

# WINTER CEREALS

CANADA 

Incorporating  and  News

# GROWER

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FALL/WINTER 2009

OFFICIAL NEWSLETTER OF WINTER CEREALS

## SASKATCHEWAN AND MANITOBA POISED TO FUND A NEW WINTER WHEAT RESEARCH INITIATIVE: PRODUCER FUNDS AT WORK FOR PRODUCERS

From the inception of both the Saskatchewan Winter Cereals Development Commission and Winter Cereals Manitoba Inc. our intention has been to raise money to support the development of new varieties and agronomic practices to increase the productivity of winter cereals across western Canada.

Prior to initiating any major funding opportunities it was necessary for both organization to build-up cash reserves to ensure that any project we initiate will be adequately funded during periods when the production of fall seeded crops is curtailed due to circumstances such as bad weather . Both Saskatchewan and Manitoba now have the financial reserves to be able to commit to the type of research project that will have a significant impact on prairie agriculture.

This fall both the SWCDC and WCMI agreed in principle to provide \$75,000.00 from each organization, for a minimum of three years, to support new initiatives that will benefit winter cereals growers.

This means that through their provincial organizations producers will have a \$450,000 voice in the future of winter wheat and development of agronomic practices that will benefit all winter cereal crops.

Dr Rob Graff, Winter Wheat Breeder at the Lethbridge Agriculture and Agri Food research station has been spearheading the breeding sector of the proposal. Dr. Graff outlines the current situation below:

### Pan-Prairie Winter Wheat Testing Network Progress

The "pan-prairie" winter wheat testing program is an industry effort that has, as a primary objective, the establishment of a well-dispersed network of sites across Western Canada to test publicly developed experimental winter wheat lines.

Looking forward five years, it is quite possible that only two winter wheat breeding programs will remain in Western Canada, namely the AAFC program in Lethbridge and the University of Manitoba program in Winnipeg. Positioned at opposite ends of the prairies, the AAFC and U of M programs have the required depth to meet the agronomic,

disease resistance, and end-use quality needs of the western Canadian winter wheat industry. However, a major challenge will be the operation and funding of a network of sites across the prairies that facilitates the selection of superior genotypes for the various agri-climatic zones.

It is evident that early generation selection, both prior to and during initial yield trial stages, is required, particularly in the harsher prairie environments. Without the ability to select for adaptation in these regions, the probability of successfully identifying cold tolerant, well adapted cultivars will be severely reduced. With the right distribution of testing sites, regions that currently produce large quantities of winter wheat or are seen as potential areas for major growth in the near future, will be well served.

To enhance testing in Alberta, an application to the Alberta Crop Industry Development Fund (ACIDF) was made to build upon existing infrastructure available within Agriculture & Agri-Food Canada and Alberta Agriculture & Food. This successful grant application expands the testing capabilities at Lethbridge, Lacombe, Olds (AB), and Scott (SK). It allows for additional agronomic trials, replicated cold hardiness screening of early generation breeding material, and additional disease resistance screening for common bunt.

Discussions with Ducks Unlimited Canada, Winter Cereals Manitoba Inc, the Saskatchewan Winter Cereals Development Commission, and the Alberta Winter Wheat Producers Commission have lead to the creation of an industry group that is looking at mechanisms for funding a pan-prairie winter wheat program. In conjunction with research funded by WGRF, this research will be focused on enhancing the winter survival of winter wheat through breeding and agronomy. From a breeding standpoint, the funding would allow the creation or expansion of sites in Saskatchewan and Manitoba to screen for adaptation of experimental lines developed by the existing programs. It is anticipated that the funded sites would be Saskatoon, Indian Head (SK), Brandon, and Carman (MB).

In anticipation of an expanded testing network in Saskatchewan and Manitoba, a site in Saskatoon was established by AAFC in spring 2009, with the intention of planting about 800 yield trial plots. Unfortunately, the late harvest delayed seed set-up across the prairies, and rain/wet seed-bed conditions did not allow seeding to occur. On the positive side, it allowed us to identify some key areas that will be improved upon in 2010. An exchange of additional tests also took place between AAFC Lethbridge and the U of M programs.

Looking ahead, it is hoped that funding will facilitate successful winter wheat production in all areas of the prairies through a combination of innovative new varieties and agronomic practices, and increase collaborations in western Canada.

### THE SELECT PROGRAM, THE CWB and YOUR ORGANIZATIONS

Fall 2009 has been stressful for many prairie producers. Many producers reported to us that they were having difficulty arranging delivery of Select varieties to delivery points within a reasonable trucking distance.

As a result we have opened a dialogue with the CWB on how to improve the handling of both Select and non select varieties. An initial meeting was held in October and a meeting between the full boards of the SWCDC, WCMI and CWB officials has been scheduled for November 26, 2009.

