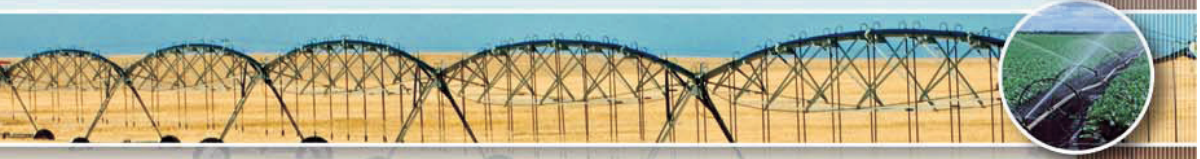




Agriculture and  
Agri-Food Canada

Agriculture et  
Agroalimentaire Canada



Canada-Saskatchewan  
Irrigation  
Diversification  
Centre

# CROP VARIETIES FOR IRRIGATION



January 2010



Saskatchewan





**Canada-Saskatchewan  
Irrigation  
Diversification  
Centre**

The Canada-Saskatchewan Irrigation Diversification Centre (CSIDC), Outlook, Saskatchewan, is managed and funded by the federal and provincial governments, by industry and by academia. The federal contribution is provided by Agriculture and Agri-Food Canada. The provincial partner is Saskatchewan Agriculture. Industry is represented by the Irrigation Crop Diversification Corporation (ICDC) and the Saskatchewan Irrigation Projects Association (SIPA). Academia is represented by the University of Saskatchewan.

The goal of CSIDC is to promote economic security and sustainable rural development, primarily through diversified cropping and intensive management of irrigated cropland.

Funding for variety testing and the production of this report was provided by the Irrigation Crop Diversification Corporation; Agriculture and Agri-Food Canada, and Saskatchewan Agriculture.

**CROPS:**

Canola ( <i>B. napus</i> )	4	Oilseed Sunflower	12
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**For more information contact:**

**CSIDC**  
Box 700  
901 McKenzie St. S.  
Outlook, SK S0L 2N0  
ph. 306-867-5400  
email: [csidc@agr.gc.ca](mailto:csidc@agr.gc.ca)

**Saskatchewan Agriculture**  
Irrigation Development Branch  
Box 609  
Outlook, SK S0L 2N0  
ph. 306-867-5500  
email: [gerry.gross@gov.sk.ca](mailto:gerry.gross@gov.sk.ca)



# Using the Variety Guide

## Introduction

The yield comparison tables are compiled from irrigated yield tests conducted by the Canada-Saskatchewan Irrigation Diversification Centre (CSIDC). The data used in the tables are from irrigated co-operative (pre-registration) trials, regional yield trials, agronomic and observational trials, and producer funded yield trials.

The trials are conducted on small replicated plots using specialized plot equipment. A high level of management is applied to eliminate differences caused by soil variability, weed pressure, or disease. The aim is to make conditions as uniform as possible so that yield differences are due to the varieties themselves, and not some other factor. The yield of small, uniform plots is generally greater than field yields; however, the relative ranking of varieties will be the same. Emphasis is placed on testing varieties with good lodging tolerance, suitable disease resistance, and ease of harvest under irrigated production.

Crop varieties respond differently from year to year. The highest yielding variety one year may be one of the lowest yielding in another year (for example, it may mature late and be at risk of frost). Choosing the highest yielding variety is no guarantee that it will give the highest yield for this season, or your farm. Selecting one of the higher ranked varieties may be suitable, especially if some other characteristic, such as disease resistance or early maturity, is desired.

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## Site years

## Interpreting the Tables

One site year is a test performed for one year at one site. A test conducted over 10 years at one site, or one year at 10 sites equals 10 site years in both cases. Results from less than six site years are reported only for those cases where data is limited.

## Relative yield of varieties

All varieties are compared as a percent of a standard “check” variety. This variety is included in all tests. All other varieties are compared to it. This allows comparisons from year to year, from site to site, and from test to test.

A well run test performed over a large number of site years can detect yield differences of 2 or 3 percent. Consider four varieties that yield 108, 107, 106, and 102 percent of the check: the top three have produced comparable yields, and will outyield the fourth. However, where site years are limited, varieties within 6 or 8 percent cannot be said to be different based on the available data. Further testing is needed to rank the varieties more precisely.

## Lodging ratings

Lodging ratings are reported on a four point subjective scale. The ratings are based on both numerical ratings and on general field observations throughout the growing season. Lodging varies widely from year to year and from site to site.

## Interpreting the Tables (continued)

Lodging ratings are subjective, based on the judgement of the researcher. The rankings at CSIDC have been performed using a consistent method wherever possible. This improves the accuracy of the ranking of the varieties, but does not predict results for any given year, field, or level of management.

### Agronomic information

Agronomic information includes plant height, days to flowering or maturity, seed size and quality measurements. Crop height, for example, varies from year to year. Therefore, the agronomic information is useful only as a comparison between varieties. Find a variety you are familiar with and compare others to it to determine whether it is likely to be different.

