



**B.C. GRAIN  
PRODUCERS  
ASSOCIATION**

# **2011 FIELD CROP VARIETY PERFORMANCE**



**B.C. PEACE RIVER REGION**

*Funding provided by ...*

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**Investment  
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*of British Columbia*



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**BC Grain Producers Association**  
**2011 Field Crop Variety Performance**  
**BC Peace River Region**

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Front cover photo

Field pea research plots in the foreground, flax plots in the middle, canola at back as seen in the third week of July, 2011 at the Fort St. John research farm. Note that there is still an unusual amount of blooming going on due to lots of moisture earlier in June and early July, 2011 (see pages 38-39 on amounts).

Front cover photo credit: Clair Langlois

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# BC Grain Producers Association 2011 Field Crop Variety Performance BC Peace River Region

## Introduction, Acknowledgements, and Cautionary Notes

This report summarizes the *Field Crop Variety Performance Trials* that were conducted by the *Research Committee* of the *BC Grain Producers Association*, and is the result of funding and partnering with the following organizations:

### Investment Agriculture Foundation of British Columbia – IAF BC Peace River Grain Industry Development Council - BCPRGIDC

**LOUIS DREYFUS** (Dawson Creek office) should be recognized for their contribution via kernel protein analysis, **HADLAND SEED FARM LTD.** and **HILL FARMS LTD.** for bulk certified seed contributions, as well as several other anonymous local producers for their own certified seed-lot contributions, whom should all be recognized for their help with these trials and thus the results you see here. We thank these individuals/organizations for their “in-kind” support towards making our field-testing and the production of this book possible. Various other private organizations make financial contributions for field days, etc., throughout the year; an invaluable influx of funds to the support of the research department. Special thanks also extended to the site cooperators who continue to generously give their support of the program, *Vic Blanchette* for the Fort St. John site, and *School District 59* for the use of the *Hudson School Farm* near Dawson Creek, BC. A further word of thanks goes out to *Dennis Meier* of Dawson Creek who continuously and generously offers us space on his adjacent farm for all our field equipment.

We should also thank our field and lab team whom once again helped to make this year yet another successful year. They are full-time technicians *Satoru Noshō*, *Brandi Smith*, and *Michelle Whelpton* whom all worked very hard and well together. Many thanks yet once again to *Colleen Anderson* for her help this time, in the review of this report. We extend a notice of thanks as well to all our part-time workers too numerous this season to list, but whom were invaluable in a year of increased workload (largest number of plots tested historically) and with all the heavy weeding pressures associated with the intense rainfall.

This document reports all tested materials grown during the 2011 growing season from performance trials placed at both the Dawson Creek and Fort St. John research farms, and as such the **data compiled in this report is derived from “head-to-head” comparisons only**. Materials not included in 2011, but which were previously tested, may now be viewed via earlier publications and are available for viewing or downloading at [www.bcgrain.com](http://www.bcgrain.com).

Multiple-year testing for any one variety is our goal, but often new materials have only been tested for one year, the current year usually. This can sometimes result in an unfair representation of the new single-year materials against statistically stronger multiple-year materials even though this report cautions readers about this possible effect. To try to resolve this issue starting in 2007 we now display the results in two graphs for each crop type, one with only the current year’s results, and one with multiple-year results. In the multiple-year graphs, new one-year data is left out. Where one-year results are shown, be it in current-year graphs or in charts, readers still **must interpret and use such one-year data with considerable caution**, as a variety may change position regarding both yield and maturity as additional results are obtained. This is simply the effect of compiling data from variable weather patterns over time. The more station years, (defined as one test site at one location in one year), that can be used to produce an average, the more stable and reliable the result will be, hence the association’s steadfast efforts to procure multi-year data. By providing readers now with a separate “current year graph” for each crop-type, many of the risks with looking at one-year data is still there but the chances of misrepresenting a new entry against its older neighbors is greatly reduced.

This book is produced without bias and is reported to the best of our ability from our own site data collection (except where noted as in any additional canola data). It should only be used as a guide, and where labels are available with your product, be it seed or other product, always follow label directions.

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## BC Grain Producers Association - Reference & Terminology -

### Station Years

The number of station years that the variety has been tested can be seen in the yield tables inside the square brackets [ ]. A station year is one test site at one location in one year. For example, a canola trial conducted at two locations over three years would have six station years, or [6]. We advise using caution if the data is based on *less than three station years in total*, or less than two years at both locations. This of course is a concern for canola where often a line does not even stay in the seed market for more than two years.

### Interpreting Yield Results

Crops in this book are managed using the same level of inputs as field sized recommendations would suggest. Small-plot research plots offer better consistency and can be better controlled, whereas wet areas and variable soil fertility affect field-scale crop production. However, small plots are subject to *edge effect*. “Edge effect” is caused by the spaces around the individual plots allowing extra sunlight to penetrate, boosting yields on these exposed outer plants, as compared to the average plant in a field scale situation that would be shadowed by its neighbors.

**The important concept here is that these effects are equal for all small plots in a given trial, and we can therefore compare varieties in each trial and look at resulting yields relative to one another.** Yields here are thus the result of *small plot production* and the same level of production is unlikely to be achieved on a large-scale basis. Unfortunately statistics, which are vital, cannot be used on “*percent of check variety*” data. Thus, we elected to show *bushels per acre* for this current year for the sole purpose of displaying statistical results for the current year. Treat *all yields, (percent of check and bushels per acre)*, as relative results. Agronomic information for the check variety has been bolded in all the tables to identify it.

### Plant Breeders Rights

The Plant Breeders’ Rights (PBR) gives plant breeders “copyright” protection of a variety for up to 18 years. Once a variety has been granted PBR, the breeder has control over the multiplication and sale of the seed. The breeder can take legal action for damages if someone infringes on their rights. Farmers may save some seed for seeding the next year on their own farm, but the sale of the crop as seed for planting purposes to others is not allowed. Many new transgenic herbicide-tolerant varieties have additional restrictions through ‘*technical use agreements*’, so be aware of these too, as they often replace PBR status and can have strong consequences if ignored. Varieties protected by PBR can be identified by their PBR logo on a seed bag, seed tag, or advertising material. This book tries to identify such PBR lines within “*Variety Description*” tables with a solid square box. Ultimately however, it is the responsibility of the grower to know which line is PBR.

### Certified Seed

The cost of *certified seed* is a small additional expense in relation to total crop production input costs, especially when changing to a different variety. Certified seed assures genetic purity, high germination rates and low percentage of foreign seed when compared to common seed. Certified seed can be purchased in bulk through authorized seed dealer networks, (see “Seed Distributors” at the back of this report).

### Seed Treatment

Choosing disease-resistant varieties and using certified seed is good, but treated seed goes a long way in the fight against plant diseases too. The cost of a fungicide or a combined fungicide/insecticide seed treatment can be a small price to pay for the amount of protection and peace of mind they provide. The right seed treatment choice is important as some perform better than others for certain crop types. Treated seed must not contaminate grain delivered to an elevator or be used for feed.

- ◆ Cereal seed should be treated to control *true loose smut* and early season *seedling* diseases.
- ◆ Seed of rye, winter wheat, and flax should be treated to control *seedling blight*. Winter wheat and rye also require protection against *smut*.
- ◆ Canola seed should be treated to control seed borne *blackleg, damping off*, and early *flea beetle* attack.

### Ergot

The fungal disease Ergot can attack the grain of all varieties of wheat, barley, rye, triticale, and most common species of grass. Oat varieties are rarely attacked. Grain having 0.1% ergot is considered poisonous to livestock and should not be used as feed. The black rice-like “*seed mummies*” can be spotted prior to harvest in heads during a field inspection.

### Seed Inoculation

Peas can make much of their nitrogen (N) requirement from the air through a partnership with soil bacteria called *Rhizobium*. The pea seed must be inoculated immediately before or during seeding with a proper strain of bacteria specific to peas. *Rhizobia* are living organisms so check the expiry date on the package and follow inoculant label directions carefully. Generally it is a good idea prior to its use and even during use if possible, to try and reduce the inoculant’s exposure to sunlight, open-air, and warmth. Granular formulations placed with the seed have traditionally offered good results in Peace soils, but new inoculants are constantly entering the market place which may offer excellent inoculation as well. Survival of residual rhizobia organisms in our cool Peace soils is not consistently reliable; making use of inoculant with seed is a good form of insurance. High soil nitrogen levels (over 60 kg N/ha) will reduce nodulation in the field regardless of inoculation. Cool, dry, or excessively wet soils, provide a harsh environment for proper inoculation and under these conditions, a low level of nodulation formation will be seen. Granular inoculant placed with the seed at plant was used on all pea-trials seen here in this report.

## Seeding Rates

While the following *range* of seeding rates has given consistent yields for each crop in these trials, experience has shown that the top end of the range provides even more consistent results. **Risk can be reduced under conditions of stress that impair emergence by increasing seeding rates.** In addition, higher seeding rates can reduce the amount of secondary tillering, **produce earlier and more uniform maturity**, and reduce the amount of green kernels at harvest.

For example, tests conducted by the Beaverlodge Research Station several years ago throughout the Peace region showed that by increasing the seeding rate of wheat from 80 to 120 lbs/ac (90 to 134 kg/ha), that the time to maturity was reduced by two days. Our own BCGPA trials involving seeding rates in barley did not show similar results upon conclusion. Initially our results did show that when increasing seeding rates to 2.25 to 2.5 bushels per acre for barley, it decreased maturity from 2 to even 4 days, which is significant by harvest. However, over the full 5 years of the project, results became less significant. Wheat was not tested.

Suggested Rates of Seeding		
Wheat	90 - 120 lb/ac	100 - 135 kg/ha
CPS Wheat	130 - 180 lb/ac	145 - 200 kg/ha
Barley	75 - 100 lb/ac	85 - 110 kg/ha
Oats	70 - 90 lb/ac	85 - 100 kg/ha
Flax	26 - 40 lb/ac	30 - 35 kg/ha
Rye	65 - 85 lb/ac	73 - 95 kg/ha
Peas	150 - 300 lb/ac	165 - 330 kg/ha
Argentine Canola	5 - 8 lb/ac	6 - 9 kg/ha
Polish Canola	5.5 lb/ac	6 kg/ha

Due to large differences in seed sizes, seeding rates can vary considerably. Therefore, one should base the seeding rate on a *target number of viable seeds per square foot*. Using the 1000 kernel weights, adjusting for percent germination, and allowing for seed decay (3%), calculate the number of pounds of seed required per acre.

Crop	Type	Seeds / sq.ft	Avr. 1000 K wt
Wheat	- CWRS	24 - 25	35 - 44 g
	- CPS / CWES	24 - 25	44 - 52 g
Barley	- 6 Row	24 - 25	35 - 43 g
	- 2 Row	24 - 25	44 - 53 g
Oats	- Hulled	24 - 25	38 - 47 g
Rye		24	30 - 35 g
Peas		8	200 - 345 g

## Example (using peas):

Target **8** pea plants per square foot, the variety has a 1000 K wt. of **250** grams, and you estimate that between seed decay and percent germination of the seed lot that you will have, **90%** of the seeds will grow into healthy plants. Thus...

$$\frac{8 \text{ plants/sq.ft} \times 250 \text{ (g/1000 K)} \times 10}{90 \text{ ( \% )}} = 222 \text{ lb/acre}$$

Answer: You would plant 222 lbs. of pea seed/acre.

## BC Grain Producers Association - 2011 Growing Conditions -

Our farming season started on the cool side with sufficient moisture, delaying planting by about a week from “normal”, if one can still define what a “normal spring” is anymore. Good fortune occurred during planting with only a few interruptions from light rains and one significant wet snowfall, but all research plots made it into the ground prior to any significant deadlines commercial operations would face such as “crop insurance deadline” on canola. All crops emerged beautifully showing great prospects for a good crop year, however in mid-June until mid-July it all changed with heavy rains. Worst was at the Dawson Creek (DC) site but both DC and Fort St. John (FSJ) sites produced record breaking rainfall at this time. At one point the entire field at DC was under water for at least 24-36 hours. There were three such major rain events in 2011 over just three weeks, which delayed weed control from finishing or even starting (depending on the crop) and it caused significant root-rot in canola at the DC site. This root-rot eventually took its toll on over half of the canola trials at DC – fortunately without long-last affects however on those canola trials that make up the data in this publication. All other crop trials (and surviving canola trials) all seemed to pull through the flooding without any long-lasting affects and went on to produce incredibly high yields of high quality and with little to no lodging by harvest.

Harvest was of course delayed under this scenario as crops (all crops) just did not want to stop growing which put us all into the leaner daylight days of autumn with little heat to offer, morning fogs, and early evening dews, meaning a very late harvest as most producers can relate to. To our fortune however, a killing frost stayed away from both the DC and FSJ sites until well after Thanksgiving, a highly unusual event, but one that allowed harvest of all trials to finish up (however with encouragement from crop desiccation in most cases), and get any post-harvest site preparations to occur before the snow flew too. The real amazing thing through all this is that other than field peas, even with the higher than normal heights and heavy yields, lodging was a non-event.

## Interpreting Data

The yield for each variety is reported on a regional basis for the Dawson Creek and Fort St. John areas as well as an average for the entire BC Peace. Also, the number of years each variety has been tested is given for each of the two regions. In the following examples, the number of years is indicated in [ ] right after the yield. "Station years" are the total number of times a variety has been tested in these trials.

Two Row Barley			Yield as % of AC Metcalfe								
Variety	Type	feed	Dawson Creek			Fort St. John			B.C. Peace		
			2011	2003-2011		2011	2003-2011		2011	2003-2011	
			Yield	Avg.	Stn.Yrs.	Yield	Avg.	Stn.Yrs.	Yield	Avg.	Stn.Yrs.
XENA	2-row	feed	115	113	[3]	125	105	[5]	120	109	[8]

note: above example is dramatization

Number of **years** the variety was tested at **each station**

Number of **times** in total the variety was tested in the **BC Peace**.

**Statistical Values** Entries into the Regional trials are replicated (or repeated) four times (three times minimum) at both locations. Replication is used to derive an overall average per entry per trial, and allow for statistical analysis.

**Coefficient of Variance (CV value)**, given as a percentage, it tells us how statistically sound or reliable a given data set is. Generally, any value less than or equal to 15% is considered to be acceptable and indicates "sound" data. This means if you were to repeat the trial under similar conditions, you would get similar results, or at least we are 95% confident that we would. We tend to be a little more lenient on this 15% for such things as disease or insect data, as these are normally highly variable due to the nature of the beast, but we do not like to see yield data from a single trial with a high CV value. Anything less than 10% is considered excellent.

**Least Significant Difference test (LSD value)**, are those little letters behind the *data means*. Basically, if two or more *data means* (or averages) have the same letter behind their number, they are NOT significantly different from one another according to statistics. Therefore, means or averages with the same letter should not be viewed as one being "superior" or "inferior" from the other or others of the same letter. LSD takes variability into account, and compares "apples" to "apples".