Interested producers can contact our office for more details after that date.

### In This Issue

Notice of Annual General Meeting..... 2

Important Websites for Winter Cereals Growers..... 2

Summary Report ..... 3

New Winter Wheat Varieties Coming Soon..... 4

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**ATTENTION MANITOBA WINTER WHEAT PRODUCERS**

**NOTICE OF ANNUAL GENERAL MEETING  
WINTER CEREALS MANITOBA INC.**

*Plan to attend a full day of information packed presentations. Lunch will be provided.*

**March 10, 2010 • 8:30 am to 4:00 pm**

**Heartland Inn, Winkler, Manitoba**

**WINTER CEREALS MANITOBA INC.  
Box 689, Minnedosa, Manitoba R0J 1E0**

TO ADVANCE REGISTER OR MORE INFORMATION CONTACT  
J. DAVIDSON, EXECUTIVE MANAGER 866-472-4611  
jake@wcmi.info

**Notice of Annual General Meeting  
WINTER CEREALS CANADA INC.**

THE ANNUAL GENERAL MEETING OF WINTER CEREALS CANADA INC. WILL BE HELD IN CONJUNCTION WITH THE 2010 WINTER CEREALS MANITOBA INC. ANNUAL GENERAL MEETING ON MARCH 10, 2010 AT THE HEARTLAND INN, WINKLER, MANITOBA

**ATTENTION SASKATCHEWAN WINTER CEREALS PRODUCERS**

**NOTICE OF ANNUAL GENERAL MEETING  
SASKATCHEWAN WINTER CEREALS  
DEVELOPMENT COMMISSION**

*Plan to attend a morning of information packed presentations.*

**January 11, 2010 • Join Us For Coffee at 8:30 am**

**Saskatoon Inn & Convention Centre**

**Proud Members of Crop Production Week**

FOR MORE INFORMATION CONTACT  
J. DAVIDSON, EXECUTIVE DIRECTOR 866-472-4611  
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- [www.wcmi.info](http://www.wcmi.info)
- [www.swcdc.info](http://www.swcdc.info)

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*The views expressed in the Winter Cereals Grower are not necessarily those of WCCI, SWCDC or WCMi.*

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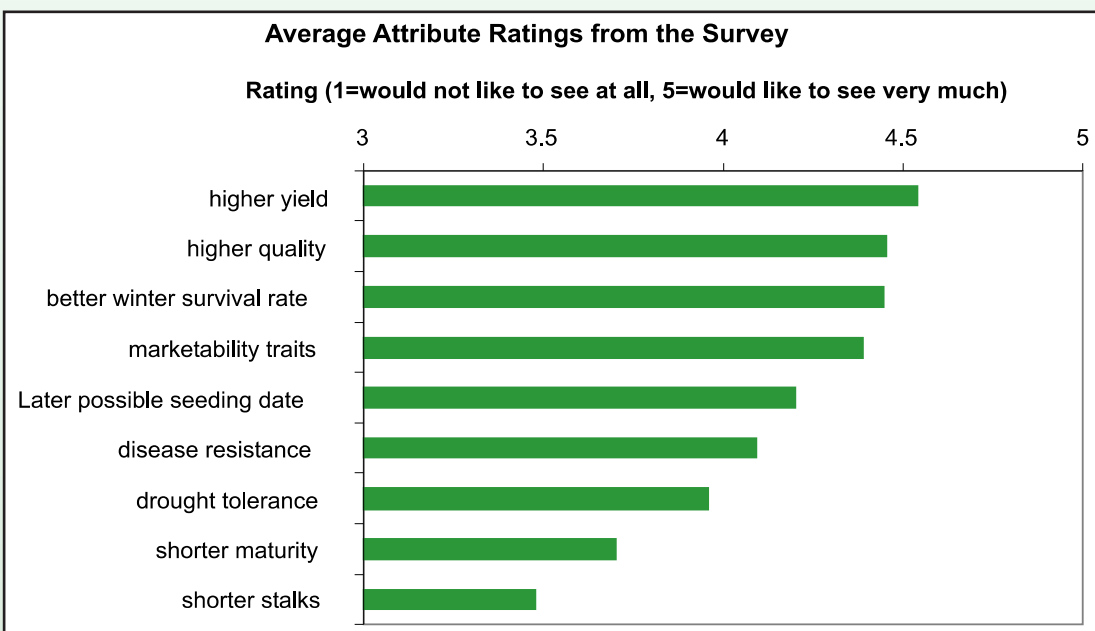
## Summary Report

# “Producer Stated Preference for Hypothetical New Winter Wheat Varieties on the Canadian Prairies”

Jesse Cole

In June, 2008 a study funded by Genome Canada, Genome Prairie and Genome Alberta was initiated at the University of Alberta, Department of Rural Economy entitled “Producer Stated Preference for Hypothetical New Winter Wheat Varieties on the Canadian Prairies”. The study had the goal of determining the demand of Western Canadian Wheat Producers for the attributes of possible new winter wheat varieties. Specific attributes of concern were cold tolerance and duck nesting success rates.