### Disease ratings

CSIDC does not routinely collect disease ratings for each variety. **Please consult Varieties of Grain Crops 2010, a publication of Saskatchewan Agriculture, for disease ratings of specific varieties.**

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## A Word of Caution

Occasionally the comparison with the check variety can be misleading. In some years the check may have an exceptionally low or high yield, skewing the rankings. For example, a new variety with limited site years of data (compared to the long term check) may rank unusually high if the check performed much worse than average during one year. Further testing will even out the variability and the ranking of the varieties will more closely reflect performance in the field.

**Management practices may have a greater impact on yield than choice of variety.** For example, seeding date experiments at CSIDC for irrigated flax have shown up to 20 percent yield reduction for late May seeding as compared to early May. This 20 percent spread is greater than the yield difference between flax varieties.

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## Plant Breeder's Rights



Plant Breeders' Rights (PBR) ensure that private sector and institutional crop breeders are afforded reasonable control of their varieties and fair compensation for their efforts. Plant breeders may apply under the Plant Breeders' Rights Act to obtain certain controls over seed increase and seed sales of their varieties.

Sale or any other transfer of ownership of seed protected under the act is prohibited without the written permission of the breeder or the breeder's agent, and without payment of a royalty to the breeder or the agent. Under PBR, bona fide farmers are allowed to keep seed of the variety for use on their own farms.

**Varieties for which Plant Breeders' Rights are in effect at the time of printing are identified by the symbol . Varieties for which Plant Breeders' Rights have been applied for are identified by the symbol \*.**

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***For more detailed information on specific varieties, refer to the Saskatchewan Agriculture publication Varieties of Grain Crops 2010.***

## Canola (*B. napus*)

Results from the 2009 Prairie Canola Variety Trials are available on the Canola Council of Canada website at

[www.canolacouncil.org/pcvt.aspx](http://www.canolacouncil.org/pcvt.aspx).

These trials provide information on some of the most recent canola varieties released.




Clubroot is a serious soil-borne disease of canola. Currently, there are no economical control measures that can remove the disease from infected canola fields. Sanitation and crop rotation are the most effective methods of prevention. Information about clubroot is available on the following website:

[www.clubroot.ca](http://www.clubroot.ca).

[www.clubroot.ca](http://www.clubroot.ca).


**45H29** is the first variety registered with tolerance to clubroot. **45H29** has yielded slightly higher than **45H21** in limited testing (data not shown).

**45S51** is the first variety registered with tolerance to white mold. **45S51** has yielded similar to **45H21** in limited testing (data not shown).











Variety	Type	Site Years	Yield as % of 45H21	Lodging Rating	Height (cm)	Days to Maturity
<b>Conventional</b>						
46A65 	OP	41	83	G	122	99
<b>Clearfield</b>						
5525 CL	HYB	5	105	VG	130	99
45H73	HYB	16	100	G	128	98
45P70	HYB	12	97	G	127	99
71-30 CL	HYB	9	95	G	129	97
1651 H	HYB	10	82	G	131	98
<b>Liberty Link</b>						
5440	HYB	12	112	VG	132	99
5030	HYB	24	110	VG	138	99
8440	HYB	12	110	VG	123	99
5770	HYB	6	106	VG	107	100
9590	HYB	16	104	G	126	98
5020	HYB	23	99	VG	122	97
1143*	HYB	10	95	G	125	99
<b>Roundup Ready</b>						
45H26	HYB	15	108	G	128	99
9553	HYB	7	108	G	130	98
45H28	HYB	7	106	G	129	99
D3150	HYB	7	105	G	126	98
46P50	HYB	16	103	G	131	100
6040 RR	HYB	5	102	G	127	99
9554	HYB	8	102	VG	130	98
71-45 RR	HYB	16	102	G	122	97
45H21	HYB	41	100	G	125	99
V1037*	HYB	10	99	G	127	100
SP Favourable RR	SYN	8	99	G	134	98
83S01 RR	SYN	6	98	G	126	98
1841	HYB	15	98	VG	133	98
4424 RR	HYB	5	97	G	128	99
93H01 RR	HYB	7	96	G	127	99
1852 H	HYB	10	96	G	135	99
6020 RR	HYB	5	94	G	121	99
9551 	OP	7	90	G	122	98
SP Desirable RR	SYN	14	89	G	122	98
v1035*	HYB	6	90	G	119	97
4414 RR	HYB	6	88	G	128	97
SP Banner 	OP	11	86	G	120	97
997 RR	OP	9	86	G	126	99
Rugby *	OP	10	85	G	120	98
Red River 1826**	OP	8	79	G	121	98

Average plot yield of 45H21 (check): 4,847 kg/ha (86 bu/ac)

HYB = Hybrid; SYN = Synthetic; OP = Open Pollinated  
Lodging: G = good; VG = very good

 PBR in effect  
\* PBR applied for  
\* Low linolenic variety  
\*\* High Erucic Acid Rapeseed

## Flax

Variety	Site Years	Yield as % of CDC Bethune	Lodging Rating	Days to Maturity
CDC Bethune 	25	100	G	114
Prairie Thunder 	17	99	VG	114
Prairie Blue 	25	95	G	118
Taurus 	14	93	G	113
Macbeth 	24	93	G	114
Prairie Grande 	14	92	VG	113
CDC Sorrel 	17	92	G	115
Lightning 	15	92	G	114
AC Watson 	18	92	G	113
CDC Mons	25	92	G	116
Hanley 	24	90	G	112
CDC Arras	23	90	F	113
CDC Normandy	19	89	F	115
Vimy	17	83	P	112

Average plot yield of CDC Bethune (check): 3,273 kg/ha (52 bu/ac)  
 Lodging: P = poor; F = fair; G = good; VG = very good

 PBR in effect

All varieties are resistant to rust.