Example:

Variety	Dawson Creek		
	2011	2003-2011	
	Yield	Avg.	Stn.Yrs.
Super X	105 ab	102	[3]
Superdooper Y	107 a	105	[3]
So-So 101	100 b	98	[2]
Old Goody	95 c	97	[6]

In this example, some people might think variety "Superdooper Y" is superior to variety "Super X" and "So-So 101". This is not true according to statistics, "Superdooper Y" is superior to variety "So-So 101", but is equivalent to "Super X" in yield because both "Superdooper" and "Super X" have the letters "a" with them. In this example, "Super X" is not superior (or significantly different), from variety

"So-So 101" either, as both have a "b" behind their means. Also, "Superdooper Y", "Super X", and "So-So 101" are superior to, (or a better term is significantly different from), "Old Goody". Note, in this report, we only have LSD values for this current year's data, and thus you should still take notice of the long term averages. Note that preferably data should have six station years, (usually meaning 3 years at each site), but that for **any varieties with less than three station years of data, you must compare data with caution.**



## Fertilizer Rates Used In 2011

<b>Fort St. John, B.C.</b>		<b>Legal Description: SW19 Tp84 R18 W6</b>							
Crop	Fertilizer Applied			Placement	lbs actual/ac Recom. vs. Applied	Enviro-Test Labs			
	kg/ha					N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	S
<b>Canola</b>	27-0-0-12	214	banded		Recommended* =	35	25	15	25
	6-26-30	55	banded		Actually applied =	57.7	26.7	14.7	22.9
	12-52-0	30	in-furrow						
<b>Flax</b>	27-0-0-12	214	top dressing		Recommended* =	40	30	15	15
	6-26-30	50	banded		Actually applied =	57.4	25.5	13.4	22.9
	12-52-0	30	in-furrow						
<b>Cereals</b>	34.5-0-0-0	95	banded		Recommended* =	0	32	15	10
	6-26-30	50	banded		Actually applied =	34.7	25.5	13.4	0
	12-52-0	30	in-furrow						
<b>Peas</b>	20-0-0-24	55	banded		Recommended* =	0	25	15	10
	6-26-30	50	banded		Actually applied =	15.7	25.5	13.4	11.8
	12-52-0	30	in-furrow						

<b>Dawson Creek, B.C.</b>		<b>Legal Description: SW20 Tp78 R14 W6</b>							
Crop	Fertilizer Applied			Placement	lbs actual/ac Recom. vs. Applied	Enviro-Test Labs			
	kg/ha					N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	S
<b>Canola</b>	27-0-0-12	214	banded		Recommended* =	35	25	15	25
	6-26-30	55	banded		Actually applied =	57.7	26.7	14.7	22.9
	12-52-0	30	in-furrow						
<b>Flax</b>	27-0-0-12	214	banded		Recommended* =	0	25	20	12
	6-26-30	50	banded		Actually applied =	57.4	25.5	13.4	22.9
	12-52-0	30	in-furrow						
<b>Wheat &amp; Barley</b>	34.5-0-0-0	160	banded		Recommended* =	50	22	20	5
	6-26-30	50	banded		Actually applied =	54.4	25.5	13.4	0
	12-52-0	30	in-furrow						
<b>Malt Barley &amp; Oats</b>	34-0-0-0	127	banded		Recommended* =	35	22	15	10
	6-26-30	50	banded		Actually applied =	44.4	25.5	13.4	0
	12-52-0	30	in-furrow						
<b>Peas</b>	20-0-0-24	55	banded		Recommended* =	0	20	15	12
	6-26-30	50	banded		Actually applied =	15.7	25.5	13.4	11.8
	12-52-0	30	in-furrow						

Recommended\* = recommendations given by Enviro-Test Labs of Calgary, Alberta, calculated from soil samples pulled earlier in the spring of the same calendar year.



## Pesticide Applications

Pesticide Applications			
Fort St. John, B.C.		Legal Description: SW19 Tp84 R18 W6	
Crop	Date Applied	Product Used	Product Rate
Canola	18-Jun-11	Muster (ethametsulfuron methyl) Lontrel 360 (clopyralid) Poast Ultra (sethoxydim) Merge	12 g/ac 227 ml/ac 200 ml/ac 400 ml/ac
Field Peas	9-Jun-11	Sencor (metribuzin) 75%DF MCPA Sodium	77g/ac 190ml/ac
Flax	18-Jun-11	Buctril - M (bromopynol + MCPA )	400 ml/ac
Wheat, Barley, Oat	18-Jun-11	Buctril - M (bromopynol + MCPA )	400 ml/ac
Dawson Creek, B.C.		Legal Description: SW20 Tp78 R14 W6	
Crop	Date Applied	Product Used	Product Rate
Canola (napus & rapa)	11-Jun-11	Muster (ethametsulfuron methyl) Lontrel 360 (clopyralid) Poast Ultra (sethoxydim) Merge	12 g/ac 227 ml/ac 200 ml/ac 400 ml/ac
Field Peas	8-Jun-11	Sencor (metribuzin) 75%DF MCPA Sodium	77 g/ac 190 ml/ac
	22-Jun-11	Assure II Sure-Mix	200ml/ac 6L/1000L H2O
Flax	13-Jun-11	Buctril-M (bromopynol + MCPA)	400 ml/ac
	22-Jun-11	Assure II Sure-Mix	200ml/ac 6L/1000L H2O
Malt Barley Oat	22-Jun-11	Refine SG Ag Surf MCPA Ester	12 g/ac 2L/1000L H2O 228ml/ac
Wheat, Barley, Trit	8-Jun-11	Refine SG Ag Surf MCPA Ester	12 g/ac 2L/1000L H2O 228ml/ac

All seed was treated with seed treatment; canola with Helix Xtra®, cereal & flax with Raxil FL®, and pea seed with Apron Maxx RTA.

## Planting and Harvest Information

Loc.	Crop	Seeding rate		Date Planted	Soil Temp (C°) @ plant	Seeding Depth	Harvest Date	Harvesting Method
		lbs/ac	kg/ha					
<b>FSJ</b>	Napus Canola	8	8.9	16-May-11	12	0.5 - 1 inch	15-Oct-11	desiccate/direct
	Flax	40	45	13-May-11	10	0.75 - 1 inch	19-Oct-11	desiccate/direct
	Barley	77	86	25-May-11	10	0.5 - 1 inch	19-Sep-11	desiccate/direct
	CWRS Wheat	90	101	25-May-11	10	0.5 - 1 inch	9-Oct-11	desiccate/direct
	CPS/CWES	90	101	25-May-11	10	0.5 - 1 inch	24-Oct-11	desiccate/direct
	Oats	81	90	25-May-11	10	0.5 - 1 inch	9-Oct-11	desiccate/direct
	Triticale	117	131	25-May-11	10	0.5 - 1 inch	24-Oct-11	desiccate/direct
	Peas	149	167	10-May-11	5	1 - 2 inch	8-Sep-11	desiccate/direct
<b>DC</b>	Napus Canola	8	8.9	15-May-11	10	0.5-1 inch	14-Oct-11	desiccate/direct
	Flax	40	45	12-May-11	7	0.5-1.25 inch	16-Oct-11	desiccate/direct
	Barley	77	86	21-May-11	11	0.5 - 1 inch	14-Sep-11	desiccate/direct
	CWRS Wheat	90	101	21-May-11	11	0.5 - 1 inch	7-Oct-11	desiccate/direct
	CPS/CWES	90	101	21-May-11	11	0.5 - 1 inch	20-Oct-11	desiccate/direct
	Oats	81	90	28-May-11	11	0.5 - 1.25 inch	8-Oct-11	desiccate/direct
	Triticale	117	131	21-May-11	11	0.5 - 1 inch	20-Oct-11	desiccate/direct
	Peas	149	167	11-May-11	8	0.5-1.25 inch	12-Sep-11	desiccate/direct

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## CANADA WESTERN RED SPRING WHEAT

As grain yields increase, protein content generally decreases. Some of the newer varieties have both higher protein and grain yield. To control true *loose smut* of wheat only a systemic fungicide will work as the pathogen is found inside the seed. To control the other types of smut (*covered*, *false loose* and *bunt*) a non-systemic fungicide seed treatment will work as the disease pathogen is on the outside of the seed.

CWRS Wheat		Yield as % of Katepwa											
		Dawson Creek				Fort St. John				B.C. Peace			
Variety	2011 Yield		2006-2011		2011 Yield		2006-2011		2011	2006-2011			
	bus / acre	% of Check	Avg. (%)	Station Years	bus / acre	% of Check	Avg. (%)	Station Years	Avg. (%)	Avg. (%)	Station Years		
5603HR	106	a-d	111	105	[4]	100	ij	98	101	[4]	104	101	[8]
5604HR CL	100	a-e	105	97	[3]	108	f-i	105	97	[3]	105	101	[6]
AC Barrie	89	e	93	89	[6]	103	hij	101	102	[6]	97	95	[12]
AC Splendor	101	a-e	106	91	[6]	98	j	96	91	[6]	101	94	[12]
Alvena	102	a-e	106	98	[5]	110	d-h	108	105	[5]	107	103	[10]
BW433*	106	a-d	112	112	[1]	101	ij	98	98	[1]	105	105	[2]
BW901*	106	a-d	112	112	[1]	115	c-g	112	112	[1]	112	112	[2]
Carberry	102	a-e	107	111	[3]	114	c-g	111	115	[3]	109	111	[6]
CDC Abound	113	ab	118	110	[6]	126	b	123	111	[6]	121	117	[12]
CDC Alsask	107	a-d	112	102	[6]	117	cde	114	107	[6]	113	108	[12]
CDC Go	112	ab	117	102	[6]	118	cde	115	108	[6]	116	109	[12]
CDC Kernen	101	a-e	106	101	[3]	116	c-f	113	113	[3]	109	107	[6]
CDC Osler	100	a-e	105	101	[6]	110	d-h	108	105	[6]	106	104	[12]
CDC Stanley	107	abc	113	105	[3]	115	c-g	112	105	[3]	112	109	[6]
CDC Thrive	105	a-d	111	99	[3]	118	cde	115	114	[3]	113	107	[6]
CDC Utmost	106	a-d	111	104	[3]	116	c-f	114	111	[3]	112	109	[6]
Glenn	101	a-e	106	103	[3]	108	f-i	105	104	[3]	105	104	[6]
Goodeve	103	a-e	108	102	[5]	109	e-h	107	106	[5]	108	104	[10]
Harvest	102	a-e	107	92	[6]	111	d-h	108	102	[6]	107	100	[12]
Infinity	116	a	121	105	[6]	122	bc	119	110	[6]	120	112	[12]
<b>Katepwa</b>	95	cde	100	100	[6]	102	hij	100	100	[6]	100	100	[12]
Muchmore	110	abc	115	107	[3]	119	bcd	117	115	[3]	116	112	[6]
Shaw	105	a-d	110	103	[3]	113	c-g	110	111	[3]	110	106	[6]
Snowbird**	97	b-e	101	92	[6]	106	g-j	104	102	[6]	103	98	[12]
Snowstar**	107	abc	113	95	[6]	113	c-g	110	106	[6]	111	103	[12]
Stettler	108	abc	113	119	[4]	126	b	123	118	[4]	118	118	[8]
Superb	115	a	121	111	[6]	135	a	132	120	[6]	126	115	[12]
Unity	111	abc	117	108	[4]	118	cde	115	111	[4]	116	112	[8]
Vesper	91	de	96	100	[2]	106	g-j	104	100	[2]	100	102	[4]
WR859 CL	107	a-d	112	107	[4]	104	hij	101	102	[4]	107	104	[8]
LSD (P=.05) =	8.717					5.36							
CV value (%) =	5.9					3.37							

### Katepwa - check variety

Means followed by the same letter do not significantly differ (P=.05, LSD)

\* first year tested, very limited data available

\*\* CWHWS Canadian Western Hard White Spring Wheat denotes materials not registered, very limited data available

**WR859 CL, CDC Abound and 5604HR CL**

are Clearfield® tolerant varieties

**Unity** is a Wheat Midge Resistant variety

# CWRS Wheat

# Variety Descriptions

Variety	B.C. Peace Averages				Alberta Agdex 100/32								Distributor
	2006 - 2011				Resistance to:								
	Days to Maturity	Height	Bushel Weight	Kernel Protein %	Lodging	Loose Smut	Common Bunt	Stripe Rust	Leaf Spot	Sprouting	FHB		
	+/- check	cm	lbs/bu	+/- check									
5603HR	0.9	78	63	1 [8]	G	G	G	P	F	XX	F	Viterra	
5604HR CL	-7.7	81	64	0 [6]	G	VG	VG	XX	P	G	G	Viterra	
AC Barrie	-2.2	77	64	1 [12]	G	G	F	VP	P	G	F	SeCan	
AC Splendor	-3.7	76	63	1 [12]	F	F	F	F	F	F	P	SeCan	
Alvena	-1.7	80	63	0 [10]	G	G	G	F	XX	F	P	SeCan	
BW433*	-1.7	115	65	-1 [2]	XX	XX	XX	XX	XX	XX	XX	Syngenta Seeds Canada	
BW901*	-2.2	108	65	-1 [2]	XX	XX	XX	XX	XX	XX	XX	Canterra Seeds	
Carberry	-1.1	75	65	0 [6]	VG	G	G	G	P	F	G	SeCan	
CDC Abound	-1.8	74	65	0 [12]	G	F	F	P	P	G	P	Viterra	
CDC Alsask	-2.3	80	63	0 [12]	F	G	G	F	P	F	P	Viterra	
CDC Go	-3.3	73	64	0 [12]	G	P	G	G	P	P	P	Public Variety	
CDC Kernen	0.0	86	65	0 [6]	G	VG	F	F	F	F	F	Canterra Seeds Seeds	
CDC Osler	-3.2	75	63	0 [12]	G	G	G	F	F	F	VP	Public Variety	
CDC Stanley	-2.2	82	64	-1 [6]	G	G	VP	XX	F	VG	P	Viterra	
CDC Thrive	-3.2	84	64	0 [6]	G	G	F	F	F	P	P	SeCan	
CDC Utmost	-0.6	80	64	0 [6]	G	P	VP	F	F	G	P	FP Genetics	
Glenn	1.2	81	66	1 [6]	VG	F	F	G	F	F	F	Canterra Seeds	
Goodeve	-2.6	82	63	0 [10]	VG	G	P	F	P	G	VP	Alliance Seeds Corp.	
Harvest	-3.2	76	65	0 [12]	VG	G	F	G	P	VG	VP	FP Genetics	
Infinity	-1.2	77	63	0 [12]	G	G	F	P	P	G	VP	Canterra Seeds	
<b>Katepwa</b>	0.0	82	63	0 [12]	F	G	G	P	P	F	F	SeCan	
Muchmore	-0.8	71	65	-1 [6]	VG	G	G	G	P	F	P	FP Genetics	
Shaw	-3.1	86	65	0 [6]	G	P	G	XX	P	G	P	SeCan	
Snowbird**	-1.0	79	64	0 [12]	G	G	F	P	P	G	P	FP Genetics	
Snowstar**	-3.5	72	65	0 [12]	XX	P	P	P	F	F	P	SeCan	
Stettler	0.3	76	65	0 [8]	G	G	G	G	P	G	P	SeCan	
Superb	-1.5	75	65	0 [12]	G	F	G	VP	P	G	P	SeCan	
Unity	-1.6	77	64	0 [8]	G	P	VG	P	P	G	P	SeCan	
Vesper	-3.9	91	65	0 [4]	VG	F	P	VP	G	F	G	SeCan	
WR859 CL	-4.4	72	64	0 [8]	G	VG	VG	F	P	XX	G	Richardson Intl.	