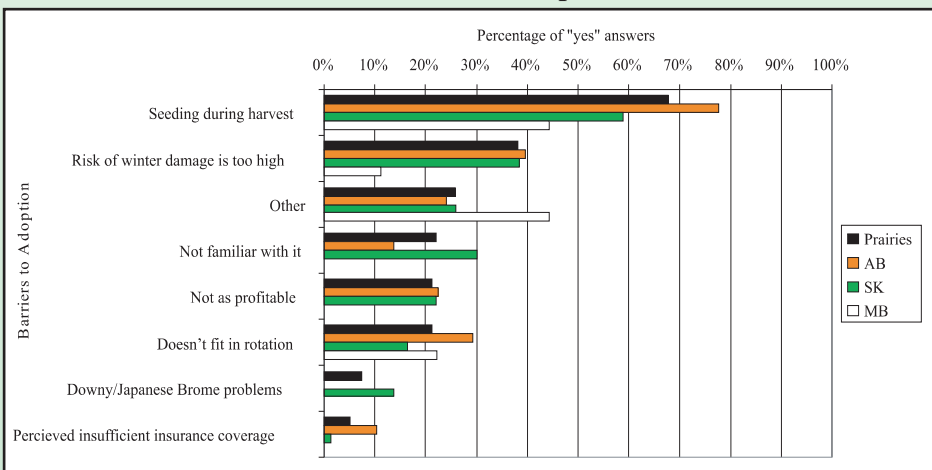
A questionnaire was distributed to Producers in Alberta, Saskatchewan and Manitoba at farm shows and meetings inquiring about their preferences for different attributes. Across Provinces producers the highest demand was for profitability related traits followed by agronomic traits. The graph below shows how producers from all three provinces rated different possible attributes of winter wheat varieties.



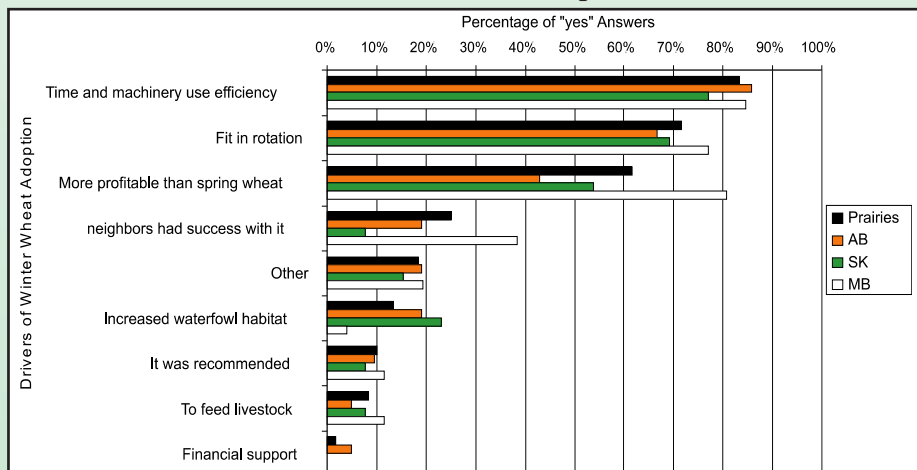
An analytical model was also used to determine specific effects of cold tolerance and duck nesting success on hypothetical winter wheat adoption rates and acreage. Cold tolerance increases had a significant positive impact on the willingness to adopt new varieties while the effects of duck nesting success increases had negative impacts on hypothetical adoption rates. Gross profit was also found to have a significant positive impact on adoption rates.

The findings of the study indicate which attributes may be the most useful in encouraging winter wheat adoption among Prairie wheat producers. Traits which increase profitability such as higher yield, quality, and winter survival rates are more useful than agronomic traits such as drought or disease resistance in achieving acreage targets. Furthermore, producer motivation for growing winter wheat does not include increases in duck nesting success indicating that funds for conservation targets should come from non producer sources.