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.

# Spring Wheat

## Canada Western Red Spring

**Goodeve, Unity** and **Fieldstar** are CWRS wheat midge tolerant varieties. They contain the “SM1” tolerant gene. To manage against the build-up of midge resistance to the gene, an “*interspersed refuge*” will be used commercially. These varieties are not immune to wheat midge and can suffer midge damage when high infestation levels occur. More information on midge tolerant wheat can be found at [www.midgetolerantwheat.ca](http://www.midgetolerantwheat.ca).

**CDC Imagine** and **CDC Abound** are tolerant to the CLEARFIELD® herbicides Adrenalin SC and Altitude FX.

**Lillian** is a solid stem variety offering some resistance to wheat stem sawfly.

Limited quantities of seed of the new varieties **Goodeve, Unity,** and **Waskada** will be available in 2010. Seed of the new varieties **Fieldstar, Helios,** and **Stettler** will not be available in 2010.

## Canada Western Amber Durum

Seed of the new varieties **Brigade,** **Eurostar** and **CDC Verona** will not be available in 2010.

All durum wheat varieties are susceptible to two new races of loose smut.

## Canada Western Extra Strong

**Glencross** is the first CWES wheat midge tolerant variety. Seed of the new varieties **Glencross** and **CDN Bison** will not be available in 2010.

Limited quantities of seed of the new varieties **Burnside** and **CDC Walrus** will be available in 2010.

## Canada Western Soft White Spring

Soft white spring wheat may have potential demand as a feedstock in the production of ethanol. All soft white wheat varieties are eligible for both domestic and export markets. Soft white spring wheat varieties are susceptible to pre-harvest sprouting. The leaf spot pathogens that affect other wheat classes also affect soft white cultivars and therefore recommendations for leaf spot control are similar.























**AC Reed, AC Meena** and **Bhishaj** are susceptible to common bunt. **AC Andrew** has improved resistance to common bunt, powdery mildew, and black point. **Bhishaj** has improved resistance to loose smut. **AC Reed, AC Meena,** and **AC Andrew** are susceptible to loose smut.

Seed of the new variety **Sadash** will be available in 2010.


Irrigated areas in south and central Saskatchewan are susceptible to fusarium infestations. **Low to moderate levels of fusarium were found in a number of irrigation districts across the province in 2009.** Sow less susceptible cereal types and varieties on irrigated fields with a history of fusarium head blight. Use fusarium tested seed to prevent new infestations of irrigated land. Durum and CWES are the most susceptible wheat types followed by CWSWS, CPS and CWRS. Information on resistance levels in wheat varieties is available in the Saskatchewan Agriculture publication:

**Varieties of Grain Crops 2010.**

# Spring Wheat

Variety	Site Years	Yield as % of AC Barrie	Lodging Rating	Height (cm)	Days to Maturity	% Protein +/- AC Barrie	Head Awns Present
<b>Canada Western Red Spring</b>							
CDC Abound *	11	108	G	85	109	-0.3	Y
McKenzie	22	107	F	91	103	-0.5	Y
Superb 	39	106	G	87	107	-0.4	Y
Unity 	12	105	G	91	104	-0.3	Y
5602HR 	25	103	G	92	107	+0.3	Y
CDC Go	18	103	G	84	105	-0.2	Y
Stettler *	6	102	G	89	106	+0.4	Y
AC Barrie 	49	100	G	92	105	15.5%	N
Fieldstar 	7	100	G	92	104	-0.2	Y
Helios 	13	99	G	92	102	0.0	N
Somerset 	15	98	G	98	102	+1.0	N
Goodeve 	10	98	G	90	104	+0.3	N
Kane 	13	97	G	86	105	-0.3	Y
CDC Imagine 	17	97	G	89	103	-0.1	N
Lillian 	23	96	F	92	104	+0.5	N
Waskada 	11	96	G	93	105	+0.4	Y
Harvest 	15	94	G	87	102	-0.3	N
CDC Alsask *	17	93	G	94	103	+0.7	N
CDC Osler	14	93	G	88	102	+0.2	N
Alvena 	13	88	G	91	103	+0.7	N
<b>Canada Western Hard White</b>							
Snowstar 	13	102	G	83	104	-1.3	N
Snowbird 	32	93	G	94	105	-0.3	N
<b>Canada Western Amber Durum</b>							
Strongfield 	33	108	F	88	108	-0.1	Y
AC Avonlea 	44	107	G	89	106	-0.2	Y
Brigade *	8	104	G	93	113	-0.2	Y
CDC Verona *	8	104	G	88	114	-0.1	Y
Eurostar *	8	99	F	90	112	-0.2	Y
<b>Canada Prairie Spring White</b>							
AC Vista 	49	119	F	83	107	-2.0	Y
<b>Canada Prairie Spring Red</b>							
AC Crystal 	46	114	G	83	107	-2.3	Y
5702PR *	11	111	G	84	107	-1.2	Y
5701PR 	27	104	G	81	105	-1.1	Y
<b>Canada Western Extra Strong</b>							
CDN Bison	6	103	G	88	108	-0.7	Y
CDC Walrus	18	102	F	98	105	-0.7	N
CDC Rama	19	101	G	99	105	-0.4	Y
Burnside	20	99	F	99	106	-0.7	N
Glencross	11	97	F	100	105	-0.6	N
<b>Canada Western Soft White Spring</b>							
Sadash 	27	127	G	85	110	-4.2	Y
AC Andrew	46	123	G	83	109	-3.6	Y
Bhishaj	39	120	G	84	108	-3.8	Y
AC Meena	27	118	G	84	108	-3.9	Y
AC Reed	38	116	G	79	107	-3.8	Y