\* first year tested, very limited data available

VG = very good, G = good, F = fair, P = Poor, VP = very poor

\*\* CWHWS = Canadian Western Hard White Spring Wheat  
denotes materials not registered, very limited data available

XX = insufficient data

**WR859 CL, CDC Abound AND 5604HR CL** are Clearfield® tolerant varieties

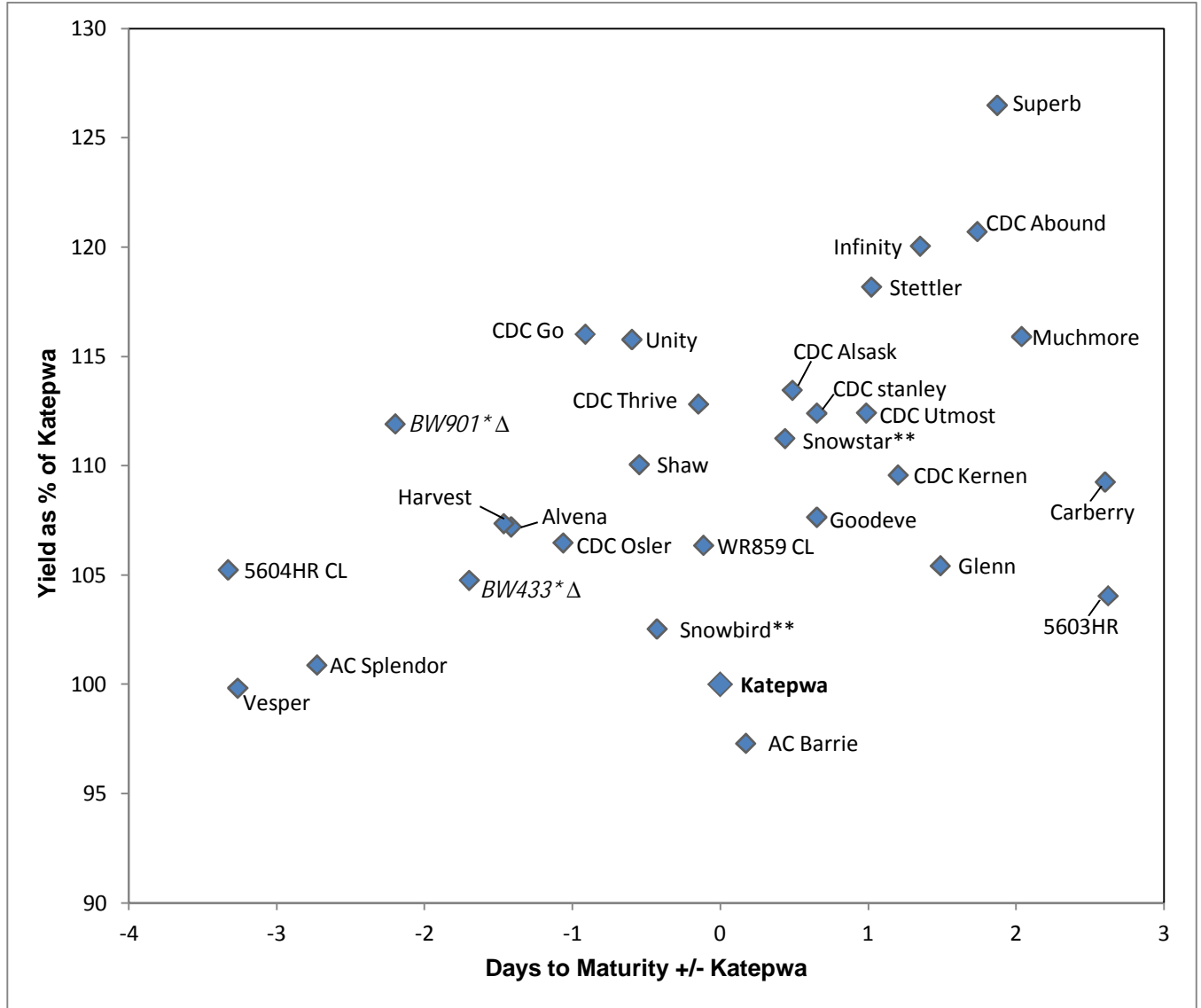
Average protein for **Katepwa** is 13 %

**Unity** is a Wheat Midge Resistant variety

Average maturity for **Katepwa** is 104 days

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**Katepwa - check variety**



Average maturity for **Katepwa** is 117 days for 2011

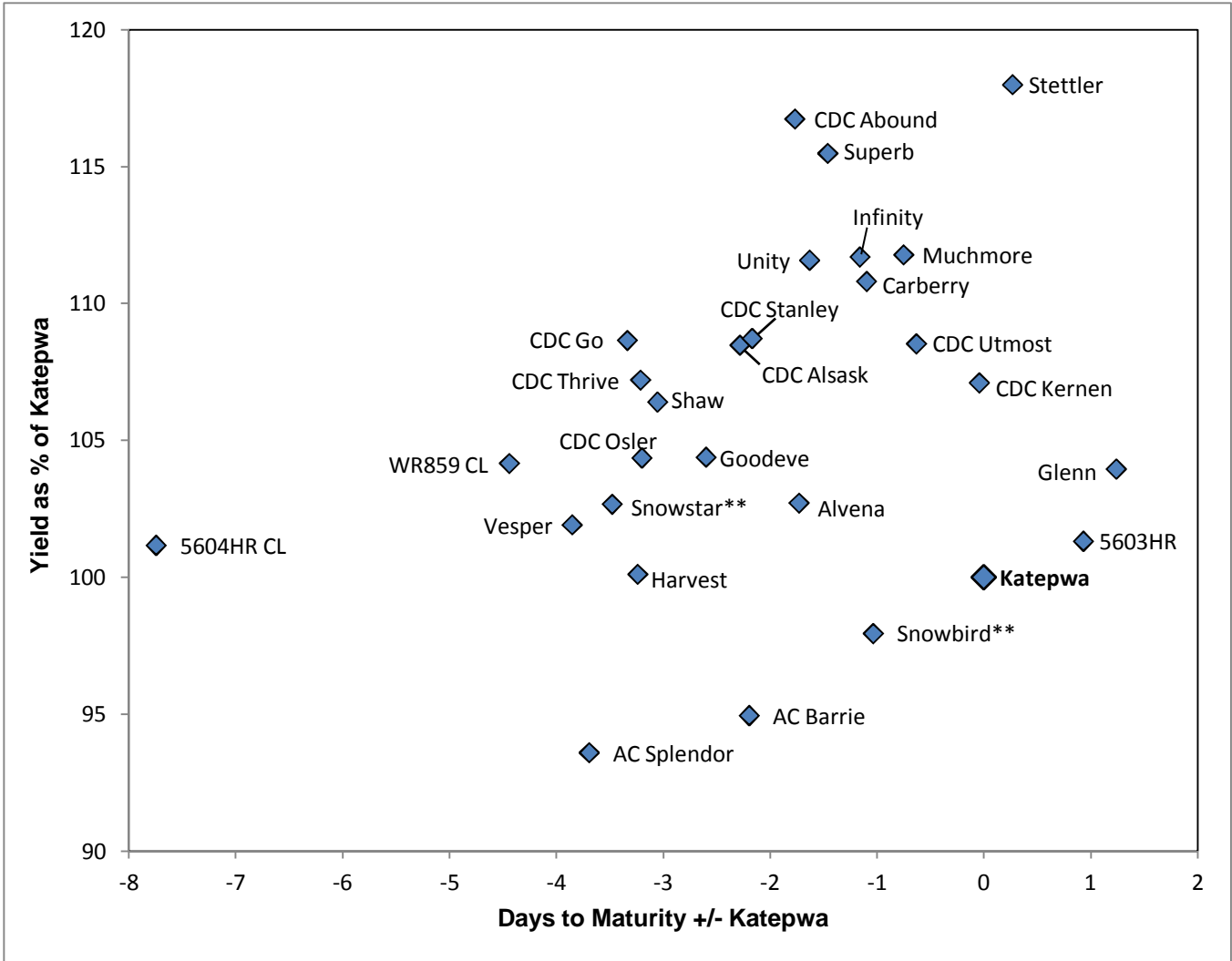
\* first year tested, very limited data available

\*\* CWHWS Canadian Western Hard White Spring Wheat

denotes materials not registered, very limited data available

**WR859 CL, CDC Abound** and **5604HR CL** are Clearfield® tolerant varieties

**Unity** is a Wheat Midge Resistant variety



Average maturity for **Katepwa** is 104 days

\*\* CWHWS Canadian Western Hard White Spring Wheat

# CANADA PRAIRIE SPRING WHEAT

## CANADA WESTERN SOFT WHITE SPRING WHEAT

All current Canada General Purpose Spring varieties (CPS and CWSWS are in this class) should be treated with a systemic fungicide seed treatment to control smut. Avoid deep seeding General Purpose wheats. Note the long maturity periods required for the production of currently available CWSWS wheat varieties. Seeding rates for all classes of wheat covered by the new class "General Purpose" should be increased 20 to 25% due to the larger kernel size.

[For testing purposes, CPS and CWSWS wheats are grown together in the same trial and compared against a CWRS]

CPS / CWSWS Wheat		Yield as % of 5700PR										
Variety	Type	Dawson Creek				Fort St. John				B.C. Peace		
		2011 Yield		2006 - 2011		2011 Yield		2006 - 2011		2011	2006-2011	
		bus / acre	% of check	Avg. (%)	Stn. Yrs.	bus / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.
<b>5700PR</b>	CPS-red	131 b	100	100	[6]	143 ab	100	100	[6]	100	100	[12]
5702PR	CPS-red	136 ab	103	99	[5]	135 bc	94	105	[5]	99	102	[10]
AC Andrew	CWSWS	147 a	112	107	[5]	153 a	107	112	[5]	109	109	[10]
AC Crystal***	CPS-red	136 ab	104	77	[5]	145 ab	101	90	[5]	103	83	[10]
AC Taber***	CPS-red	130 b	99	82	[6]	145 ab	102	91	[6]	100	86	[12]
CDC NRG003	CWGP	127 b	97	94	[2]	129 c	90	94	[2]	94	94	[4]
Conquer	CPS-red	126 b	96	92	[2]	130 c	91	87	[2]	93	90	[4]
HW024*	CWHWS	99 d	76	76	[1]	109 e	76	76	[1]	76	76	[2]
Minnedosa	CPS-white	126 b	96	91	[2]	127 c	89	90	[2]	92	91	[4]
NRG010	CPS-white	132 b	101	99	[3]	137 bc	96	97	[3]	98	98	[6]
Superb	CWRS	121 b	93	99	[4]	134 bc	94	100	[4]	93	99	[8]
SY985 (HY985 )	CPS-red	110 c	84	91	[2]	117 d	82	89	[2]	83	90	[4]
LSD (P=.05) =		10.08				8.07						
CV value (%) =		5.51				4.18						

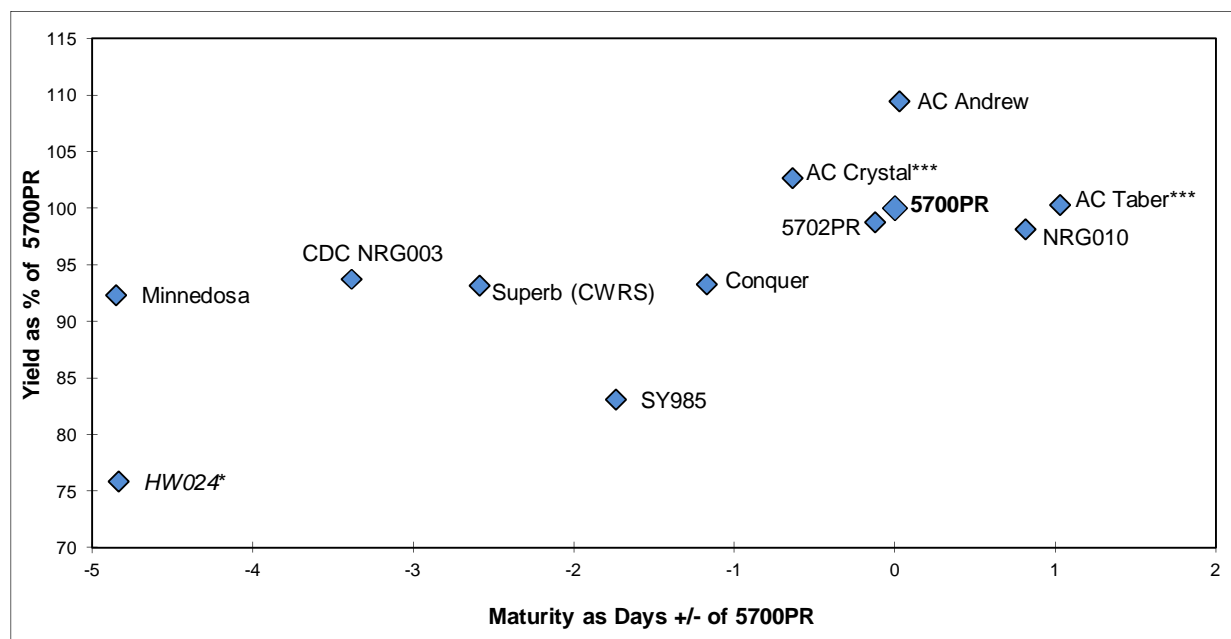
\* first year tested, very limited data available

denotes materials not registered, very limited data available

\*\*\* denotes semi-dwarf stature

Conquer is a Varietal Blend

## CPS / CWSWS Wheat Regional Variety Performance 2011



denotes materials not registered, very limited data available

Average maturity for 5700PR is 122 days for 2011

# CPS / CWSWS Wheat

# Variety Descriptions

Variety	Type	B.C. Peace Averages 2006-2011				Data from Alberta Agdex 100/32										Distributor
		Maturity in days +/- check	Height cm	Bushel Weight lbs/bu	Kernel Protein % +/- check	Resistance to:										
						Lodging	Loose Smut	Common Bunt	Stripe Rust	Leaf Spot	Sprouting FHB					
<b>5700PR</b>	CPS-red	0	67	64	0 [12]	VG	P	G	P	P	P	VP			Viterra	
5702PR	CPS-red	0	73	63	0 [10]	G	P	F	P	F	F	P			Viterra	
AC Andrew	CWSWS	2	72	64	-1 [10]	VG	VP	P	F	G	F	VP			SeCan	
AC Crystal***	CPS-red	1	67	64	1 [10]	G	F	VG	VP	F	P	VP			SeCan	
AC Taber***	CPS-red	3	67	64	0 [12]	G	P	VG	VP	F	P	VP			SeCan	
CDC NRG003	CWGP	-3	81	64	0 [4]	G	G	VG	XX	VP	XX	VP			Canterra Seeds	
Conquer	CPS-red	1	87	64	1 [4]	G	P	G	XX	F	XX	P			Canterra Seeds	
HW024*	CWHWS	-5	96	65	0 [2]	XX	XX	XX	XX	XX	XX	XX			SeCan	
Minnedosa	CPS-white	-4	84	64	0 [4]	G	F	G	G	P	G	P			SeCan	
NRG010	CPS-white	1	79	63	0 [6]	G	VG	VG	VG	P	XX	VP			Canterra Seeds	
Superb	CWRS	-3	74	65	1 [8]	G	F	G	VP	P	G	P			SeCan	
SY985 (HY985)	CPS-red	-1	79	65	1 [4]	G	VG	G	XX	F	XX	F			Viterra	

\* first year tested, very limited data available

VG = very good, G = good, F = fair, P = Poor, VP = very poor

### 5700PR - check variety

XX = insufficient data

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denotes materials not registered, very limited data available

Overall average maturity for **5700PR** is **105** days.

\*\*\* denotes semi-dwarf stature

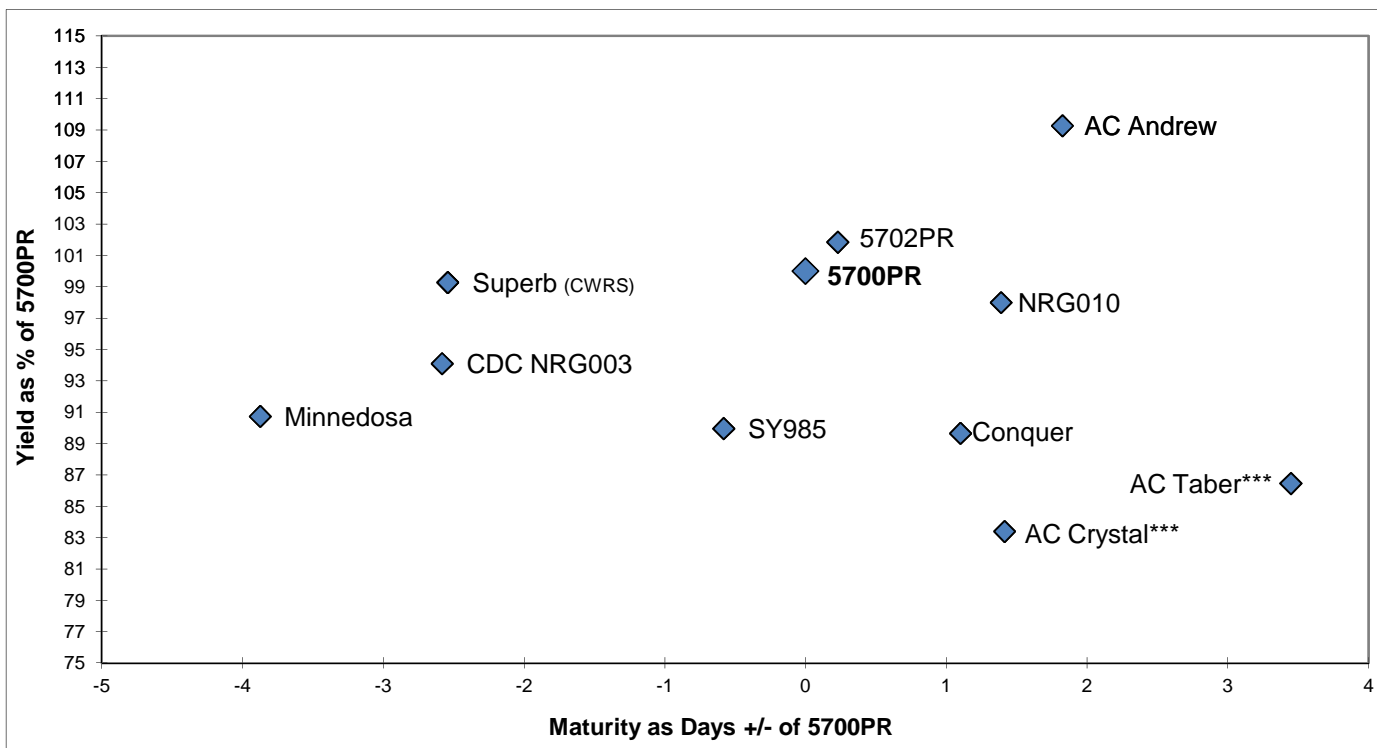
Overall average protein for **5700PR** is **11.7** %

Numbers in square brackets [ ] is number of station years collected for protein

# CPS / CWSWS Wheat

# Regional Variety Performance

# 2006-2011





## DURUM WHEAT

Durum is a type of wheat which is used to make pasta products (macaroni, spaghetti, etc.) and Canada has become a world leader in quality durum. Durum plant breeding within Canada is also moving toward even higher protein content and is developing a brand new category of high gluten strength durum for a specialty pasta market. However, durum requires a long growing season and high heat, two things the Peace River region is not known for having. In the past, durum production has been concentrated in the southern parts of the Canadian prairies.

