



Agriculture and  
Agri-Food Canada

Agriculture et  
Agroalimentaire Canada



Canada-Saskatchewan  
Irrigation  
Diversification  
Centre

2015

# CROP VARIETIES FOR IRRIGATION



Canada



UNIVERSITY OF  
SASKATCHEWAN



ICDC  
Irrigation Crop Diversification Corporation



Government  
of  
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 the Saskatchewan Ministry of 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 the Saskatchewan Ministry of Agriculture.

### For more information, contact:

**Garry Hnatowich, PAg**  
**Irrigation Crop Diversification Corp**  
**Canada-Saskatchewan Irrigation**  
**Diversification Centre**  
**Box 700, 901 McKenzie St. S.**  
**Outlook, SK S0L 2N0**  
**ph. 306-867-5405**  
**email: [garry.icdc@sasktel.net](mailto:garry.icdc@sasktel.net)**

**Kelly Farden, MSc, PAg**  
**Saskatchewan Agriculture**  
**Irrigation Branch**  
**Box 609, 410 Saskatchewan Ave. W.**  
**Outlook, SK S0L 2N0**  
**ph. 306-867-5507**  
**email: [kelly.farden@gov.sk.ca](mailto:kelly.farden@gov.sk.ca)**

## Table of Contents

<u>Crop</u>	<u>Page</u>	<u>Crop</u>	<u>Page</u>
Canola ( <i>B. napus</i> )	4	Soybean	14
Flax	5	Corn	17
Spring Wheat	6	Annual Cereal Forage	18
Barley	9	Alfalfa	19
Field Pea	11	Timothy	20
Dry Bean	12	Perennial Forage	20
Faba Bean	14		

# Using the Variety Guide

**Introduction** The yield comparison tables are compiled from irrigated yield tests conducted by the Irrigation Crop Diversification Corp (ICDC) and 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 a lower ranked variety may be suitable, especially if some other characteristic, such as disease resistance or early maturity, is desired.

---

## Interpreting the Tables

### Site years

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 are higher yielding than 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

ICDC does not routinely collect disease ratings for each variety. **Please consult Varieties of Grain Crops 2015, a publication of Saskatchewan Ministry of Agriculture, for disease ratings of specific varieties.**

## 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 compared to early May. This 20 percent spread is greater than the yield difference between flax varieties.

## Plant Breeders' Rights



Plant Breeders' Rights (PBR) ensure that the 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 .**

***For more detailed information on specific varieties, refer to the Saskatchewan Ministry of Agriculture publication, Varieties of Grain Crops 2015.***

## Canola (*B. napus*)

Producers may notice the numbers of varieties listed are reduced from prior publications. In consultation with seed companies, those varieties no longer commercially available have been removed. For queries on variety comparisons of older (not listed) to newer varieties, contact Garry Hnatowich (see page 1).

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).

A number of newer registered hybrids are not yet included in the Canola Table due to insufficient site years of testing. However, these hybrids may have been evaluated. For inquiries about non-listed hybrids, please contact Garry Hnatowich (see page 1).

Variety	Type	Site Years	Yield as % of 45H21	Lodging Rating	Height (cm)	Days to Maturity
<b>Conventional</b>						
46A65	OP	43	83	G	119	99
<b>Clearfield</b>						
VR 9560 CL	HYB	7	110	VG	133	100
5525 CL	HYB	17	105	VG	127	98
45H73	HYB	20	102	G	125	98
45P70	HYB	16	97	G	124	98
<b>Liberty Link</b>						
L252	HYB	6	122	VG	129	99
L261	HYB	5	118	VG	142	100
5440	HYB	31	113	VG	129	99
L150	HYB	10	113	G	128	99
L130	HYB	15	113	VG	125	99
<b>Roundup Ready</b>						
6060 RR	HYB	12	113	VG	129	101
VR 9562 GC	HYB	5	113	VG	133	99
45H29	HYB	17	112	G	132	98
Canterra 1990	HYB	9	111	G	123	99
45H31	HYB	6	110	VG	129	99
45H26	HYB	17	107	G	125	98
V12-1*	HYB	9	107	G	125	100
1970	HYB	7	107	G	126	101
45H28	HYB	13	106	G	126	98
72-55 RR	HYB	5	104	G	119	97
46P50	HYB	16	103	G	129	99
VR 9553 G	HYB	12	103	G	125	98
D3150	HYB	13	102	G	125	98
VT 500G	HYB	10	101	VG	125	99
45H21	HYB	43	100	G	122	98
6040 RR	HYB	11	100	G	125	99
71-45 RR	HYB	20	100	F	119	97
45S51	HYB	10	100	G	122	96
VT Remarkable	COM	8	100	G	123	99
45S52	HYB	6	100	G	124	98
72-65 RR	HYB	7	98	G	120	98
83S01 RR	COM	6	98	G	124	98
4424 RR	HYB	5	97	G	126	99
93H01 RR	HYB	7	96	G	125	98
VT Desirable	COM	14	90	VG	118	97
73-45 RR	HYB	5	89	G	112	97













Average plot yield of 45H21 (check): 4,904 kg/ha (87.5 bu/ac)