Average plot yield of AC Barrie (check): 5,882 kg/ha (87 bu/ac)  
Lodging: F = fair; G = good

 PBR in effect  
\* PBR applied for

# Barley

## Malt Barley

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

Information on recommended malting barley varieties for 2010-2011 can be found on the Canadian Malting Barley Technical Centre (CMBTC) website at [www.cmbtc.com](http://www.cmbtc.com).

Recommended 2-row varieties include **AC Metcalfe**, **CDC Copeland**, **CDC Kendall** and **Newdale** while recommended 6-row varieties include **Legacy** and **Tradition**.






















**CDC Yorkton**, **Robust**, **Lacey**, **CDC Battleford** and **Harrington** are not on the CMBTC malting list. A malting barley market may exist for these varieties.

**CDC Mayfair** and **CDC Kamsack** are two new 6-row varieties that have yielded less than **CDC Yorkton**, while **Norman**, **Merit 57**, **CDC Reserve** and **CDC Landis** are new 2-row varieties that have yielded similar to **AC Metcalfe** in limited testing (data not shown). Production of these new 2-row and the 6-row varieties **CDC Clyde** and **CDC Laurence**, has been limited to quantities required for testing and market development.

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

## Feed Barley

The 2-row variety **Formosa**, has yielded less than **McLeod** while the 6-row variety **Chigwell** has yielded similar to **Sundre** in limited testing (data not shown).

Variety	2 or 6 Row	Site Years	Yield as % of AC Metcalfe	Straw	Lodging Rating	Height (cm)	Relative Maturity	Awn Type
<b>Malt</b>								
CDC Clyde 	6	5	128	N	G	83	M	S
CDC Laurence 	6	5	122	N	G	95	M	S
CDC Yorkton	6	6	120	N	G	84	M	S
Lacey 	6	5	115	N	G	86	M	S
Legacy 	6	7	115	N	G	89	M	S
Tradition 	6	7	112	N	G	90	M	S
CDC Battleford 	6	8	110	N	F	93	M	S
Robust	6	6	106	N	P	105	M	S
Newdale 	2	7	117	N	G	88	M	R
CDC Copeland 	2	8	114	N	G	98	M	R
CDC Select	2	7	102	N	G	91	M	R
AC Metcalfe 	2	11	100	N	F	92	M	R
CDC Kendall 	2	10	100	N	P	97	M	R
Harrington	2	11	84	N	P	90	M	R
<b>Feed</b>								
AC Rosser 	6	7	129	N	P	95	M	S
Alston	6	4	125	N	G	84	M	S
Manny	6	6	118	N	G	89	M	R
Sundre 	6	4	113	N	G	93	L	S
Champion 	2	4	122	N	G	87	M	R
Xena 	2	6	121	N	F	83	M	R
CDC Coalition 	2	5	120	N	G	86	M	R
CDC Bold	2	7	117	SD	P	86	M	R
CDC Trey 	2	7	114	N	G	92	M	R
McLeod 	2	6	114	N	F	81	M	R
CDC Mindon 	2	4	110	N	G	87	M	R
CDC Helgason 	2	7	108	N	G	92	M	R
CDC Dolly	2	9	105	N	P	88	E	R
CDC Cowboy 	2	5	103	N	F	108	L	R
<b>Hulless</b>								
CDC McGwire 	2	7	88	N	F	92	M	R

Average plot yield of AC Metcalfe (check): 6,244 kg/ha (116 bu/ac)

Lodging: P = poor; F = Fair; G = Good

Maturity: E = early; M = medium; L = late

M = AC Metcalfe = 100 days

 PBR in effect

R = rough

S = smooth

N = normal



















SD = semi-dwarf

# Field Pea

All Green, Yellow and Maple varieties listed in the table are semi-leafless types. **CDC Sonata** is a normal leaf silage variety. Normal leaf varieties are not normally recommended for irrigated production.