However, a few producers in northwestern Alberta have had success growing the crop and for this reason it has been tested here in the B.C. Peace. Often surprises arise in our northern long-daylight region and so it was worth investigating durum in a limited fashion. Most varieties of durum wheat currently available are suggested by literature to have approximately 10 days later maturity than CWRS wheat, but this may not be proving to be the case locally but was in 2011 (a very wet & late year). Durum should thus not be grown in large acreage within the B.C. Peace River region for grain production until more is understood about its agronomics and interest develops among the grain buyers to purchase the end product from the region - admittedly a vicious circle of acceptance and trial and error. Therefore, *caution* should be taken when attempting to grow durum in the B.C. Peace region, and *disclosure of this data is currently not a recommendation to grow durum in the Peace.*

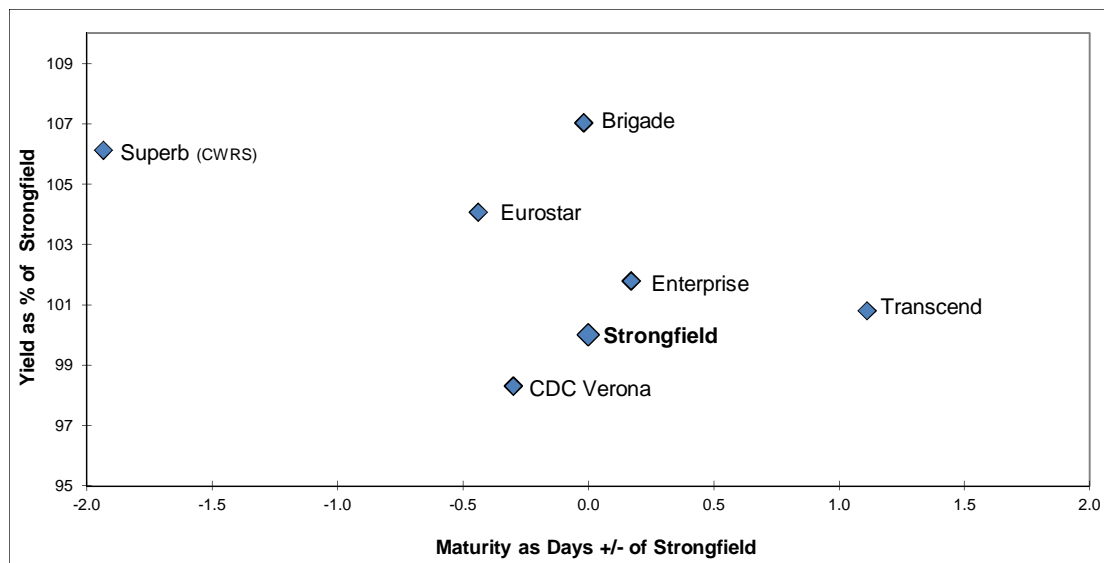
It appears, however, that the B.C. Peace River region has one really big advantage in growing durum, as it would seem we can grow it free of fusarium, a major problem in most durum growing regions. For these reasons data so far collected within the B.C. Peace region has been disclosed as it appears that durum could hold some economic promise to our region in years to come - assuming a buyer/market develops. The test years 2009 and 2010 unfortunately were years of severe drought and poor yield potentials, but compared to other wheat yields over the same period of time at the same testing locations, durum was respectable in yield by comparison and even seemed to survive the drought better than other wheat types. 2011 was a very wet & late year but did not change its promising outlook as a new viable crop-type for our region, noting however that if a normal killing frost would have occurred it would have been bad news for anything later than a CWRS wheat no matter how many days later.

Durum Wheat		Yield as % of Strongfield										
Variety	Type	Dawson Creek				Fort St. John				B.C. Peace		
		2011 Yield		2009 - 2011		2011 Yield		2009 - 2011		2011	2009-2011	
		bus / acre	% of check	Avg. (%)	Stn. Yrs.	bus / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.
Brigade	CWD	129 a	106	101	[3]	123 b	108	105	[3]	107	103	[6]
CDC Verona	CWD	120 b	98	97	[3]	111 c	98	108	[3]	98	102	[6]
Enterprise	CWD	125 ab	102	104	[3]	115 c	101	105	[3]	102	105	[6]
Eurostar	CWD	124 ab	101	100	[3]	121 b	107	106	[3]	104	103	[6]
<b>Strongfield</b>	CWD	122 ab	100	100	[3]	113 c	100	100	[3]	100	100	[6]
Superb	CWRS	119 b	98	98	[1]	130 a	115	115	[1]	106	106	[2]
Transcend	CWD	124 ab	102	95	[2]	113 c	100	102	[2]	101	99	[4]
LSD (P=.05) =		5.34				3.17						
CV value (%) =		2.89				1.81						

denotes materials not registered, very limited data available

\* first year tested, very limited data available

## Durum Wheat Regional Variety Performance 2011



denotes materials not registered, very limited data available

Average maturity for **Strongfield** is **127 days** for 2011

**Durum Wheat** **Variety Descriptions**

Variety	Type	B.C. Peace Averages 2009-2011				Data from Alberta Agdex 100/32										Distributor
		Maturity in days	Height	Bushel Weight	Kernel Protein %	Resistance to:										
		+/- check	cm	lbs/bu	+/- check	Lodging	Shatter	Loose Smut	Common Bunt	Stripe Rust	Leaf Spot	Sprouting FHB				
Brigade	CWD	0.3	81	64	-1 [6]	G	XX	P	G	G	F	F	P	Viterra		
CDC Verona	CWD	-0.5	76	64	-1 [6]	G	XX	P	G	VG	P	F	P	Alliance Seed Corp.		
Enterprise	CWD	-1.1	78	65	-1 [6]	G	XX	P	G	VG	G	F	P	Canterra Seeds		
Eurostar	CWD	1.3	83	65	-1 [6]	G	XX	P	VG	VG	F	F	P	SeCan		
<b>Strongfield</b>	CWD	0.0	74	64	0 [6]	F	VG	VP	G	G	P	F	VP	SeCan		
Superb	CWRS	-1.9	98	66	-3 [2]	G	XX	F	G	VP	P	G	P	SeCan		
Transcend	CWD	0.6	86	64	0 [4]	F	XX	VP	VG	VG	F	F	P	FP-Genetics		

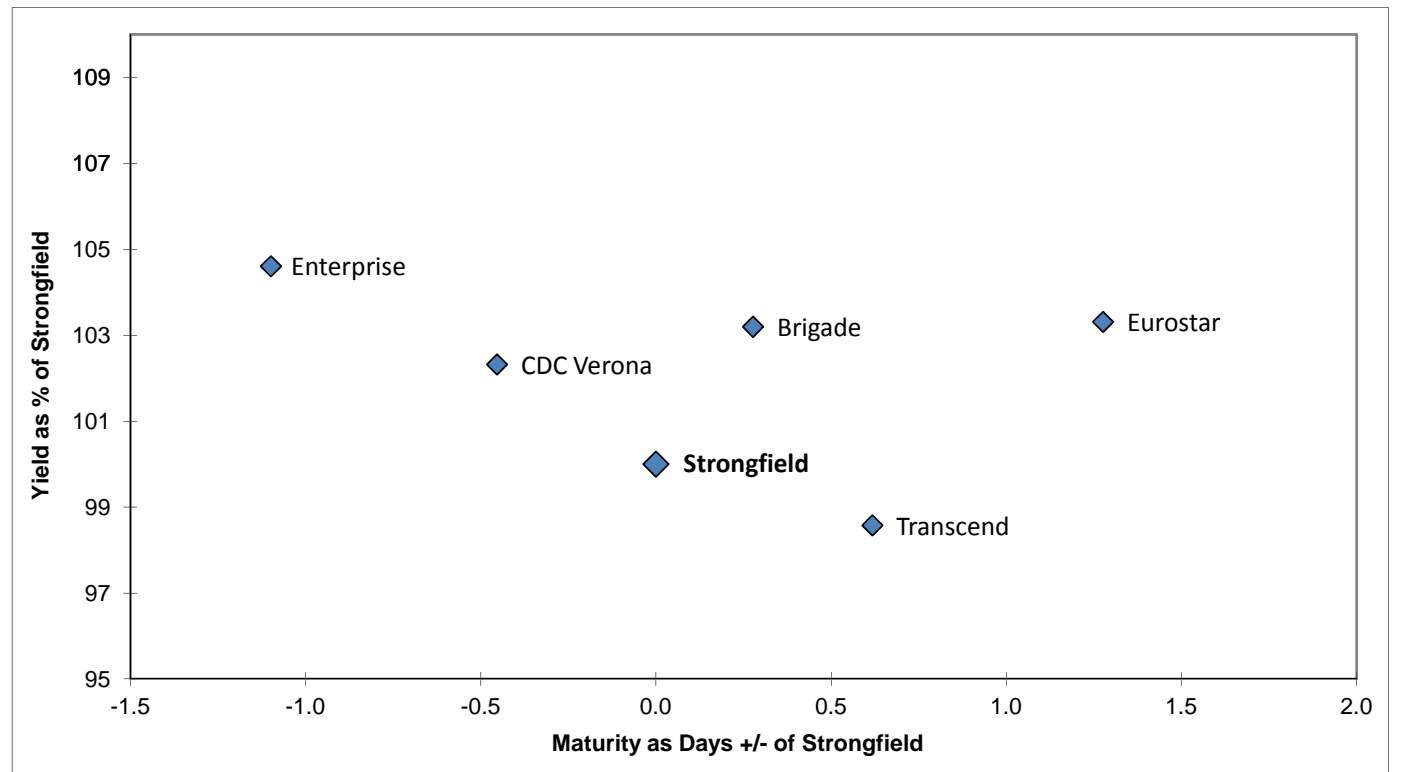
\* first year tested, very limited data available VG = very good, G = good, F = fair, P = poor, VP = very poor  
**Strongfield - check variety** XX = insufficient data

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denotes materials not registered, very limited data available  
 Numbers in square brackets [ ] is number of station years collected for protein

Overall average maturity for **Strongfield** is 111 days.  
 Overall average protein for **Strongfield** is 14.2 %

**Durum Wheat** **Regional Variety Performance** **2009-2011**



# Barley

Six Row Barley		Yield as % of AC Metcalfe												
Variety	Type	Dawson Creek				Fort St. John				B.C. Peace				
		2011 Yield		2006 - 2011		2011 Yield		2006-2011		2011	2006-2011			
		bus / acre	% of check	Avg. (%)	Stn. Yrs.	bus / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.		
AC Albright	Feed, General	105	d	83	91	[5]	148	d	100	86	[6]	92	89	[11]
AC Lacombe	Feed, General	152	ab	121	103	[5]	187	a	126	102	[6]	124	103	[11]
<b>AC Metcalfe</b>	Malt	126	c	100	100	[5]	148	d	100	100	[6]	100	100	[11]
<i>CDC Anderson*</i>	Malt	140	abc	111	111	[1]	166	bc	112	112	[1]	112	112	[2]
CDC Mayfair	Malt	131	bc	104	102	[4]	163	c	110	95	[4]	107	99	[8]
Celebration	Malt	126	c	100	103	[2]	151	d	102	96	[2]	101	100	[4]
Chigwell	Feed	148	ab	118	104	[4]	176	ab	118	104	[4]	118	104	[8]
<i>Muskwa*</i>	Feed, General	145	abc	115	115	[1]	169	bc	114	114	[1]	115	115	[2]
Stellar-ND	Malt	135	abc	107	100	[4]	150	d	101	84	[5]	104	92	[9]
Sundre***	Feed	156	a	124	102	[5]	184	a	124	111	[6]	124	106	[11]
Trochu	Feed, General	155	a	124	109	[5]	182	a	123	101	[6]	123	105	[11]
Vivar**	Feed	153	ab	121	105	[5]	181	a	122	103	[6]	122	104	[11]
LSD (P=.05) =		14.26				9.37								
CV value (%) =		7.09				3.88								

Two Row Barley		Yield as % of AC Metcalfe												
Variety	Type	Dawson Creek				Fort St. John				B.C. Peace				
		2011 Yield		2006 - 2011		2011 Yield		2006-2011		2011	2006-2011			
		bus / acre	% of check	Avg. (%)	Stn. Yrs.	bus / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.		
<b>AC Metcalfe</b>	Malt	132	de	100	100	[6]	153	a-f	100	100	[6]	100	100	[12]
Bentley	Malt	134	de	102	102	[4]	150	b-f	98	100	[4]	100	101	[8]
CDC Austenson	Feed	152	a-d	115	115	[4]	166	ab	109	106	[4]	112	110	[8]
CDC Carter ¶	Feed	110	de	104	104	[3]	121	b-f	99	98	[3]	101	101	[6]
CDC Coalition	Feed, General	144	b-e	109	109	[5]	166	ab	109	104	[5]	109	107	[10]
CDC Cowboy	Feed, Forage	142	cde	107	107	[5]	148	c-f	97	91	[5]	102	99	[10]
CDC ExPlus ¶	Malt	99	e	94	94	[2]	110	f	90	85	[2]	92	89	[4]
CDC Kindersley	Malt	137	de	104	104	[2]	150	b-f	98	98	[2]	101	101	[4]
CDC Meredith	Malt	162	ab	123	123	[4]	170	a	112	107	[4]	117	115	[8]
<i>CDC PolarStar*</i>	Malt	134	de	101	101	[1]	139	ef	91	91	[1]	96	96	[2]
CDC Reserve	Malt	135	de	103	103	[4]	151	b-f	99	103	[4]	101	103	[8]
Cerveza	Malt	141	cde	107	107	[3]	158	a-d	104	106	[3]	105	106	[6]
Champion	Feed, General	140	cde	106	106	[6]	144	def	95	104	[6]	100	105	[12]
CONLON	Feed, General	134	de	101	101	[6]	147	c-f	97	85	[6]	99	93	[12]
<i>FB205*</i>	Feed, Forage	136	de	103	103	[1]	153	a-f	100	100	[1]	102	102	[2]
Gadsby	Feed, General	159	abc	120	120	[2]	168	ab	110	107	[2]	115	114	[4]
<i>HB08304*</i> ¶	Malt	107	de	101	101	[1]	117	c-f	96	96	[1]	99	99	[2]
Major	Malt	146	bcd	110	110	[3]	164	abc	107	99	[3]	109	105	[6]
Merit 57	Malt	166	a	125	125	[5]	170	a	111	107	[5]	118	116	[10]
Newdale	Malt	142	cde	107	107	[6]	155	a-e	102	104	[6]	104	106	[12]
Norman	Malt	131	de	99	99	[3]	139	ef	91	88	[3]	95	94	[6]
Ponoka	Feed, General	148	bcd	112	112	[6]	160	a-d	105	107	[6]	108	109	[12]
TR07728	Feed	150	a-d	114	114	[3]	168	ab	110	103	[3]	112	109	[6]
XENA	Feed, General	151	a-d	114	114	[6]	169	a	111	96	[6]	112	105	[12]
LSD (P=.05) =		11.81				10.50								
CV value (%) =		5.87				4.78								