HYB = Hybrid; COM = Composite Hybrid; OP = Open Pollinated


\* Specialty oil profile

Lodging: F = fair; G = good; VG = very good

# Flax

Variety	Site Years	Yield as % of CDC Bethune	Lodging Rating	Days to Maturity	Height (cm)
CDC					
CDC Bethune 	30	100	G	114	65
Prairie Thunder 	22	100	G	114	62
Prairie Sapphire 	9	99	G	115	66
Prairie Blue 	30	95	G	118	66
CDC Glas 	4	95*	G	115	65
Macbeth 	29	94	G	113	65
Prairie Grande 	19	94	G	113	60
Taurus 	14	93	G	114	65
CDC Sorrel 	24	93	F	115	70
Lightning 	15	92	G	115	65
AC Watson	18	92	G	114	60
Hanley 	29	92	G	112	60
CDC Arras	23	90	G	114	63
CDC Sanctuary 	13	88	F	114	69
Vimy	17	83	P	114	65

Average plot yield of CDC Bethune (check): 3,172 kg/ha (50.6 bu/ac)

 PBR in effect

\* Limited site years, additional site years are required for accuracy

Lodging: P = poor; F = fair; G = good; VG = very good

The Flax Council of Canada's Triffid Stewardship Program recommends the testing of all flax seed intended for planting, and that only flax seed which tests negative for the presence of Triffid be planted. All flax producers should be aware that the Crop Development Centre and SeCan have cooperated in the effort to re-constitute flax breeder seed which is free of genetic modification (i.e. Triffid). Certified seed, produced from re-constituted breeder seed, of CDC Bethune, CDC Sorrel, CDC Sanctuary, and CDC Glas are expected to be good for 2015.

The flax industry is encouraging all flax producers who did not purchase certified seed in 2014 to do so for 2015, so that all trace of Triffid can be removed from the grain supply. For the latest recommendations, please visit [www.flaxcouncil.ca](http://www.flaxcouncil.ca)

All varieties are immune to rust.

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

# Spring Wheat

Producers are strongly encouraged to use a combination of the Canadian Food Inspection Agency's List of Registered Varieties <http://www.inspection.gc.ca/plants/variety-registration/registered-varieties-and-notifications/eng/1300109081286/1300109176745> and the Canadian Grains Commission's Variety Designation Lists <http://www.grainscanada.gc.ca/legislation-legislation/orders-arretes/ocgcm-maccg-eng.htm> to determine the registration and grade eligibility status of varieties.

## **Canada Western Red Spring**

**Fieldstar VB, Goodeve VB, Shaw VB, Unity VB, CDC Utmost VB and Vesper VB** 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 <http://www.midgetolerantwheat.ca/farmers/faq.aspx>.

Limited quantities of seed of the new varieties **AAC Brandon, AAC Elie, and AAC Redwater** will be available in 2015.

**CDC Imagine, CDC Abound, CDC Thrive, 5604HR CL, and WR859CL** are tolerant to the CLEARFIELD® herbicides Adrenalin SC and Altitude FX.

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

## **Canada Western Amber Durum**

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

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

Limited quantities of **AAC Current, AAC Raymore, CDC Desire, and CDC Vivid** will be available in 2015.

## **Canada Western Extra Strong**

**Glencross VB** is the only CWES wheat midge tolerant variety using the “SM1” gene and will be marketed with an interspersed refuge (see above).

## **Canada Prairie Spring**

**Conquer VB and Enchant VB** are CPS-red midge tolerant varieties using the “SM1” gene.

## **Canada Western General Purpose**

Varieties in the General Purpose market class are intended for ethanol and livestock feed purposes.






































## **Canada Western Soft White Spring**

Soft white spring wheat may be used as a feedstock in the production of ethanol. 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. Seed of the new variety **AAC Chiffon** will be available in 2015.


Irrigated areas in south and central Saskatchewan are susceptible to fusarium infestations. 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 tolerance levels in wheat varieties is available in the Saskatchewan Ministry of Agriculture publication:

**Varieties of Grain Crops, 2015.**

# 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 	19	113	G	86	107	-0.5	Y
5604HR CL 	8	113	G	92	101	-0.7	Y
Unity VB 	22	112	F	93	102	-0.5	Y
WR859CL 	16	112	G	86	102	-0.5	Y
Vesper VB 	9	112	G	91	103	-0.4	Y
Glenn 	17	111	G	91	107	-0.8	Y
CDC Kernen 	12	111	G	97	104	-0.3	Y
Goodeve VB 	20	110	G	92	102	-0.3	N
Muchmore 	16	110	G	80	104	-1.3	Y
CDC Utmost VB 	14	110	G	93	102	-0.6	N
5603HR 	13	110	G	95	104	-0.7	Y
AAC Brandon 	7	110	G	82	105	-0.9	Y
Stettler 	20	109	G	91	104	+0.3	Y
CDC VR Morris 	6	109	G	94	103	-0.4	N
Fieldstar VB 	19	108	F	95	102	-0.3	Y
Shaw VB 	16	108	G	98	103	-0.7	N
CDC Stanley 	12	108	G	92	103	-0.4	N
Cardale 	8	107	G	87	101	-0.6	Y
Carberry 	19	106	G	82	105	-0.8	Y
CDC Thrive 	10	105	G	97	103	-0.2	N
AAC Redwater	7	104	G	86	100	-0.1	Y
5602HR 	29	103	G	93	106	+0.3	Y
AAC Elie 	5	103	G	81	105	-0.7	Y
SY433	6	101	F	98	101	-0.4	Y
KANE 	17	101	G	88	103	-0.5	Y
AC Barrie 	62	100	G	94	104	15.8%	N
Waskada 	17	99	G	95	103	+0.3	Y
CDC Plentiful 	4	98*	F	92	101	-1.0	N
CDC Imagine 	17	97	G	92	103	-0.1	N
Lillian 	23	96	F	94	102	+0.5	N
Harvest 	15	94	G	90	102	-0.3	N
AAC Bailey 	8	91	G	95	101	-0.4	N
<b>Canada Western Amber Durum</b>							
Enterprise 	19	113	F	92	109	-0.4	Y
Brigade 	22	109	G	96	110	-0.7	Y
Strongfield 	47	108	G	90	107	-0.1	Y
CDC Verona 	22	104	G	91	111	-0.3	Y
Navigator 	33	103	G	82	107	-1.2	Y
Eurostar 	22	102	F	94	110	-0.6	Y
Transcend 	14	104	G	99	107	-0.3	Y