**CDC Acer, CDC Rocket** and **40-10** have purple flower colour and tannin containing seed coats. All other varieties have white flower colour and non-pigmented seed coat.

All pea varieties will lodge under irrigation. Those with better lodging resistance will stand later into the season. These varieties tend to be less affected from disease, fill more fully, and generally produce a higher yield with superior seed quality.

Variety	Site Years	Yield as % of Cutlass	Lodging Rating	Days to Maturity	Vine Length (cm)	Seed Weight (g/1000)
<b>Green</b>						
Stratus 	9	108	P	99	75	248
Camry 	12	104	F	100	67	247
Cooper 	28	103	G	101	82	258
CDC Striker	32	102	F	97	82	228
CDC Patrick	13	102	F	99	88	164
CDC Sage	14	93	F	99	80	172
Nitouche	20	92	F	98	82	231
SW Sergeant	14	92	F	99	81	185
Tamora 	13	89	F	100	80	263
Bluebird 	12	80	P	99	63	246
<b>Yellow</b>						
CDC Centennial	14	120	P	99	76	246
Agassiz 	13	116	F	97	91	216
Tudor 	14	115	F	100	91	263
CDC Meadow	22	115	F	96	88	198
SW Carousel 	14	115	P	98	86	231
Reward 	12	114	G	98	90	235
SW Midas 	14	113	F	96	79	199
Thunderbird 	13	109	G	99	87	204
CDC Mozart	26	108	F	97	75	211
CDC Treasure	13	108	G	96	88	199
Polstead 	17	108	F	94	73	258
Noble 	9	107	G	98	88	217
Sorento 	9	105	F	99	81	229
CDC Golden	22	105	F	97	84	199
Eclipse 	39	102	G	99	81	226
Canstar 	15	101	F	95	84	219
CDC Bronco	20	100	G	98	81	190
Cutlass	39	100	G	98	81	207
CDC Prosper	13	93	G	99	83	134
SW Circus 	9	91	F	93	78	182
DS-Admiral 	11	87	F	96	83	230
<b>Maple</b>						
CDC Rocket	11	92	F	97	85	187
CDC Acer	3	56	VP	99	84	125
<b>Forage/Silage</b>						
CDC Leroy	11	91	F	100	85	136
CDC Tucker	11	88	G	100	93	159
40-10	7	53	VP	102	96	116
CDC Sonata	3	51	VP	100	82	196

Average plot yield of Cutlass (check): 5,246 kg/ha (78 bu/ac)  
Lodging: VP = very poor; P = poor; F = fair; G = good

 PBR in effect

# Dry Bean

Variety	Plant Type	Site Years	Yield as % of Othello	Days to Maturity	Seed Weight (g/1000)
<b>Pinto</b>					
Island	II	10	104	106	407
Othello	III	32	100	105	345
Winchester	II	11	99	101	342
CDC WM-1	I	6	72	99	350
<b>Black</b>					
AC Black Diamond	II	22	92	104	261
Black Violet	II	15	76	105	178
CDC Jet	II	10	70	109	173
<b>Great Northern</b>					
AC Polaris	II	22	100	105	493
Alert	II	11	89	107	338
Resolute	II	11	82	101	335
<b>Pink</b>					
CDC Rosalee	III	5	102	102	264
Early Rose	II	9	97	99	293
Viva	III	32	95	107	258
<b>Small Red</b>					
AC Earlired	III	12	107	98	312
AC Redbond	II	21	102	100	316
NW-63	III	14	90	107	300

## Wide Row Trials

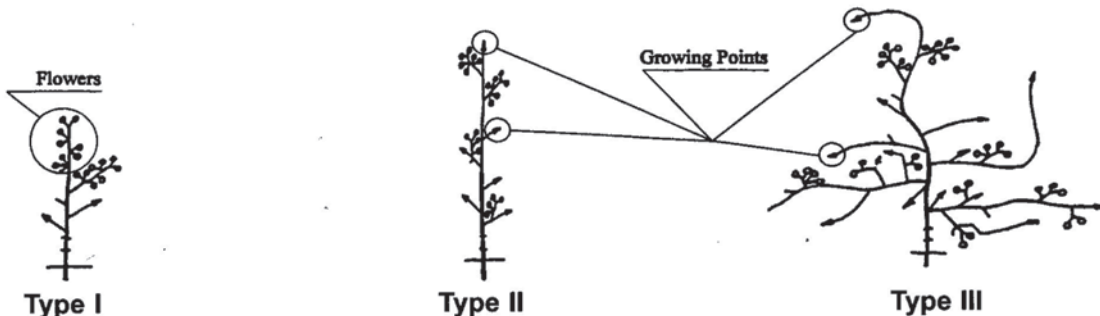
Commercial row crop production is typically on 55 cm (22 in.) or 75 cm (30 in.) centres. The wide row bean trials are grown on 60 cm (24 in.) rows to evaluate varieties under conditions similar to conventional practice.

