguard	100	XX	106	110	109	102	88	+2	G	-1.3	3	R
Westar	100	100	100	100	100	100	100	104	F	44.3	5	R

**Remarks:** Polish varieties, on average, yield 20% less and mature 2-3 weeks earlier than Argentine type. Argentine types shatter more readily than Polish when ripe and require early seeding in Areas 4, 5 & 6. Argentine canola is risky in Areas 5 and 6 because of late maturity. Mixtures of canola and mustard are inseparable and unacceptable. STALLION & AC TRISTAR – Triazine resistant varieties. In blackleg prone areas, do not grow varieties that are very 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:** <sup>†</sup>Denotes variety may not be described in 1994; \*Denotes variety not well suited to the area; XX Denotes insufficient test data available.  
**Abbreviations used:** Rel Mat=Relative maturity; L=Late, M-L=Medium-late, E=Early; T. Wt.=Test Weight (kg/ha). Multiply kg/ha by 0.8 to get pounds per bushel; K. Wt.=Kernel weight(grams/1000 kernels); 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.