Average plot yield of AC Barrie (check): 5,669 kg/ha (84 bu/ac)

























 PBR in effect or filed

\* Limited site years, additional site years are required for accuracy


Lodging: F = fair; G = good

Wheat Table continued following page.

# 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 Amber Durum</b>							
CDC Vivid 	4	106*	G	91	104	-1.3	Y
CDC Desire 	4	105*	G	91	102	-1.2	Y
AAC Raymore 	6	97	G	93	103	-0.4	Y
AAC Current 	9	96	G	96	103	-0.3	Y
<b>Canada Western General Purpose</b>							
NRG010 	11	135	G	89	107	-3.4	Y
CDC NRG003 	11	135	F	88	105	-2.6	Y
Pasteur 	10	131	VG	87	109	-2.4	N
AAC Innova 	6	127	G	89	109	-3.2	Y
Minnedosa 	15	126	G	87	103	-2.6	Y
AAC Proclaim 	5	106	G	92	105	-2.9	Y
<b>Canada Western Hard White</b>							
Snowstar 	17	106	G	86	103	-1.5	N
Snowbird 	32	93	G	96	104	-0.3	N
<b>Canada Prairie Spring Red</b>							
Conquer VB 	15	136	G	92	105	-1.8	Y
AAC Ryley 	5	131	G	92	103	-1.8	Y
5702PR 	19	119	G	86	105	-1.2	Y
Enchant VB 	6	119	G	93	104	-1.8	Y
SY985 	5	119	F	86	104	-1.5	Y
AAC Penhold 	4	118*	G	74	104	-1.3	Y
AC Crystal 	46	114	G	85	106	-2.3	Y
<b>Canada Western Extra Strong</b>							
Burnside	29	102	F	102	105	-0.6	N
Glencross VB	20	101	F	103	104	-0.6	N
<b>Canada Western Soft White Spring</b>							
AAC Chiffon 	10	138	F	96	106	-3.6	Y
Sadash 	45	133	G	87	108	-4.0	Y
AC Andrew	62	125	G	85	108	-3.7	Y
Bhishaj 	48	122	G	86	106	-3.8	Y
AC Meena 	32	120	G	86	107	-3.9	Y
AC Reed 	43	117	G	80	105	-3.8	Y

Average plot yield of AC Barrie (check): 5,669 kg/ha (84 bu/ac)

 PBR in effect or filed

\* Limited site years, additional site years are required for accuracy

Lodging: F = fair; G = good

A number of newer registered varieties are not yet included in the Wheat Table due to insufficient site years of testing. However, these varieties may have been evaluated; for inquiries of non-listed varieties, please contact Garry Hnatowich (see page 1).

# Malt Barley

## Malt Barley

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




















Information on recommended malting barley varieties for 2015-2016 can be found on the Canadian Malting Barley Technical Centre (CMBTC) website at [www.cmbtc.com](http://www.cmbtc.com).

### Lines under Test


Commercial acceptability of malting varieties is given only after two years of successful plant-scale evaluation. Several carload lots of barley are malted and brewed then subjected to a taste panel. This process normally takes a minimum of three years, since a crop grown in one year will be malted in January-February, brewed in May-June, and aged and tasted in October-November of the following year.

Growers are cautioned that most malting varieties, especially two-row barley, are more susceptible to sprouting.

CDC PolarStar is available only through a closed loop Identity Preserved program offered by Prairie Malt Limited/Sapporo Breweries and their agents.