Yield and days to maturity are important factors when choosing a bean variety. Spring or fall frost can destroy a dry bean crop. It is important to select a variety that will mature in the normal frost-free season for your region.

**CDC WM-1** and **CDC WM-2** are new slow darkening pinto dry bean varieties. **CDC WM-2** has yielded higher than **CDC WM-1** but less than **Winchester** in limited testing under wide row production conditions (data not shown).

Average plot yield of Othello (check): 3,313 kg/ha (2,952 lb/ac)

## Dry Bean Plant Type



### Determinate bush

The main stem and branches end in flowers. Flowering lasts 10 to 20 days with fairly uniform pod maturity.

### Indeterminate short vine

The main stem is erect. The stem and branches end in vegetative buds. Flowering lasts 10 to 30 days with uneven pod maturity.

### Indeterminate sprawling vine

The stems are semi-prostrate with well developed branches and a dense canopy. Flowering is similar to Type II plants.

Graphic courtesy Colorado Dry Bean Production and IPM Bulletin 548A. Colorado State University Co-operative Extension and Agricultural Experimental Station. 1990.

### Narrow Row Trials

The narrow row dry bean trials are sown on 20 cm (8 in.) row spacing to evaluate performance in a solid seeding management practice. The pod clearance rating is a measure of the proportion of pods held 5 cm (2 in.) or more above ground level. This gives an indication of the suitability for harvest using a direct cut harvest system. Varieties with higher pod clearance ratings will normally have lower harvest losses.

The narrow row variety trials are a separate test from the wide row trials. These tests are not designed to compare conventional wide row and solid seeded management. **Yields and variety rankings cannot be compared between the tables.**




Variety	Plant Type	Site Years	Yield as % of CDC Pintium	Pod Clearance Rating*	Days to Maturity
<b>Pinto</b>					
Maverick	II	4	119	75	109
Island	II	10	114	72	103
Winmor	II	6	114	78	104
Winchester	II	10	113	77	100
CDC Pintium	I	29	100	85	96
CDC WM-1	I	12	98	82	98
CDC WM-2 *	II	5	94	77	98
<b>Black</b>					
Black Violet	II	4	117	82	104
AC Black Diamond	II	11	112	78	103
CDC Jet	II	18	89	85	107
<b>Great Northern</b>					
Alert	II	4	116	78	106
AC Polaris	II	17	111	74	105
Resolute	II	11	95	79	100
<b>Pink</b>					
CDC Rosalee	III	4	113	76	99
Viva	III	10	94	69	103
<b>Small Red</b>					
AC Redbond	II	15	110	78	101
<b>Navy</b>					
Envoy	I	16	83	79	100
AC Cruiser	II	9	79	77	110
Kippen	II	6	73	77	103
Morden 003	I	8	69	76	104

Average plot yield of CDC Pintium (check): 3,192 kg/ha (2,844 lb/ac)



\*Pod clearance rating = % of pods that completely clear the cutterbar at time of swathing.

\*: PBR applied for

## Faba Bean

Variety	Site Years	Yield as % of CDC Fatima	Height (cm)	Days to Maturity	Seed Weight (g/1000)
<b>Coloured Flower</b>					
Florent	2	129	130	111	413
CDC Fatima	7	100	122	110	528
CDC Blitz	7	98	129	115	434
Orion	6	91	119	117	354
Taboar 	2	84	134	110	470
<b>White Flower</b>					
Imposa 	2	118	129	114	536
Snowbird 	3	82	115	110	516

Average plot yield of CDC Fatima (check): 5,145 kg/ha (4,584 lb/ac)

 PBR in effect  
 PBR applied for

Faba bean is late maturing, and should be sown early for best results.

**CDC Fatima** combines earlier maturity and shorter height with high yield potential. Its large seed size is preferred in some markets. White-flowered types are zero tannin. All coloured flower types have seed coats that contain tannins and are considered suitable for food markets if seed size and quality match customer demand.

## Oilseed Sunflower

Variety	Site Years	Yield as % of 63A21 emss	Height (cm)	Days to Maturity
63M80**	2	115	156	129
63M40**	2	104	146	123
63A21 emss	4	100	139	110
63M02**	3	93	151	117
63A70	3	92	156	119

Average plot yield of 63A21 emss (check): 4,361 kg/ha (3886 lb/ac)

\*\* Mid oleic NuSun

The early maturing, short stature (emss) variety **63A21** was grown under solid seeded management practices (20 cm / 8 in. row spacing). All other varieties were grown under wide row management practices (60 cm / 24 in. row spacing).

NuSun varieties have a fatty acid profile desired by major frying companies.










## Corn


The Alberta Corn Committee (ACC) irrigated grain and silage corn hybrid performance trials were conducted at CSIDC from 2003-2009. Results from the trials for each individual year as well as a multi-year summary are available on the ACC website at [www.albertacorn.com](http://www.albertacorn.com).