Means followed by the same letter do not significantly differ (P=.05, LSD)

\* first year tested, very limited data available

\*\* semi-dwarf type

\*\*\* smooth-awned type

¶ denotes hulless seed types (bu/ac adjusted for hulless)

denotes materials not registered, very limited data available

**AC Metcalfe - check variety for 2 row**  
**AC Metcalfe - check variety for 6 row**

Feed Barley							Variety Descriptions						
Variety	Type	B.C. Peace Averages				Alberta Agdex 100/32 info							Distributor
		2006-2011				Resistance to							
		Days to Maturity	Height	Bushel Weight	Kernel Protein %	Lodging	Loose Smut	False Smut	Root Rot	Scald	FHB	Tolerance	
		+/- check	cm	lbs/bu	+/- check								
Eligible for General Purpose Grades Only													
AC Albright	6 row	-7.6	77	52	1 [12]	XX	P	P	P	F	XX	SeCan	
AC Lacombe	6 row	-1.3	74	50	-1 [12]	G	P	G	P	P	VP	SeCan	
CDC Austenson	2 row	5.4	69	55	0 [8]	G	VP	VG	F	VP	F	SeCan	
CDC Coalition	2 row	4.5	69	55	0 [10]	G	VG	VG	F	VP	F	Canterra Seeds	
CDC Cowboy	2 row	4.9	91	55	1 [10]	F	P	G	F	P	G	SeCan	
Champion	2 row	3.2	70	55	-1 [12]	G	VP	VG	XX	VP	F	Viterra	
Chigwell	6 row	3.9	72	52	0 [8]	G	P	G	P	G	VP	SeCan	
CONLON	2 row	-4.2	71	55	0 [12]	G	F	F	G	VP	G	Seed Depot Corp.	
FB205*	2 row	18.2	129	58	0 [2]	XX	XX	XX	XX	XX	XX	U of S	
Gadsby	2 row	9.8	90	56	0 [4]	F	VG	VG	F	VG	F	SeCan	
Muskwa*	6 row	15.1	103	55	-3 [2]	XX	XX	XX	XX	XX	XX	SeedNet	
Ponoka	2 row	5.9	71	55	0 [12]	G	VG	VG	F	G	P	SeCan	
Sundre***	6 row	4.7	81	54	-1 [12]	G	P	VG	P	VG	VP	Mastin Seeds, AB	
TR07728	2 row	4.6	77	56	0 [6]	XX	P	VG	G	P	F	Viterra	
Trochu	6 row	-4.0	72	52	-1 [12]	G	P	G	G	F	F	SeCan	
XENA	2 row	2.0	70	55	0 [12]	G	P	P	G	VP	G	Viterra	
Semi-dwarf varieties													
Vivar**	6 row	-1.0	70	51	-1 [12]	VG	F	VG	G	F	VP	SeCan	
Hulless varieties													
CDC Carter ¶	2 row	1.5	75	63	0 [6]	VG	VG	VG	VP	P	F	SeCan	

Malt Barley							Variety Descriptions						
Variety	Type	B.C. Peace Averages				Alberta Agdex 100/32 info							Distributor
		2006-2011				Resistance to							
		Days to Maturity	Height	Bushel Weight	Kernel Protein %	Lodging	Loose Smut	False Smut	Root Rot	Scald	FHB	Tolerance	
		+/- check	cm	lbs/bu	+/- check								
<b>AC Metcalfe</b>	2 row	0.0	72	55	0 [24]	G	VG	F	F	VP	F	SeCan	
Bentley	2 row	0.9	73	53	0 [8]	G	P	G	G	VP	P	Canterra Seeds	
CDC Anderson*	6 row	16.3	113	53	-2 [2]	XX	XX	XX	XX	XX	XX	SeCan	
CDC ExPlus ¶	2 row	3.3	87	63	-1 [4]	VG	P	P	VG	VG	G	U of S	
CDC Kindersley	2 row	2.9	86	56	0 [4]	G	VP	VG	F	VP	F	SeCan	
CDC Mayfair	6 row	-3.8	69	51	0 [8]	G	VP	G	F	VP	P	Canterra Seeds	
CDC Meredith	2 row	3.9	68	54	-1 [8]	G	VG	G	G	VP	F	SeCan	
CDC PolarStar*	2 row	11.1	118	57	-1 [2]	XX	XX	XX	XX	XX	XX	Canterra Seeds	
CDC Reserve	2 row	-2.2	71	54	0 [8]	G	VP	P	F	P	P	SeCan	
Celebration	6 row	1.6	90	53	0 [4]	VG	VG	VG	P	VP	P	Canterra Seeds	
Cerveza	2 row	3.6	77	54	0 [6]	G	VG	VG	F	VP	F	Mastin Seeds, AB	
HB08304* ¶	2 row	15.2	121	65	-2 [2]	XX	XX	XX	XX	XX	XX	U of S	
Major	2 row	3.1	74	54	0 [6]	G	VG	G	F	P	F	Viterra	
Merit 57	2 row	5.4	72	55	-1 [10]	F	P	VP	F	P	G	Canterra Seeds	
Newdale	2 row	0.5	70	54	0 [12]	G	VP	G	G	P	F	FP Genetics	
Norman	2 row	-2.2	67	54	1 [6]	G	VP	VP	P	VP	G	FP Genetics	
Stellar-ND	6 row	-5.0	76	51	0 [10]	VG	G	G	F	P	F	Canterra Seeds	

\* first year tested, very limited data available

VG= very good, G = good, F = fair, P = poor, VP = very poor

¶ denotes hulless seed types

XX = insufficient data

■ Protected by Plant Breeders' Rights

Overall average maturity for **AC Metcalfe** is 93 days

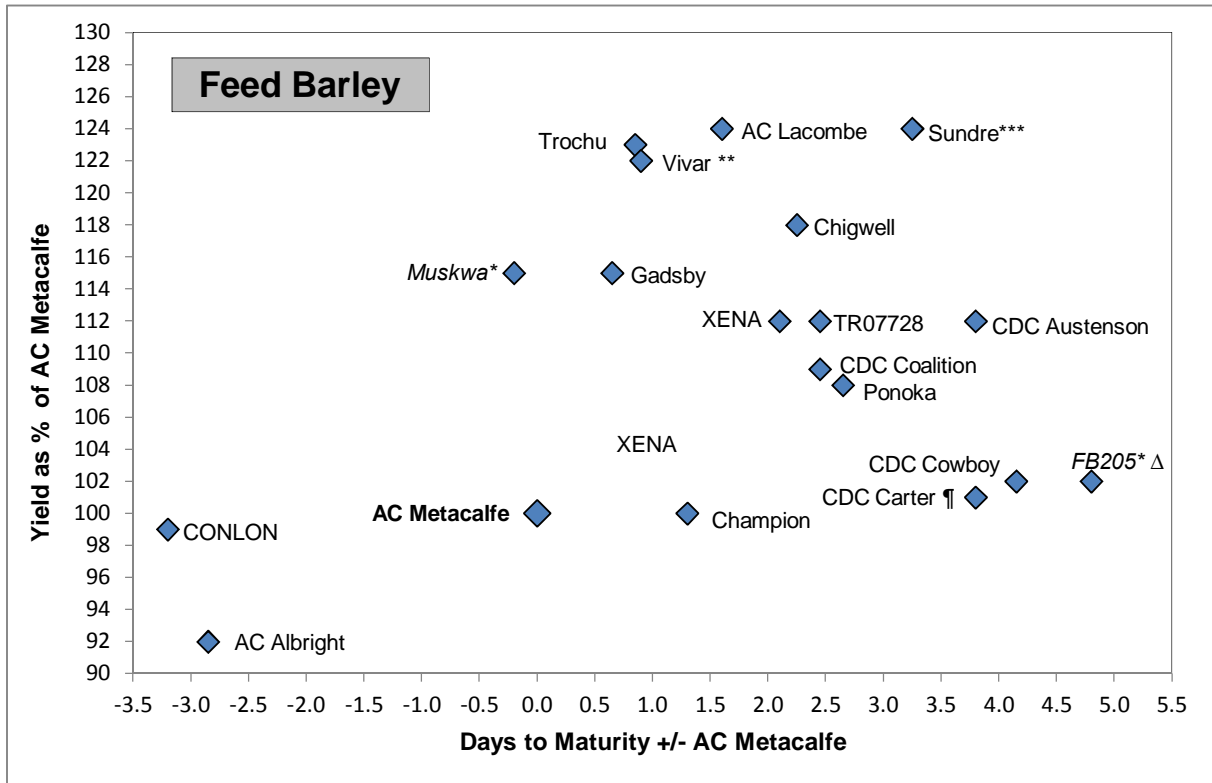
denotes materials not registered, very limited data available

Overall average protein for **AC Metcalfe** is 13.7%

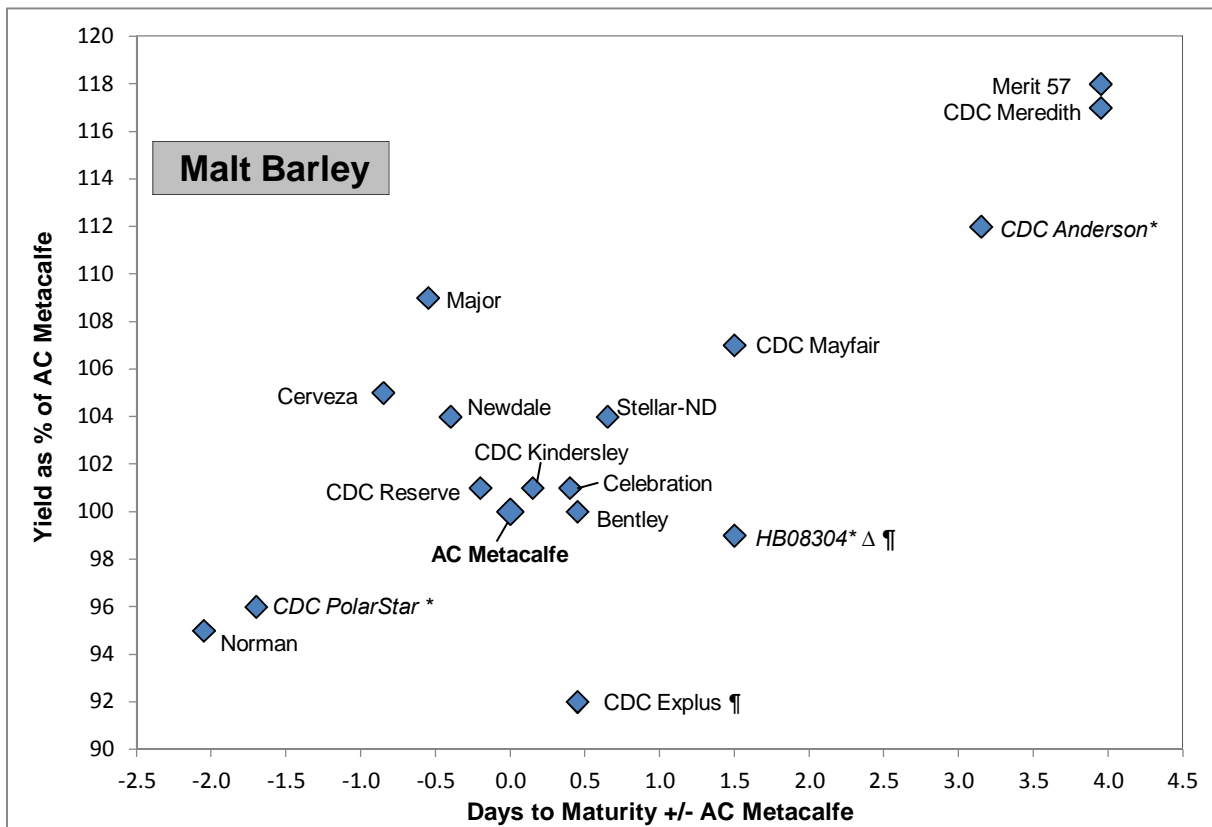
Numbers in square brackets [ ] is number of station years collected for protein

**AC Metcalfe - check variety**

\*\* semi-dwarf type \*\*\* smooth-awned type



Average maturity for AC Metcalfe is 106 days in 2011 (both graphs)