Variety	2 or 6 Row	Site Years	Yield as % of AC Metcalfe	Lodging Rating	Height (cm)	Days to Maturity
<b>Malting Varieties</b>						
<b>Malting Acceptance: Recommended</b>						
AAC Synergy 	2	3	121*	G	89	95
Newdale 	2	8	116	G	88	96
Legacy 	6	9	114	G	88	98
CDC Copeland 	2	8	114	G	98	97
Tradition	6	10	112	G	89	98
Cerveza 	2	4	107	VG	91	96
Celebration 	6	5	105	G	91	95
Bentley 	2	6	104	G	94	97
CDC Meredith 	2	5	104	F	89	98
CDC Kindersley 	2	5	104	G	91	94
AC Metcalfe 	2	11	100	G	92	96
Merit 57 	2	6	100	G	91	100
CDC PolarStar 	2	4	95*	P	91	97
<b>Other: A malting market may exist, review CMBTC recommendation list for updates</b>						
CDC Clyde 	6	6	125	VG	84	99
CDC Mayfair 	6	5	115	G	86	99
CDC Battleford 	6	8	110	G	93	99
Major 	2	5	109	G	89	94
CDC Anderson 	6	5	101	G	90	97
CDC Kendall 	2	10	100	P	89	96
CDC Landis 	2	5	99	G	90	96
Harrington	2	11	84	P	87	95

Average plot yield of AC Metcalfe (check): 6,469 kg/ha (120.2 bu/ac)

 PBR in effect or filed

\* Limited site years, additional site years are required for accuracy

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

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

Barley Table continued following page.

# Feed & Food Barley

## Feed and Food Barley

**CDC Cowboy** and **CDC Maverick** are 2-row forage varieties. **CDC Carter** and **CDC McGwire** are 2-row normal starch hulless barleys suitable for food use.

Disease resistance, straw strength, and maturity are more critical when barley is grown under irrigation. Growers should select early, strong-strawed, disease resistant varieties.





















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

Most available varieties are susceptible to one or more types of smut. Therefore, seed of susceptible varieties should be treated with a registered fungicide on a regular nature.


Harvesting grain over 16 percent moisture and then using aeration bins for drying can lead to sprouting and embryo death. Seed with reduced germination is undesirable for seed or malting.

Two-row barley varieties are generally more resistant to shattering than six-row varieties.

For additional information, refer to the Saskatchewan Ministry of Agriculture “Variety of Grain Crops 2015.”

Variety	2 or 6 Row	Site Years	Yield as % of AC Metcalfe	Lodging Rating	Height (cm)	Days to Maturity
<b>Feed and Food</b>						
<b>Hulled</b>						
AC Rosser 	6	9	128	P	86	95
Alston	6	5	123	G	86	101
Champion 	2	7	121	G	87	96
CDC Austenson	2	6	121	VG	90	97
Xena 	2	6	121	F	92	96
CDC Coalition 	2	6	117	VG	88	96
CDC Bold	2	7	117	F	86	96
McLeod 	2	8	116	G	82	94
CDC Trey 	2	7	114	VG	92	96
Brahma 	2	5	113	VG	91	95
Sundre 	6	7	110	G	91	100
Breton 	6	3	110*	F	93	96
CDC Helgason 	2	7	108	G	92	95
CDC Mindon 	2	7	107	G	88	94
Muskwa 	6	3	106*	G	79	93
CDC Dolly	2	9	105	P	83	94
Chigwell 	6	5	105	VG	86	98
Busby 	2	5	104	G	99	96
CDC Cowboy 	2	8	102	F	107	101
AC Metcalfe 	2	11	100	G	92	96
CDC Maverick 	2	4	96	P	109	97
<b>Hulless</b>						
Enduro	2	5	100	VG	84	98
CDC Clear	2	4	100	G	100	98
CDC Carter 	2	5	91	F	91	99
CDC McGwire 	2	7	88	F	93	98
Taylor 	2	5	80	VG	96	98

Average plot yield of AC Metcalfe (check): 6,469kg/ha (120.2 bu/ac)

 PBR in effect or filed

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

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

# Field Pea









## Field Pea

Please note that the “Check” variety has been changed to **CDC Golden**, replacing **Cutlass**, and the number of site years and relative performance of varieties may have changed from past publications as a reflection of this.


The following varieties have purple flower colour and pigmented seed coats: **CDC Mosaic**, **CDC Rocket**, **CDC Dakota**, and **40-10**. **CDC Mosaic**, and **CDC Rocket** have a maple-patterned seed coat, **40-10** has a speckled seed coat, while **CDC Dakota** has a solid dun (tan) coloured seed coat. All other varieties have white flower colour and non-pigmented seed coats.

All pea varieties will lodge under irrigation. Those with better lodging tolerance 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.

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




Variety	Site Years	Yield as % of CDC Golden	Lodging Rating	Days to Maturity	Vine Length (cm)	Seed Weight (g/1000)
<b>Green</b>						
CDC Raezer	9	110	G	100	87	224
CDC Limerick	5	109	VG	102	85	196
CDC Pluto	8	106	F	99	84	153
CDC Patrick	12	104	G	101	86	165
CDC Tetris	12	101	G	104	90	204
Cooper 	21	100	G	102	84	252
CDC Striker	25	98	G	98	78	233
CDC Sage	9	92	G	100	82	180
SW Sergeant	4	89	G	102	85	192
<b>Yellow</b>						
CDC Amarillo	5	126	G	100	91	233
Agassiz 	12	119	G	99	86	215
CDC Centennial	4	110	P	101	79	249
Hugo 	5	121	P	97	73	205
Argus 	5	117	G	99	84	231
Polstead 	9	114	G	101	75	246
Sorento 	9	114	F	101	78	226
CDC Treasure	11	112	G	98	85	203
CDC Meadow	21	109	G	98	86	198
CDC Hornet	11	107	G	102	92	194
Thunderbird 	7	104	G	103	86	201
CDC Saffron	9	104	G	99	82	232
CDC Mozart	17	103	P	98	74	214
CDC Golden	31	100	G	98	83	198
Eclipse 	23	100	G	100	82	227
Cutlass	30	97	G	99	80	206
CDC Bronco	23	95	G	101	82	190
CDC Prosper	9	86	G	102	84	140
<b>Dun</b>						
CDC Dakota	8	113	G	102	88	216
<b>Maple</b>						
CDC Rocket	11	92	F	97	86	189
CDC Mosaic	7	68	G	103	88	149
<b>Forage/Silage</b>						
CDC Leroy	4	100	G	102	86	136
CDC Horizon	7	71	G	102	94	151
40-10	7	52	P	104	93	113