Select a variety with a Corn Heat Unit rating suitable to your area. A corn heat unit map of Saskatchewan is available on the Saskatchewan Agriculture website at [www.agriculture.gov.sk.ca/Corn Heat Units](http://www.agriculture.gov.sk.ca/Corn_Heat_Units).

Information on corn production can be found in [Corn Production in Manitoba](#), published by the Manitoba Corn Growers Association. To order the manual, go to the Manitoba Agriculture website at [www.gov.mb.ca/agriculture/crops/cropproduction/gaa01d22.html](http://www.gov.mb.ca/agriculture/crops/cropproduction/gaa01d22.html).

# Annual Cereal Forage

Variety	Site Years	Dry Matter Yield	CP	NDF	ADF	TDN
<b>Barley</b>		<b>% of AC Ranger</b>				
<b>2-row</b>						
CDC Cowboy 	7	105	11.9	51.6	32.0	62.6
Newdale 	6	105	12.3	47.4	29.0	64.4
CDC Copeland 	9	102	11.6	51.1	32.6	62.4
Stockford 	4	99	13.1	51.7	33.3	61.6
CDC Bold	10	95	12.9	49.3	30.5	64.1
<b>6-row</b>						
Binscarth	4	103	12.9	49.2	29.9	63.6
AC Ranger	10	100	12.5	50.8	31.7	63.0
AC Rosser 	10	98	12.9	48.0	29.8	64.6
AC Hawkeye	10	97	12.8	52.4	33.1	62.1
Vivar 	10	96	11.7	49.7	30.3	64.2
Trochu 	10	95	12.7	48.8	30.3	59.9
CDC Battleford 	9	93	12.1	47.3	30.5	64.4
<b>Oats</b>		<b>% of CDC Baler</b>				
Pinnacle 	10	104	11.0	52.5	34.6	60.2
AC Morgan	10	102	11.1	51.3	33.9	60.0
Calibre	10	102	11.4	52.8	36.3	58.4
CDC Baler*	10	100	11.5	56.1	36.8	58.3
<b>Triticale</b>		<b>% of Pronghorn</b>				
Comet*	10	101	12.2	58.9	40.6	54.6
Banjo	10	101	13.7	59.9	39.7	54.9
Viking*	10	100	12.3	60.0	40.7	54.3
Pronghorn	10	100	14.1	58.6	39.0	54.9
AC Ultima	10	96	12.7	56.0	36.5	58.2


Average dry matter yield of check: AC Ranger = 15,424 kg/ha (6.87 tons/ac)  PBR in effect  
 CDC Baler = 15,136 kg/ha (6.74 tons/ac)  
 Pronghorn = 13,017 kg/ha (5.80 tons/ac)

Barley and oat varieties harvested at soft dough; triticale varieties harvested at early-late milk.

CP = Crude Protein; NDF = Neutral Detergent Fibre;  
 ADF = Acid Detergent Fibre; TDN = Total Digestible Nutrients

\*Varieties available for annual forage production

# Alfalfa

Variety	Site Years	Yield as % of Beaver	Variety	Site Years	Yield as % of Beaver
Steak	3	118	134	3	104
Approved	3	114	Atomic	3	104
Forecast 1001	3	112	WL 319 HQ	3	104
WinterGold	3	112	Equinox	3	103
AC Nordica	4	111	53Q60	7	103
WL 327	3	110	AC Grazelander Br 	7	103
Starbuck	3	109	Dakota	3	103
54V46	4	109	Tophand	3	103
WL 232 HQ	3	109	StockWell	10	102
Spredor 4	3	108	Proleaf	3	102
Gibraltar	3	107	Barrier	11	102
Perfect	3	107	Gala	4	102
Multi5301	3	107	Hornet	4	102
Survivor	3	106	Magnum 3801 Wet	3	101
AC Longview	7	106	Quattro HR	3	101
Pickseed 2065MF	7	106	<b>Beaver</b>	<b>30</b>	<b>100</b>
54V54	7	106	Rangelander	18	99
Pickseed 8925MF	4	105	Rhino	3	98
AC Blue J	18	105	Magnum III-WET	3	97
421Abacus	3	105	Matrix	3	96
AmeriStand 201+Z	7	105	HayGrazer	3	96
AgriMaster	3	105	Convoy	3	95
Geneva	7	104	Dalton	3	93
HybriForce-400	3	104	Runner	6	93
Apex	3	104	Rambler	30	92

Average dry matter yield of Beaver (check): 11,588 kg/ha (5.16 tons/ac)

 PBR in effect

The varieties were evaluated in the Western Forage Testing (WFT) System trials from 1996 to 2008 and in the ICDC/Saskatchewan Forage Council trials established under irrigation in 2002 at CSIDC and in 2003 at Osler, Saskatchewan. WFT variety trials are established each year and forage yields are measured for each of the following three years. All data is for a two cut system except for 2001 to 2003 in which three cuts were taken.

Varieties with rapid re-growth after cutting are best suited to intensive management. For more information on alfalfa varieties, including disease resistance, consult the latest **Saskatchewan Forage Crop Production Guide** available from Saskatchewan Agriculture.