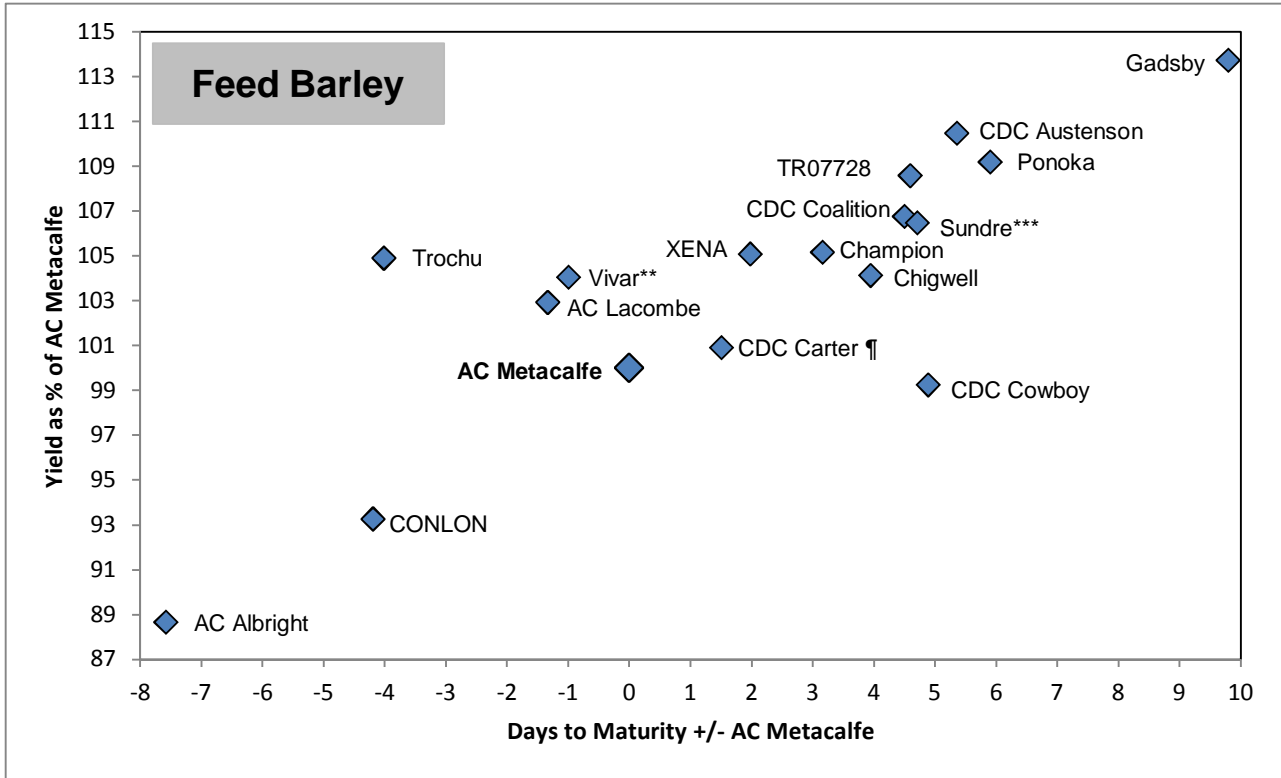


\* first year tested materials

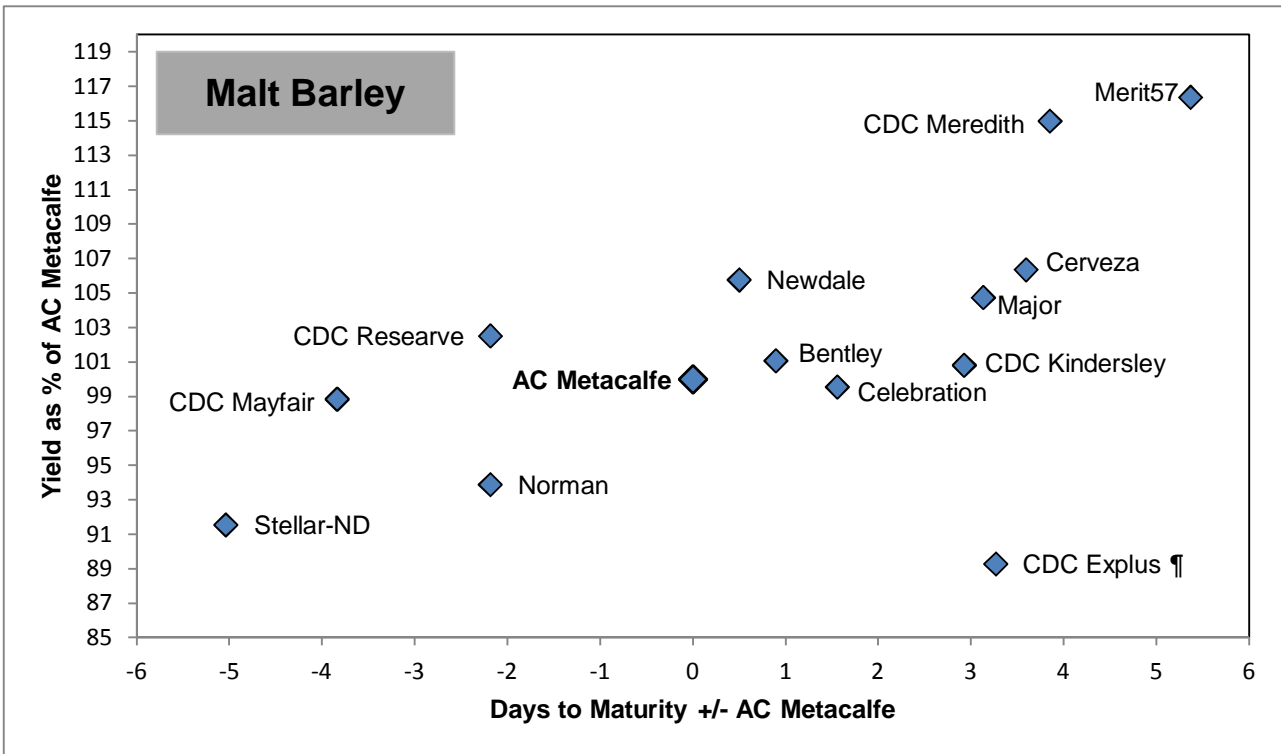
denotes materials not registered

¶ denotes hulless seed types ( bu/ac adjusted for hulless )

\*\* semi-dwarf type \*\*\* smooth-awned type



Average maturity for AC Metcalfe is 93 days (both graphs)



\*\* semi-dwarf type  
 \*\*\* smooth-awned type

¶ denotes materials not registered  
 ¶ denoted hulless seed types (bu/ac adjusted for hulls)

## OAT

Oat is usually a feed crop but some varieties are also suitable for higher value feed and food markets. The milling industry prefers higher protein varieties with plump kernels and lower hull content, while the horse industry prefers white hulled varieties. Hulless oat varieties have excellent feed and food value but need to be stored drier than normal varieties (<12% moisture) and do not flow as well in the bin due to their pubescence (hairs), which seem to "lock together". The exception to this "hairy-hulless" issue is the variety *Gehl*, included for the first time this season, which is a "low pubescence hulless" oat aimed at a replacement for rice actually, hence the marketing slogan "prairie rice" for it. A potential contracted market in the Peace River area is a real possibility if agronomics work out for *Gehl*. Yield values for hulless oat varieties are expressed after hull removal, which reduces the seed weight by 20-25% compared to the normal varieties. Keep this ratio in mind while comparing hulless to hulled, however currently (in this report) only the "low pubescence" hulless oat *Gehl* is being tested. (See earlier reports for more information on more "traditional hulless" types).

Oat		Yield as % of CDC Dancer										
Variety	Colour	Dawson Creek				Fort St. John				B.C. Peace		
		2011 Yield		2006-2011		2011 Yield		2006-2011		2011	2006-2011	
		bus / acre	% of check	Avg. (%)	Stn. Yrs.	bus / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.
AC Mustang	White	179 a	112	115	[6]	240 ab	120	117	[6]	116	116	[12]
Bradley	White	127 e	80	89	[3]	217 cd	108	106	[3]	94	98	[6]
CDC Big Brown	Brown	161 abc	101	96	[2]	227 bc	113	110	[2]	107	103	[4]
<b>CDC Dancer</b>	White	159 abc	100	100	[6]	200 d	100	100	[6]	100	100	[12]
CDC Minstrel	White	145 cde	91	94	[5]	230 abc	115	103	[5]	103	98	[10]
<i>CDC Seabiscuit*</i>	Yellow	136 de	86	86	[1]	216 cd	108	108	[1]	97	97	[2]
CDC SO-I	Tan/Brown	167 abc	105	94	[2]	231 abc	115	108	[2]	110	101	[4]
<i>Gehl*</i>	White	43 f	43	43	[1]	65 e	51	51	[1]	47	47	[2]
Lu	Yellow	155 bcd	98	98	[6]	231 abc	115	99	[6]	106	98	[12]
<i>Stride*</i>	White	152 cd	95	95	[1]	212 cd	106	106	[1]	101	101	[2]
Triactor	White	177 ab	111	114	[5]	252 a	126	110	[5]	118	112	[10]
LSD (P=.05) =		15.89				15.67						
CV value (%) =		7.44				5.06						

Means followed by the same letter do not significantly differ (P=.05, LSD)

\* first year tested, very limited data available

denotes materials not registered, very limited data available

\* *Gehl* is a "low pubescence hulless" oat intended for the whole grain oat market (see comment above chart)



### Health Benefits Of Oat

Oats are mainly used for livestock feed especially horses and cows and only a small percentage of oat has been traditionally used for human consumption. However, oat are a great source of fibre which consists of more than half as soluble fibres. Oat is high in protein and mineral contents included calcium, iron, magnesium, zinc, copper, manganese, thiamin, folacin, and vitamin E. They are higher in these components than any other whole grain, such as wheat, barley, corn or rice. Rich in Vitamin B1 they can help maintain carbohydrate metabolism. Many scientific researchers have proven that eating oatmeal, oat bran and whole oat products improves both blood pressure and cholesterol levels and furthermore, it also reduces the risk of heart disease, cancer and diabetes. Thus, oat is a significant contributor to the good health of not only livestock but also to good human health as well.



Oat		Variety Descriptions					
Variety	Type	BC Peace Averages 2006 - 2011			Alberta Agdex 100/32 info Tolerance to:		Distributor
		Maturity as days +/- check	Height cm	Bushel Weight lbs/bu	Lodging	Smuts	
AC Mustang	Feed/forage	3.0	87	43	G	F	Mastin Seeds
Bradley	Milling	2.0	84	40	VG	VG	SeCan
CDC Big Brown	Milling	3.5	94	43	G	VG	SeCan
<b>CDC Dancer</b>	<b>Milling</b>	<b>0.0</b>	<b>82</b>	<b>42</b>	<b>G</b>	<b>VG</b>	<b>FP Genetics</b>
CDC Minstrel	Milling	3.2	79	42	VG	VG	FP Genetics
<i>CDC Seabiscuit*</i>	Milling	7.9	110	42	XX	XX	Canterra Seeds
CDC SO-I	Feed	-1.3	90	40	XX	XX	T & L Seeds
<i>Gehl*</i> ¶	General Purpose	3.4	114	52	XX	XX	Wedge Farms
Lu	Feed	-2.4	78	41	G	VG	SeCan
<i>Stride*</i>	Milling	5.4	119	45	XX	XX	AAFC-Lacombe
Triactor	Milling/Feed	2.6	81	40	G	VG	Canterra Seeds Seeds

**CDC Dancer - check variety**

■ Protected by Plant Breeders' Rights

VG = very good, G = good, F = fair, P = Poor, VP = very poor

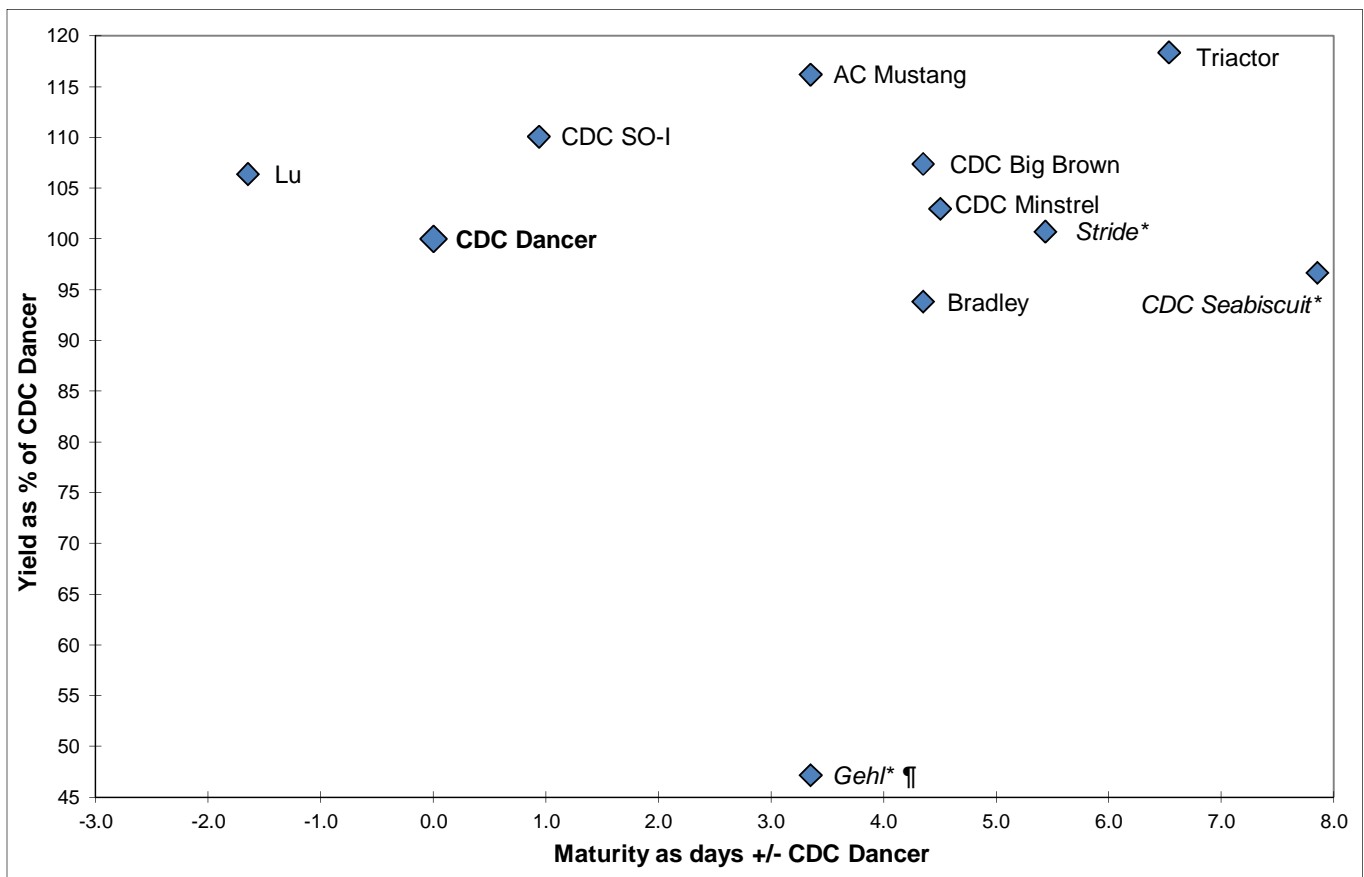
XX = insufficient data

\* first year tested, very limited data available

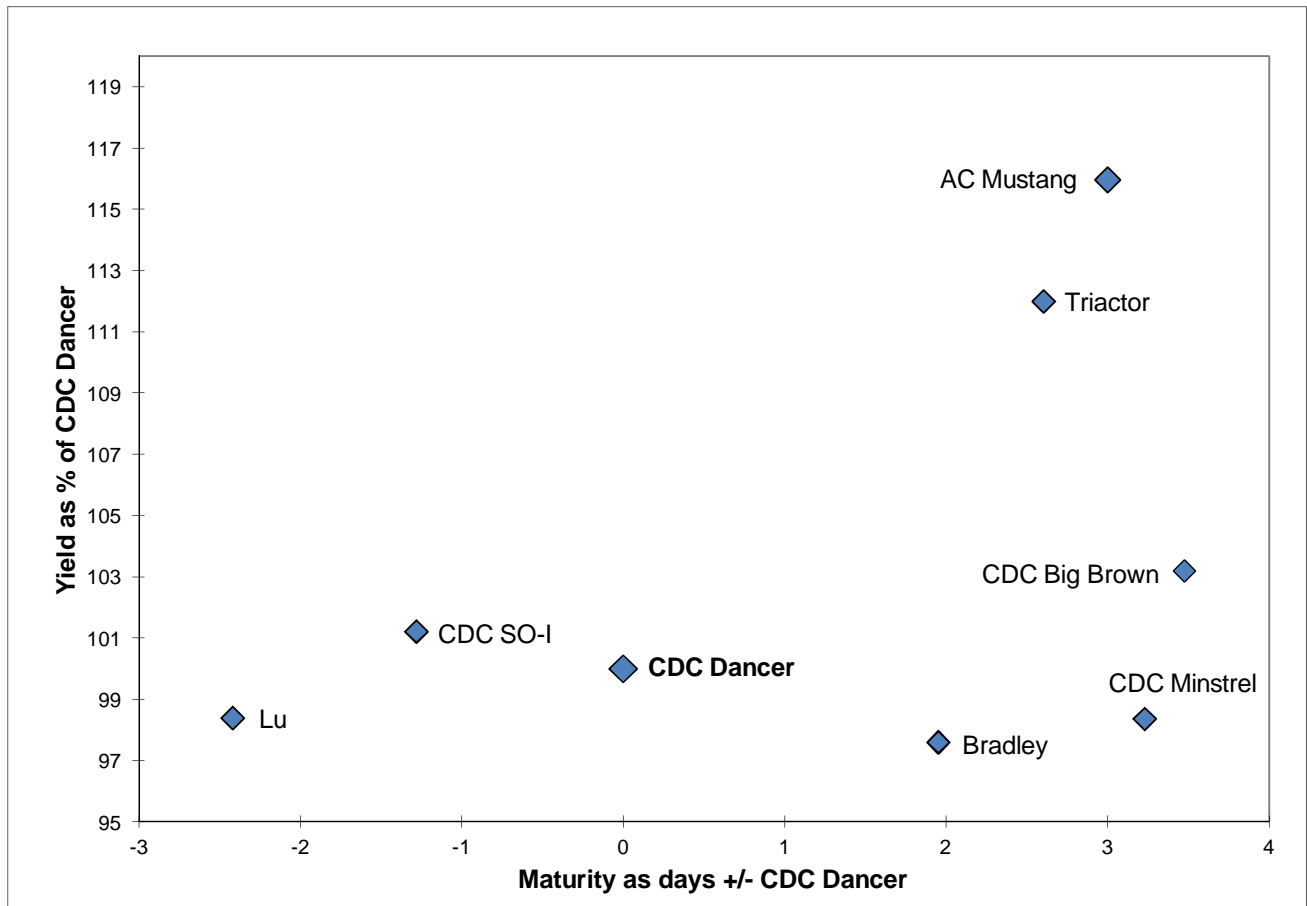
denotes materials not registered, very limited data available

¶ denotes low pubescence hullless

**Oat Regional Variety Performance 2011**



Overall average maturity for CDC Dancer is 101 days for 2011



Overall average maturity for CDC Dancer is 95 days

### Oat for Feed

Oats are often sown to provide fodder in the form of silage or greenfeed. Oats will yield more silage or greenfeed per unit area than any other cereal crop. If managed properly, it can provide 3-4.5 tons of dry matter per acre, or more, of high quality feed containing up to 10 percent protein<sup>1</sup>. Many years of comparing yields of oats with barley have shown oats to be superior in the Black and Grey Wooded soil zones<sup>1</sup>. Although the percent protein level in barley is higher than in oats, the total amount of protein produced on a given area is higher with oats than with barley<sup>1</sup>. Oats have about 22-26 percent hull whereas barley averages about 12-14 per cent hull on a weight basis<sup>1</sup>. When choosing a variety, the seed yield as well as the forage yield should be considered, thereby keeping one's options open to harvest as forage or grain<sup>1</sup>. We do not currently evaluate oat varieties for forage yield in these tests.