Average plot yield of CDC Golden (check): 5,126 kg/ha (76.2 bu/ac)


 PBR in effect or filed

Lodging: VP = very poor; P = poor; F = fair; G = good

# Dry Bean – Wide Row

Variety	Plant Type	Site Years	Yield as % of Winchester	Days to Maturity	Seed Weight (g/1000)
<b>Pinto</b>					
AC Island	II	19	122	101	380
Medicine Hat 	II	10	122	101	362
CDC WM-2 	II	14	106	99	388
Othello	III	14	103	102	361
Winchester	II	24	100	99	360
CDC Pintium	I	6	76	96	375
<b>Black</b>					
AC Black Diamond	II	22	104	101	274
Black Violet	II	14	101	101	195
CDC Blackcomb	II	7	81	101	190
CDC Jet	II	6	71	108	189
<b>Great Northern</b>					
AAC Tundra	II	9	109	100	363
AC Polaris	III	17	100	102	337
Resolute	II	21	88	99	352
AAC Whitehorse	II	4	99	96	380
<b>Pink</b>					
Viva	III	15	103	105	268
Early Rose	II	5	88	98	305
<b>Small Red</b>					
AC Redbond	II	17	108	98	331
AC Earlired	III	5	98	98	320
<b>Yellow</b>					
Arikara Yellow	I	5	76	95	407
CDC Sol 	I	7	58	103	412
Myasi	I	4	49	95	407

Average plot yield of Winchester (check):  
3,290 kg/ha (2931 lb/ac)

 PBR in effect or filed

## Wide Row Trials

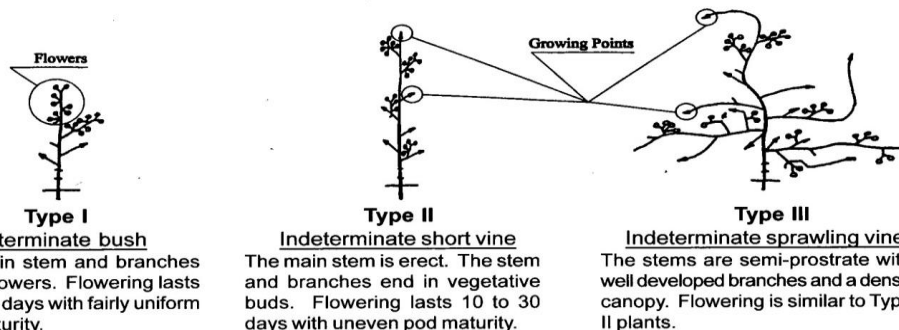
Commercial row crop production is typically on 55 cm (22 in.) or 75 cm (30 in.) centres. The wide row bean trials are grown on 60 cm (24 in.) rows to evaluate varieties under conditions similar to conventional practice.

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-2** is a slow darkening pinto dry bean variety.

**AC Black Diamond** has large shiny seeds. **Black Violet** has smaller, buffed coloured seed.

## Dry Bean Plant Type



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

# Dry Bean – Narrow Row




## 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 Narrow Row and Wide Row Tables.**

For other Market Type Varieties not listed, please contact Garry Hnatowich (see contact page 1).





Variety	Plant Type	Site Years	Yield as % of Winchester	Pod Clearance Rating*	Days to Maturity
<b>Pinto</b>					
AC Ole	II	7	125	74	104
Medicine Hat	II	10	122	74	101
Winmor	II	10	112	72	102
AC Island	II	26	110	76	99
Winchester	II	26	100	76	99
Mariah 	II	8	94	73	104
CDC WM-2 	II	20	91	71	99
CDC Pintium	I	19	89	84	94
CDC Marmot	I	9	89	72	92
<b>Black</b>					
AAC Burdett	II	4	114	74	97
CDC Superjet	II	5	107	78	106
AC Black Diamond	II	14	106	79	101
CDC Jet	II	14	105	82	105
Carmen Black	II	7	105	82	105
Black Violet	II	7	99	80	102
CDC Blackcomb	II	15	97	77	101
<b>Great Northern</b>					
AAC Tundra	II	8	114	69	99
AC Polaris	III	10	106	70	101
Alert	II	4	101	77	105
Resolute	II	14	91	72	99
<b>Small Red</b>					
AC Redbond	II	10	102	76	98
<b>Navy</b>					
Cargo	I	4	96	79	98
OAC Lightning	II	8	85	83	103
Envoy	I	12	84	77	98
Portage	II	4	78	75	104
OAC Spark	I	8	77	79	102
Skyline	I	7	70	71	103
<b>Yellow</b>					
CDC Sol 	I	11	79	72	102
Arikara Yellow	I	6	71	72	94