The contribution and co-operation of Dr. B. Coulman of the Department of Plant Sciences, University of Saskatchewan, toward the alfalfa, timothy, and forage grass variety testing is gratefully acknowledged.

# Timothy

Variety	Site Years	Yield as % of Climax
AC Alliance	5	116
Dolina	3	114
Express	3	113
Grinstad	11	112
Joliette	5	112
Jonatan	5	111
Richmond	8	109
Timfor	6	108
Turku	3	104
Winnetou	3	103
TimPro	3	102
Tenho	3	102
Alexander	6	101
Drummond	8	100
Nike	6	100
Climax	11	100
Argus	6	97
Toro	6	97
Glacier	3	96
Carola Champ	6	93
Topi	3	91
Bottnia II	6	89
Tuukka	3	87

Average dry matter yield of Climax (check):  
11,040 kg/ha (4.92 tons/ac)

Irrigated timothy trials were conducted at the CSIDC and at the Semiarid Prairie Agricultural Research Centre (SPARC) in Swift Current from 1995 to 1997. Western Forage Testing (WFT) System trials were conducted at CSIDC from 1996 to 2007. AAFC Timothy Performance Trials were conducted at CSIDC in 2004 and 2005. Results from all trials are included in the table.

The trials were harvested in early July and in late August of each year. Export markets prefer high leaf content and long seed heads. **Drummond** had the longest seed heads and the second highest leaf content in the trials conducted from 1995 to 1997. **Richmond** had a lower fiber content and higher nutritive value making it better suited to the domestic dairy hay market than other varieties tested in the 1995 to 1997 trials.

## Perennial Forage

Variety	Site Years	Yield as % of check
<b>Birdsfoot Trefoil</b>		
AC Langille	3	117
Leo (check)	3	100
<b>Cicer Milkvetch</b>		
Windsor	2	101
Oxley (check)	2	100
AC Oxley II	2	90
<b>Crested Wheatgrass</b>		
AC Goliath	2	109
Kirk (check)	3	100
<b>Smooth Bromegrass</b>		
Carlton (check)	3	100
AC Rocket	3	100
Radisson	3	99
<b>Meadow Foxtail</b>		
Dan (check)	3	100
Mountain	3	87

Variety	Site Years	Yield as % of check
<b>Orchard Grass</b>		
Tundra	3	121
Early Arctic	3	118
Kootenay	3	106
Killarney	3	105
Kay	3	100
Kayak	3	91
<b>Meadow Bromegrass</b>		
Montana	3	112
MBA	3	104
Fleet (check)	3	100
<b>Tall Fescue</b>		
Courtney (check)	3	100
Kokanee	3	88

Average dry matter yield of check:

Leo = 10,743 kg/ha (4.79 tons/ac)      Dan = 10,155 kg/ha (4.53 tons/ac)  
 Oxley = 9,496 kg/ha (4.24 tons/ac)      Kay = 11,398 kg/ha (5.03 tons/ac)  
 Kirk = 14,493 kg/ha (6.46 tons/ac)      Fleet = 13,433 kg/ha (6.09 tons/ac)  
 Carlton = 16,004 kg/ha (7.14 tons/ac)      Courtney = 13,958 kg/ha (6.23 tons/ac)

 PBR in effect

# Potato

Variety	Consumption Grade ( >45 mm diameter tubers )		Seed Grade ( <90 mm diameter tubers )	
	Site Years	Yield	Site Years	Yield
<b>Table potato</b>		<b>% of Norland</b>		<b>% of Norland</b>
Atlantic	30	106	28	96
Russet Norkotah	39	100	38	98
Norland	41	100	40	100
Shepody	41	99	40	92
<b>French Fry potato</b>		<b>% of Russet Burbank</b>		<b>% of Russet Burbank</b>
Shepody	47	125	44	101
Ranger Russet	31	109	28	97
Russet Burbank	47	100	44	100
<b>Chipping potato</b>		<b>% of Atlantic</b>		<b>% of Atlantic</b>
AC Ptarmigan	3	108	2	111
Niska	3	102	2	112
Atlantic	7	100	2	100
Snowden	7	93	3	94
Norchip	2	93	1	97

Average consumption grade plot yield of check:  
 Norland = 36.7 tonnes/ha (327 cwt/ac)  
 Russet Burbank = 30.0 tonnes/ha (268 cwt/ac)  
 Atlantic = 38.3 tonnes/ha (341 cwt/ac)

Average seed grade plot yield of check:  
 Norland = 46.1 tonnes/ha (411 cwt/ac)  
 Russet Burbank = 43.1 tonnes/ha (385 cwt/ac)  
 Atlantic = 44.0 tonnes/ha (392 cwt/ac)

The potato variety comparisons shown are based on varietal, agronomic, and fertility trials conducted at CSIDC from 1995 to 2009. The potatoes were grown using standard commercial practice under full irrigation.

Varieties which are commonly used in more than one market appear twice in the table. Shepody, for example, is used primarily as a French fry potato but is also grown for table use.