### Forage Oat

It is believed by some farmers that one variety might be better than another because it appears "leafier"; however, tests on a number of varieties have shown very little variation in leafiness<sup>2</sup>. Having said that however, such work has not likely included the newer lines of forage oats that are entering the market place now. These new "forage only" lines, such as *CDC Baler* and *Murphy*, have usually been much larger plants in our tests than their traditional counterparts developed for seed quality, which should translate to more biomass to be available for forage production. Note however, that traditionally our oat tests do not lodge and so it is unclear as to whether larger plants are going to be a concern for early lodging in a large-scale forage production practice in our area. Lodging data here is from Alberta Agdex 100/32.

### Other Comments

On heavier soils and in the more moist areas, lodging resistance should be considered, but again, traditionally lodging has not been a concern in our BC Peace oat trials, and as mentioned above, lodging data provided here is from Alberta Agdex 100/32. The variation in straw feed quality between oat varieties is insignificant and should not be used as a variety selection criterion<sup>3</sup>. The average feed values are: protein 4%, fibre 49%, calcium 0.27%, and phosphorus 0.08%<sup>3</sup>.

Source<sup>1,2,3</sup>: Alberta Agriculture, Food, and Rural Development website [www.agric.gov.ab.ca](http://www.agric.gov.ab.ca)

## SPRING TRITICALE

Triticale is a genetic cross (not a hybrid) developed by crossing wheat (*Triticum turgidum* or *Triticum aestivum*) with rye (*Secale cereale*). Most varieties of spring triticale currently available are approximately 10 days or more later maturing than CWRS wheat, and as such they should not be grown in the B.C. Peace River region for grain production. However, a few varieties are proving to be earlier than traditional spring triticale varieties, and perhaps as breeding continues earlier lines may come along that can be grown here for grain with a consistent and early enough maturity. Their high grain yields are "attention grabbers", and so it is worth watching their development, especially as triticale seems to hold a lot of potential for ethanol production in the Peace River region if breeding efforts could produce earlier maturing lines. Drought tolerance is the primary advantage that spring triticales have over other spring cereal crops. Spring triticales are also a valuable alternative or compliment to barley & oat as forage feed, but current triticale lines do tend to have low resistance to Ergot, likely due to late maturity. This may become less of a concern as earlier lines are bred. It is for these reasons, especially its potential use as a high volume ethanol feedstock, that data is included in this report.

Variety	Yield as % of Pronghorn										
	Dawson Creek				Fort St. John				B.C. Peace		
	2011 Yield		2006-2011		2011 Yield		2006-2011		2011	2006-2011	
bus / acre	% of check	Avg. (%)	Stn. Yrs.	bus / acre	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.	
AC Alta	158 e	92	97	[5]	175 c	95	105	[5]	93	101	[10]
AC Ultima	185 ab	107	107	[6]	184 b	99	93	[6]	103	100	[12]
Brevis*	192 a	111	111	[1]	193 a	105	105	[1]	108	108	[2]
Bumper	164 de	95	102	[3]	171 c	93	100	[3]	94	101	[6]
<b>Pronghorn</b>	173 bcd	100	100	[6]	185 b	100	100	[6]	100	100	[12]
Sunray	174 bcd	100	97	[2]	185 b	100	103	[2]	100	100	[4]
Taza	169 cde	98	99	[2]	179 bc	97	97	[2]	97	98	[4]
Tyndal	177 bc	103	116	[6]	178 bc	96	100	[6]	99	108	[12]
LSD (P=.05) =	9.49				5.88						
CV value (%) =	3.71				2.21						

Means followed by the same letter do not significantly differ (P=.05, LSD)

\* first year tested, very limited data available  
 denotes materials not registered, very limited data available

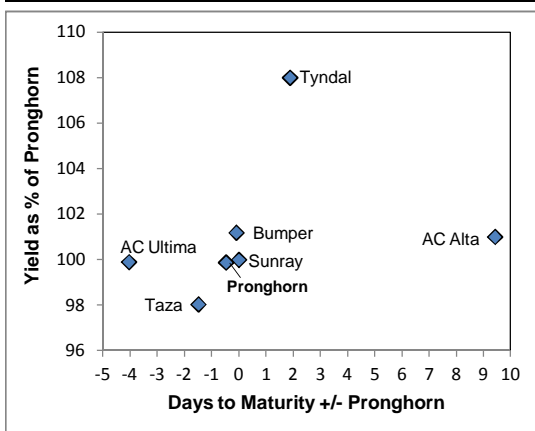
### Pronghorn - check variety

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Variety	VARIETY DESCRIPTIONS										
	Maturity as days +/- check	Height (cm)	Bushel Weight (lbs/bus)	TKW (g / 1000)	Resistance to:						Distributor
					Lodging	Loose Smut	Common Bunt	Sprouting	FHB		
AC Alta	9.4	81	55	51							Progressive Seeds
AC Ultima	-4.0	85	58	45	G	VG	VG	F	F		FP Genetics
Brevis*	1.9	110	63	51	XX	XX	XX	XX	XX		Wagon Wheel Seed Corp.
Bumper	-0.1	82	60	45	VG	XX	VG	F	P		SeCan
<b>Pronghorn</b>	0.0	87	57	44	G	VG	VG	F	G		Progressive Seeds
Sunray	-0.5	93	58	45	VG	VG	VG	F	VP		SeedNet
Taza	-1.5	103	58	46	XX	XX	VG	XX	VP		Solick Seeds
Tyndal	1.9	87	58	44	G	VG	VG	P	P		SeCan

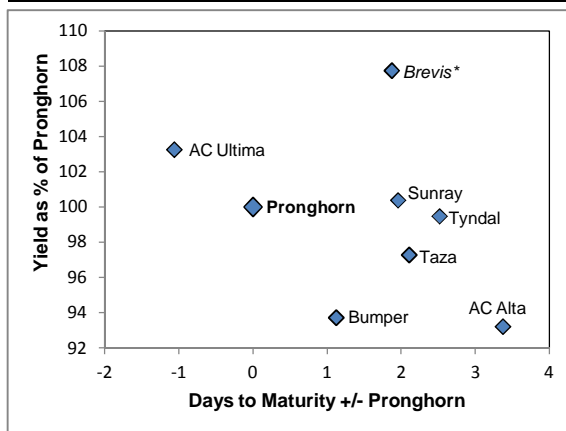
VG= very good, G = good, F = fair, P = poor, VP = very poor; XX = insufficient data

### Regional Variety Performance 2006-2011



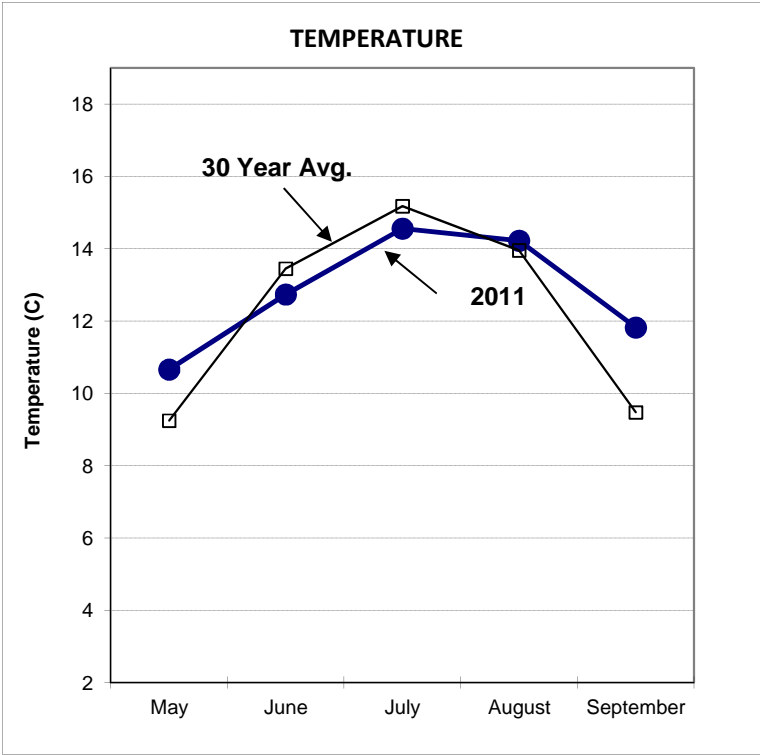
Average long-term maturity for Pronghorn is 111 days

### Regional Variety Performance 2011



Average maturity for Pronghorn is 121 days for 2011

# Dawson Creek Weather Information 2011



## TEMPERATURE

Month	Monthly Avg. Temp. (C)	Temp.* 30 year Avg. (C)
May	11	9
June	13	13
July	15	15
August	14	14
September	12	9

**Frost Events:** -1.3 May 7      -1 Sept 28  
 -1.8 May 8                -2.5 Oct 1

**Killing Frost (-2.2 C) Free Period: 163 days**  
 April 21 - October 1

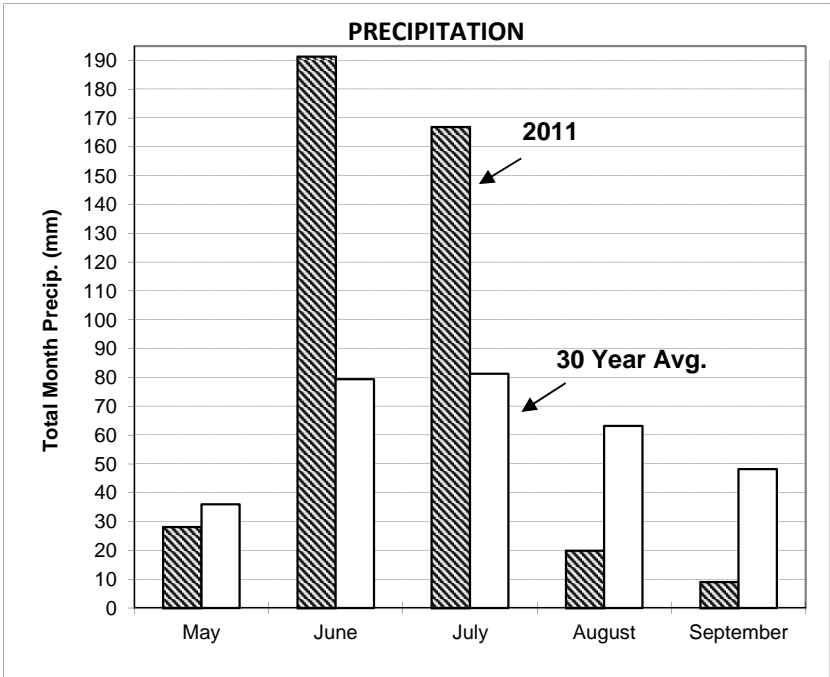
**Accumulated Growing Degree Days:**  
**2011: 1137**  
 1994-2011 Average: 1164

\* 30 year average DC from 1968-1997  
 Source: Environment CANADA

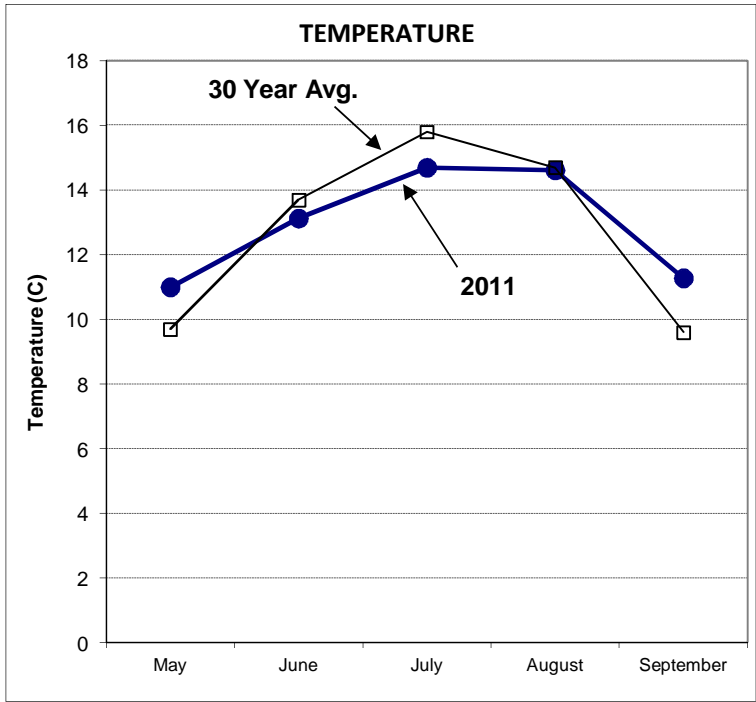
## PRECIPITATION

Month	Monthly Precipitation (mm)	Precipitation * 30 year Avg. (mm)
May	28	36
June	191	79
July	167	81
August	20	63
September	9	48

Data is provided by an on site weather station maintained by the Canadian Wheat Board through its Weatherfarm® program ( a cooperation with WeatherBug®) and in conjunction with the BC Grain Producers Association.