Average plot yield of Winchester (check): 3,779 kg/ha (3,371 lb/ac)


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

 PBR in effect or filed

# Faba Bean

Variety	Site Years	Yield as % of CDC Fatima	Days to Maturity	Seed Weight (g/1000)
<b>Coloured Flower</b>				
Florent	5	114	114	635
CDC Fatima	11	100	112	526
CDC Blitz	7	98	116	428
FB9-4	5	97	111	759
FB18-20	4	93	112	788
Orion	6	91	117	349
Taboar 	5	91	114	499
<b>White Flower</b>				
Imposa 	3	111	115	667
Tobasco 	3	93	115	522
Snowbird 	8	86	114	483

Average plot yield of CDC Fatima (check): 5,054 kg/ha (4,508 lb/ac)

 PBR in effect

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.

# Soybean

CSIDC and ICDC began soybean performance adaptability and performance evaluations in 2006. Table 1 is a summary of better adapted varieties tested during this time period. However, as of 2013 RR Rosco will no longer be commercially available, necessitating a change to the check variety. As of 2013, the Saskatchewan Advisory Council on Grain Crops adopted the soybean variety 23-10RY as an alternative check variety. ICDC has therefore started the development of a new data base of soybean variety performance, as shown in Table 2. **Producers are cautioned on the limited number of test years within Table 2 and to use this information as a guide but seek further information on any variety.** Yield values are subject to vary highly until additional site years are obtained.

**Table 1: Performance of Soybean Varieties Pre-2012**

Variety	Site Years	Yield as % of RR Rosco	Corn Heat Units*	Height (cm)	Lodge Rating	Seed Weight (g/1000)	Hilum Colour
Apollo RR	9	110	2375	75	VG	139	BR
NSC Warren RR	6	110	2375	79	VG	136	BR
LS 0036RR	6	106	2425	71	VG	129	BR
RR Rosco	9	100	2450	76	G	148	IY
Isis RR	4	92	2400	79	VG	136	BR
NSC Argyle RR	4	90	2450	73	G	140	BR
LS 0028RR	4	89	2400	62	VG	114	BR

Average plot yield of RR Rosco (check): 2,925 kg/ha (2,609 lb/ac)

Hilum is the point where the seed attaches to the pod: BR = Brown; IY = Imperfect Yellow

For a complete list of commercial varieties, see **Seed Manitoba 2015 (www.seedmb.ca)**.

\* Refer to the **Corn** section in this bulletin for information on corn heat units in Saskatchewan.

**Soybean continued on next page.**

# Soybean

**Table 2: Performance of Soybean Varieties Post-2012**

Variety	Type	Site Years	Yield as % of 23-10RY	Relative Maturity	Corn Heat Units*	Days to Maturity	Height (cm)	Lodge Rating	Seed Weight (g/1000)	Hilum Colour
NSC Gladstone RR2Y	R2Y	5	122	00.4	2375	127	86	VG	204	BL
McLeod R2	R2Y	6	119	00.3	2375	125	83	VG	185	BL
Sampsa RR	R2Y	8	115	00.8	2425	126	72	VG	169	BL
004R21	R2Y	4	114	00.4	2400	130	72	VG	171	BL
TH 32004R2Y	R2Y	8	112	00.4	2425	125	73	VG	163	BL
NSC Reston RR2Y	R2Y	8	109	00.1	2325	124	77	VG	151	BL
HS 007RY32	R2Y	4	108	00.7	2500	129	84	VG	181	BL
NSC Libau RR2Y	R2Y	5	107	00.4	2375	127	91	VG	180	BL
NSC Anola RR2Y	R2Y	6	105	00.2	2350	126	77	VG	160	BL
NSC Moosomin RR2Y	R2Y	6	103	00.0	2300	121	62	VG	170	BR
LS 002R23	R2Y	6	103	00.2	2375	124	78	VG	161	BL
NSC Tilston RR2Y	R2Y	8	101	00.4	2375	124	81	VG	163	BL
24-10RY	R2Y	6	101	00.5	2425	129	71	VG	167	BL
23-10RY	R2Y	10	100	00.0	2325	121	68	VG	187	BL
900Y71	RR1	8	100	00.7	2450	127	71	VG	175	TN
Pekko R2	R2Y	7	100	00.3	2325	121	77	VG	165	BL
900Y61	RR1	8	99	00.6	2425	126	71	VG	181	BR
TH 33003R2Y	R2Y	7	99	00.3	2400	124	84	VG	166	BR
LS 002R24N	R2Y	4	99	00.2	2375	122	84	VG	186	BL
HS 006RYS24	R2Y	4	98	00.6	2450	127	84	VG	172	BL
Vito R2	R2Y	8	93	00.3	2350	122	85	VG	157	BL
Bishop R2	R2Y	6	92	00.2	2325	121	79	VG	160	BL
P001T34R	RR1	5	74	00.0	2300	116	44	VG	161	BR

Average plot yield of 23-10RY (check): 2,964 kg/ha (2,644 lb/ac).

Varieties are either RI = Roundup Ready 1 or R2Y = Genuity Roundup Ready 2 Yield TM.

Hilum is the point where the seed attaches to the pod: BR = Brown, BL = Black, TN = Tan

For a complete list of commercial varieties see **Seed Manitoba 2015** ([www.seedmb.ca](http://www.seedmb.ca)).

\* 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).

Soybean is a potential new legume crop that may have promise within the irrigated areas of Saskatchewan. By definition, they are not a “pulse crop.” The Food and Agricultural Organization (FAO) categorizes pulse crops as those harvested solely for the dry seed, such as field pea, dry bean, and lentil. Soybean is primarily grown for its oil content, although its meal is also a commodity. In practical terms, consider soybean as an oilseed crop with the ability to fix nitrogen!

**Soybean continued on next page.**

Experience in commercial production in Saskatchewan is limited, however, the following considerations based upon established soybean producing areas should be considered:

- Limit first time acreage, start slowly.
- Select an early maturing Corn Heat Unit (CHU) variety. CHU ratings are assigned by individual seed companies; growers should not rely on only one source for judging maturity.
- Best suited to medium to light (irrigated) soils, heavy textured soils may cause planting and emergence problems such as compaction and crusting. However, heavier textured soils can produce soybean well once the crop is established.
- Despite their long maturity, do not seed too early! Soil temperatures need to warm to, or exceed, 10°C, the warmer the soil, the quicker the emergence, similar to dry bean. Cool soil temperatures can result in seed rot and pathogenic seedling diseases. Treat with a recommended fungicide seed treatment.
- Target a plant population of 445,000 plants/ha (180,000 plants/ac). Emergence should ensure 40 plants/m<sup>2</sup> (4 plants/ft<sup>2</sup>). Soybean varieties differ in seed size. Equipment calibration is required to achieve successful established populations.
- Seeding depth should be approximately 2.0–3.8 cm (0.75–1.5 inches), soybean are sensitive to deep seeding.
- **INOCULATE** – soybean require a specific species of rhizobia not native to our soils. Failure to inoculate with a “soybean” specific inoculant will result in complete nitrogen fixation failure! First-time growers in Manitoba were advised to use a full rate of granular inoculant coupled with a liquid seed-applied inoculant. Though inoculant costs exceed those of pea/lentil, they are warranted.
- Soybean are not as efficient as pea/lentil/faba bean in terms of nitrogen fixation, being more similar to dry bean. Should plants start yellowing by or during flowering, consider a top-dress application of 45–55 kg/ha N (40–50 lbs/ac N), irrigate with 0.6–1.25 ml/ha (0.25–0.5 inch/ac).
- Do not exceed 22 kg/ha P<sub>2</sub>O<sub>5</sub> (20 lbs/ac P<sub>2</sub>O<sub>5</sub>) seed-placed phosphorus in solid seeded production. Soybean is an efficient “scavenger” of soil phosphorus, but these phosphorus rates may be insufficient on soils with low soil phosphorus reserves. Higher rates need to be side banded. For row cropped production reduce seed row rates. Side band applications are recommended.
- Weed control is essential, as soybean seedlings are non-competitive. Cultivation can be used in wide row production. For both conventional and herbicide tolerant varieties, refer to the Saskatchewan Ministry of Agriculture publication, 2014 Guide to Crop Production, for herbicide options.
- Wireworms and grasshoppers may be the primary insect pests in irrigated areas.
- *Sclerotinia* (white mold) can affect soybean. Sufficient separation from pulses and canola in crop rotation is important.
- A killing frost will likely dictate time of harvest. A killing frost will not degrade the oil quality of the crop, but will diminish seed size of later maturing top pods. Soybean varieties tested have excellent lodging resistance so can be direct combined. Combine when seed moisture is less than 20% and adjust cylinder speed and concave clearance to minimize cracking or splitting of seed. Safe seed storage is 12% moisture or less.

# Corn

The Alberta Corn Committee (ACC) irrigated grain and silage corn hybrid performance trials were conducted at CSIDC from 2003–2014. 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).

A second silage corn hybrid performance trial was initiated in 2012, specifically on behalf of ICDC. For this trial, seed company representatives were invited to submit silage hybrids they deemed adapted to the Lake Diefenbaker Development Area and that were commercially available at the local level.










On the basis of these two trials, the following **silage** corn hybrid performance results were generated specifically for the irrigated area of west central Saskatchewan. Results of the 2014 ICDC dry land silage corn hybrid trial are available upon request.

Hybrid	Company	CHU Rating	Site Years	Dry Matter Yield (T/ac)	% of Baxxos RR Check	Whole Plant Moisture (%)	Days to Anthesis	Days to Silking
HL R219 RR	Hyland	2350	8	7.7	115	63.9	78	78
SilEx Bt RR	Pickseed	2200	5	7.6	114	66.2	76	79
P7443R RR	Pioneer	2100	4	7.5	111	55.9	73	78
39M26 RR	Pioneer	2100	4	7.3	109	60.0	68	75
HL 3085 RR	Hyland	2400	7	6.9	104	65.1	78	81
HL B22R	Hyland	2400	3	6.9	104	71.8	77	82
39F45	Pioneer	2000	4	6.9	103	62.2	75	78
39F57	Pioneer	2200	4	6.9	103	62.2	75	78
2791RR	Seeds 2000	2250	3	6.9	103	66.1	78	79
Baxxos RR	Hyland	2250	12	6.7	100	63.8	71	76
N05C-GT	Syngenta	2250	4	6.7	100	63.0	73	77
HL 2093	Hyland	2300	5	6.5	97	60.3	71	76
DKC30-07RIB	Monsanto	2325	3	6.5	97	67.1	77	82
DKC26-78	Monsanto	2150	3	6.4	96	61.2	69	74
DKC33-78RIB	Monsanto	2500	3	6.3	94	67.1	77	81
39D95	Pioneer	2150	5	6.0	90	62.6	74	79
HL SR06	Hyland	2250	4	5.9	88	68.7	72	79