# Fort St. John Weather Information 2011



## TEMPERATURE

Month	Monthly Avg. Temp. (C)	Temp.* 30 year Avg. (C)
May	11	10
June	13	14
July	15	16
August	15	15
September	11	10

**Frost Events:** -2.2 May 1      -1.9 Sept 13  
 -2.2 June 5                -2.3 Oct 3

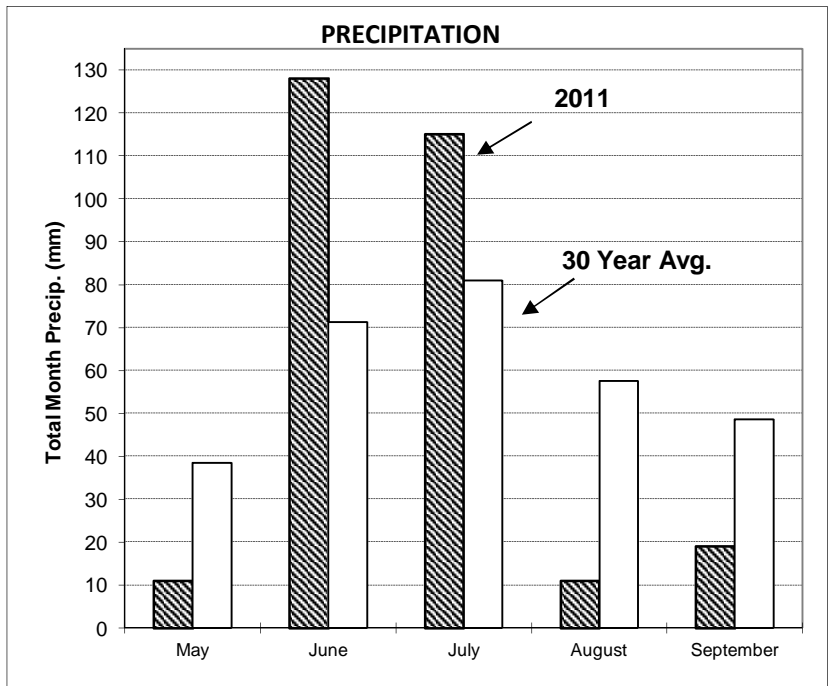
**Killing Frost (-2.2 C) Free Period: 120**  
 June 5 - October 3

**Accumulated Growing Degree Days:**  
**2011: 1159**  
 1994-2011 Average: 1152

\* 30 year average FSJ from 1968-1997  
 source: Environment CANADA

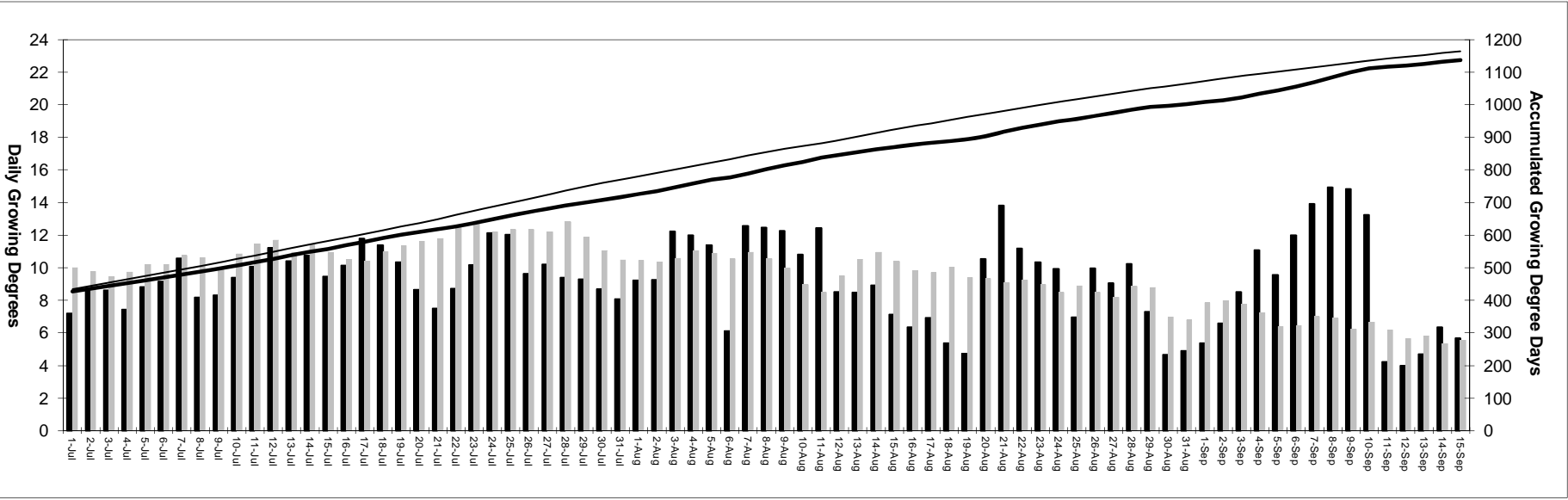
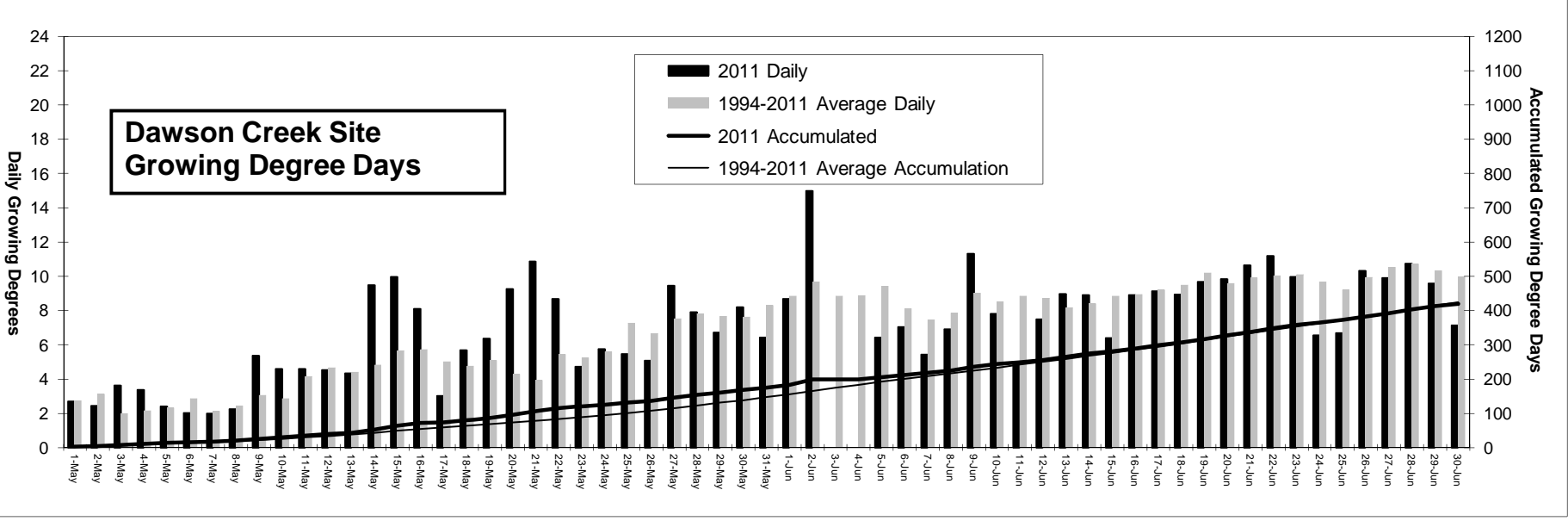
## PRECIPITATION

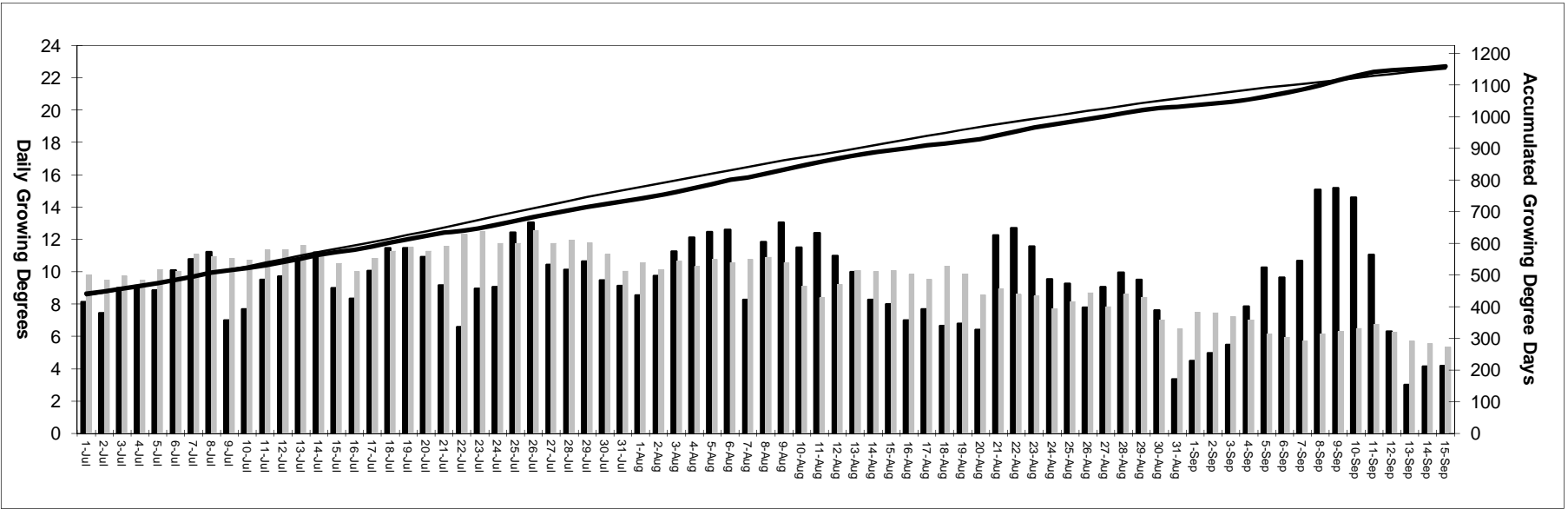
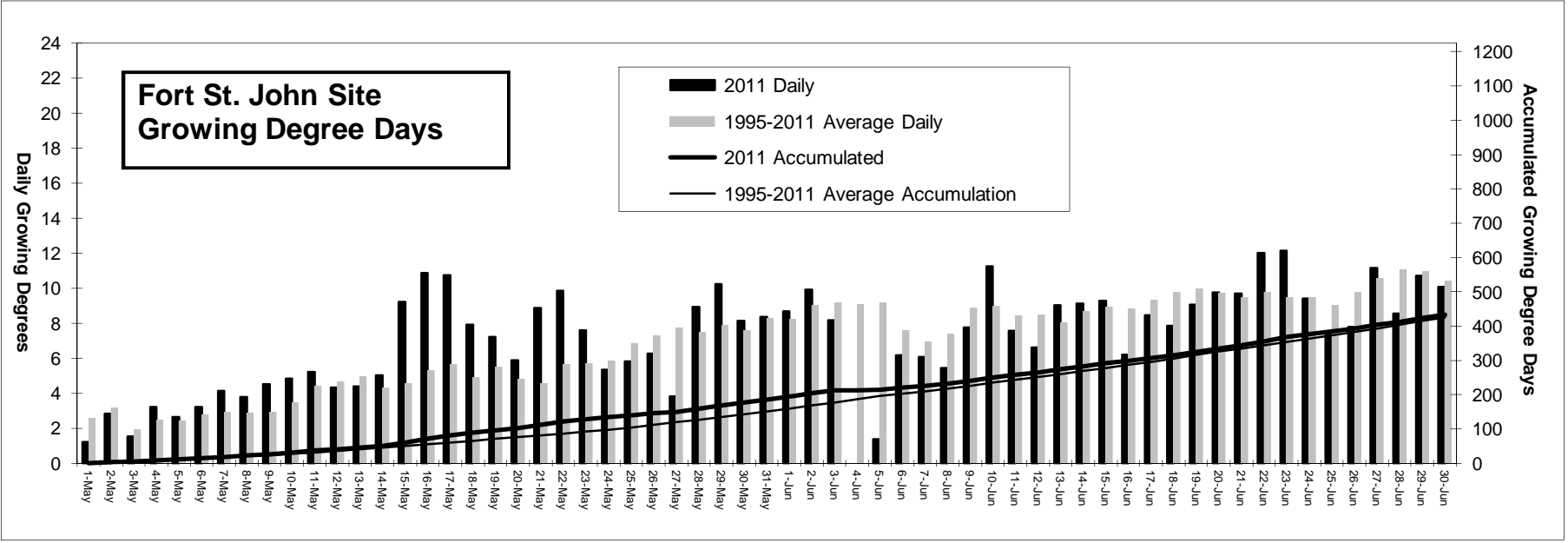
Month	Monthly Precipitation (mm)	Precipitation * 30 year Avg. (mm)
May	11	39
June	128	71
July	115	81
August	11	58
September	19	49



Data is provided by an on site weather station maintained by the Canadian Wheat Board through its Weatherfarm® program ( a cooperation with WeatherBug®) and in conjunction with the BC Grain Producers Association.









## List of Certified Seed Distributors

### Alliance Seed Corp.

%, Parrish & Heimbecker 2149 Imperial Access Rd.  
Dawson Creek Toll-Free:1(800) 315-6336  
[www.allianceseed.com](http://www.allianceseed.com)  
[www.parrishandheimbecker.com](http://www.parrishandheimbecker.com)

### Bayer CropScience Inc. Canada

#100, 3131-114 Ave. SE Calgary, AB T2Z 3X2  
Toll-Free :1(888) 283-6847 Phone:(403)-723-7400  
[www.bayercropscience.ca](http://www.bayercropscience.ca)

### Brett - Young Seeds Ltd.

P.O. Box 99, St. Norbert Postal Station,  
Winnipeg, MB R3V 1L5  
Toll-Free: 1(800) 665-5015  
[www.brettyoung.ca](http://www.brettyoung.ca)

### Canseed Ltd.

R.R. #1, Box 1155 Stettler, AB T0C 2L0  
Phone: (403)-742-4091 Fax: (403)-742-0621

### Canterra Seeds Ltd.

201-1475 Chevier Blvd. Winnipeg, MB R3T 1Y7  
Phone: (204)-988-9750 Fax:(204) 487-7682  
[www.canterra.com](http://www.canterra.com)

### Cargill Ltd.

P.O. Box 5900 300-240 Graham Avenue Winnipeg, MB  
R3C 4C5 Phone:(204)-947-0141 Fax:(204)-947-6444  
[www.cargill.ca](http://www.cargill.ca)

### DL Seeds

P.O. Box 2499 Morden, MB R6M 1C2  
Phone: (204)-331-2361 Fax:(204)-325-8052  
[www.dlseeds.ca](http://www.dlseeds.ca)

### FP Genetics

426 McDonald Street Regina, SK S4N 6E1  
Toll Free: 1(877) 791-1045 Fax: 1(877) 791-1046  
[www.fpgenetics.ca](http://www.fpgenetics.ca)

### Hadland Seed Farm Ltd.

8161 253 Rd, Baldonnel BC, V0C 1C0  
Phone: (250)-789-3646

### Mastin Seeds

RR #1 Sundre, AB T0M 0X0  
Phone:(403)-556-2609 Fax: (403)-507-2609  
[www.mastinseeds.com](http://www.mastinseeds.com)

### Monsanto Canada Inc (DEKALB)

900 - 1 Research Road Winnipeg, MB R3T 6E3  
Toll-Free:1(800) 667-4944 Phone: (204)-985-1000  
[www.monsanto.ca](http://www.monsanto.ca)

### Pioneer Hi-Bred Ltd. (DuPont)

P.O. Box 730, 7398 Queen's Line Chatham, ON  
N7M 5L1 Phone: (519)-352-6350  
[www.pioneer.com/canada](http://www.pioneer.com/canada)

### Richardson International

2800 One Lombard Place, Winnipeg, MB  
R3B 0X8  
<http://www.richardson.ca>

### Saskatchewan Pulse Growers

104 - 411 Downey Road Saskatoon, SK S7N 4L8  
Phone: (306)-668-5556 Fax: (306)-668-5557  
[www.saskpulse.com](http://www.saskpulse.com)

### SeCan Association

501-300 March Road Kanata, ON K2K 2E2  
Toll-Free:1(800) 764-5487 Phone: (613)-592-8600  
[www.secan.com](http://www.secan.com)

### Seed Depot Corp.

P.O. Box 208 Pilot Mound, MB R0G 1P0  
Phone: (204)-825-2000  
[www.seeddepot.ca](http://www.seeddepot.ca)

### SeedNet

Ron Markert Phone: (403)-485-6708  
<http://www.seednet.ca>

### Solick Seeds Ltd.

Po Box 97 Halkirk, AB T0C 1M0  
Phone: (403)-884-2358 Fax: (403)-884-2360

### Syngenta Seeds Canada Inc.

15910 Medway Road, RR 1 Arva, ON N0M 1C0  
Toll-Free:1(800) 756-7333  
[www.nkseed.com](http://www.nkseed.com)  
[www.syngenta.ca](http://www.syngenta.ca)

### T & L Seeds

P.O. Box 216 North Battleford, SK S9A 2Y1

### Viterra

P.O. Box 6600 CanWest Global Place 201  
Portage Avenue Winnipeg, MB R3C 3A7  
Toll Free:1(866) 569-4411 Fax: 1(866) 310-4156  
Dawson Creek Phone:(250)-782-9264  
Fort St. John Phone:(250)-785-3445  
[www.viterra.ca](http://www.viterra.ca)

### Wedge Farms(Smart&Natural Foods ltd)

box 276 363 River Road Arborg, MB R0C 0A0  
toll free: 1(877) 738-2144 fax: 1(204)-376-2201  
[www.mysmartfoods.com](http://www.mysmartfoods.com)

### Wagon Wheel Seed Corp.

Box 229 Churchbridge, SK S0A 0M0  
Phone: (306)-896-2236 Fax: (306)-896-2696  
<http://www.wagonwheelseeds.sk.ca>

### Western Ag Labs

#3-411 Downey Road Saskatoon, SK. S7N 4L8  
Toll Free:1(888) 978-0373 Fax:(306)-978-4140  
<http://www.westernaglabs.com>