Select a variety with a Corn Heat Unit (CHU) rating suitable to your area. A CHU map of Saskatchewan is available on the Saskatchewan Ministry of 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 (% of check)	% CP	% NDF	% ADF	% TDN
<b>Barley 2-row</b>						
Newdale 	8	108	12.3	48.4	29.7	63.9
CDC Cowboy 	9	108	12.4	51.2	31.9	62.6
CDC Copeland 	9	102	11.6	51.1	32.6	62.4
Stockford 	6	103	13.3	52.2	32.8	61.8
CDC Bold	10	95	12.9	49.3	30.5	64.1
<b>Barley 6-row</b>						
Binscarth	6	110	12.9	48.0	29.3	63.9
AC Ranger (check)	12	100	12.5	49.5	30.7	63.4
AC Rosser 	12	102	13.0	47.4	29.2	64.8
AC Hawkeye	11	96	12.7	51.9	32.6	62.2
Vivar 	11	96	11.8	48.9	29.7	64.4
Trochu 	11	94	12.7	48.1	29.8	60.5
CDC Battleford 	9	93	12.1	47.3	30.5	64.4
<b>Oats</b>						
Pinnacle 	11	105	11.0	52.5	34.6	60.2
Calibre	11	104	11.5	51.8	35.3	59.2
AC Morgan	11	102	11.1	51.0	33.7	60.3
CDC Baler* (check)	11	100	11.5	56.5	37.0	58.4
<b>Triticale</b>						
Comet*	12	101	12.1	58.5	40.0	55.3
Banjo	12	100	13.4	59.6	39.4	55.5
Viking*	12	98	12.2	59.5	40.1	55.2
Pronghorn (check)	12	100	13.9	57.9	38.3	55.8
AC Ultima	12	94	12.6	55.3	35.8	58.9

Average dry matter yield of check:

AC Ranger = 15,248 kg/ha (6.80 tons/ac)

CDC Baler = 15,703 kg/ha (7.00 tons/ac)

Pronghorn = 13,908 kg/ha (6.00 tons/ac)

 PBR in effect

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


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
Steak	3	118
Approved	3	114
Forecast 1001	3	112
WinterGold	3	112
AC Nordica	4	111
WL 327	3	110
Starbuck	3	109
54V46	4	109
WL 232 HQ	3	109
Spredor 4	3	108
Gibraltar	3	107
Perfect	3	107
AC Blue J	22	106
Survivor	3	106
AC Longview	7	106
Pickseed 2065MF	7	106
54V54	7	106
Pickseed 8925MF	4	105
421Abacus	3	105
AmeriStand 201+Z	7	105
AgriMaster	3	105
Geneva	7	104
HybriForce-400	3	104
134	3	104

Variety	Site Years	Yield as % of Beaver
Atomic	3	104
WL 319 HQ	3	104
Equinox	3	103
53Q60	7	103
AC Grazelander Br 	7	103
Dakota	3	103
Tophand	3	103
StockWell	10	102
Proleaf	3	102
Barrier	11	102
Gala	4	102
Magnum 3801 Wet	3	101
Quattro HR	3	101
Beaver	34	100
Rhino	3	98
Magnum III-WET	3	97
Rangelander	22	96
HayGrazer	3	96
Convoy	3	95
53Q30	3	94
54Q25	3	93
Dalton	3	93
Runner	6	93
Rambler	34	91

Average dry matter yield of Beaver (check): 11,444 kg/ha (5.10 tons/ac)

 PBR in effect

The varieties were evaluated in the Western Forage Testing (WFT) System trials from 1996 to 2009 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 when 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 **Forage Crop Production Guide** available from Saskatchewan Ministry of Agriculture ([www.agriculture.gov.sk.ca/Forage-Crop-Production-Guide](http://www.agriculture.gov.sk.ca/Forage-Crop-Production-Guide)).

*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 Brome</b>		
Carlton (check)	3	100
AC Rocket	3	100
Radisson	3	99
<b>Meadow Foxtail</b>		
Dan (check)	3	100
Mountain	3	87

 PBR in effect

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 Brome</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 = 10,137 kg/ha (4.52 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)

The research ICDC conducts is summarized in several useful publications, including:

- Annual Research and Demonstration Program Report
- Irrigated Alfalfa Production in Saskatchewan
- Management of Irrigated Dry Beans
- Corn Production
- Irrigation Economics and Agronomics
- Crop Varieties for Irrigation (annual update)
- Irrigation Scheduling Manual
- *The Irrigator* (annual newsletter)

For these and other publications concerning irrigation in Saskatchewan, see our web site:

[www.irrigationsaskatchewan.com/icdc](http://www.irrigationsaskatchewan.com/icdc)



**ICDC**

Irrigation Crop Diversification Corporation

Box 609

Outlook, SK S0L 2N0