### Current Barriers to Winter Wheat Adoption from Non Growers



### Current Drivers of Winter Wheat Adoption from Growers



### Ranking of Attributes Desired by Producers in New Winter Wheat Varieties by Province

Rank	AB	SK	MB
1	higher yield	higher yield	marketability traits
2	higher quality	better winter survival rate	higher yield
3	marketability traits	higher quality	higher quality
4	better winter survival rate	marketability traits	disease resistance
5	Later possible seeding date	Later possible seeding date	better winter survival rate
6	disease resistance	drought tolerance	Later possible seeding date
7	drought tolerance	disease resistance	shorter maturity
8	shorter maturity	shorter maturity	shorter stalks
9	shorter stalks	shorter stalks	drought tolerance
10	Other	Other	Other

Jesse Cole is a graduate student at the University of Alberta, Department of Rural Economy. Jesse attended several different producer events in 2008 and 2009 where he personally interviewed and collected responses from hundreds of winter wheat and spring wheat producers in Alberta, Saskatchewan and Manitoba on which to base his thesis paper.

Jesse and Winter Cereals Manitoba Inc. worked together at the 2009 Ag Days event in Brandon Manitoba.

For more information on the results of this study contact Jesse Cole at jacole@ualberta.ca or (780) 433-6903

**Disclaimer: The views expressed in this newsletter are those of each individual author and do not necessarily represent the views or opinions of Winter Cereals Canada Inc., its officers, employees or members.**

## NEW WINTER WHEAT VARIETIES COMING SOON

Pam de Rocquigny, MAFRI Cereal Specialist, Crops Knowledge Centre, Carman, Manitoba

Is winter wheat part of your yearly rotation? Wondering how the new varieties in the Canada Western General Purpose wheat class perform in Manitoba? To assist farmers with variety decisions this fall, Manitoba Agriculture, Food and Rural Initiatives (MAFRI) and MCVET (Manitoba Crop Variety Evaluation Team) has published the most recent variety descriptions and yield results from a number of sites.

### YIELD POTENTIAL

Yield is based on the genetic potential and environmental conditions in which the crop is grown. Farmers should look at long-term, multi-site data and select those varieties that perform well not only in their area but across experimental sites and years. This will increase the likelihood that given next years environment (which cannot be controlled) the variety selected will perform well.

In looking at the Long Term Yield Data & Variety Description Table, the yield potential of the winter wheat varieties tested by MCVET is similar. The 'site years tested' column shows the number of trials where the entry has been compared to the check, CDC Falcon. The more site years the variety is tested, the more dependable the data.

While data from single sites is often more interesting, individual site data, and even data accumulated over numerous sites in a single year must always be viewed with caution – varieties that excel under one set of environmental conditions may not perform as well under the next year's conditions. When looking at the Yield Comparison Table, the grey shaded area lists the yield of CDC Falcon in bu/acre below each site. CV is the Coefficient of Variation and it is an indicator of how uniform a trial is; the smaller the CV, the greater the chance that true differences were found between varieties in the trial. LSD stands for Least Significant Difference and it shows the percentage that individual varieties must differ by to be considered significantly different.

### LOOK AT THE TOTAL PACKAGE, NOT JUST YIELD

Although yield is generally the first information looked at, farmers also need to compare varieties for maturity, height, standability and resistance to disease in selecting a variety that is best suited to their farm. After variety selection emphasis must be put on planting high quality seed. Consider planting certified seed to take advantage of the variety's full genetic potential

### WINTER HARDINESS

Mother Nature has the final say as to how harsh or mild our winters are going to be. Variety selection can be one tool in the toolbox used to help winter wheat survive the

winter. Relative winter hardiness ratings presented in the variety description table are derived from data presented at time of registration as well as grower experience. For the newer varieties such as CDC Ptarmigan, Accipiter, Peregrine and the unregistered line of DH99W181\*45, there is limited information currently available. As varieties are grown on more acres in commercial production, a better understanding of winter hardiness will follow. However, with all that being said, the winter wheat varieties available for production in Manitoba all have good winter hardiness if no-till seeded into standing stubble. Farmers should also use other best management practices to help ensure winter survival such as seeding on time, seeding shallow, using starter fertilizer, and employing a weed management program in the fall.

### CONSIDER MARKETS OR END-USE

Is the winter wheat being grown for feed or for milling purposes? Certain varieties are eligible for an Identify Preserved program through the Canadian Wheat Board due to their baking quality. CDC Buteo, McClintock and Radiant are eligible for the Canadian Wheat Board's 2009-10 Canada Western Red Winter Select wheat program. Producers who market their winter wheat through the feed market may consider but are not limited to these varieties. Regardless of their market, farmers will have to sign the "Declaration of eligibility for the class" form when they deliver to a commercial handler. By signing the form, they are attesting that the wheat they are delivering is eligible for a

specific class of western Canadian wheat.

### MORE WINTER WHEAT VARIETIES COMING IN THE FUTURE

In the 2009-2010 MCVET winter wheat trials, entries included varieties belonging to the Canada Western Red Winter class (the check variety CDC Falcon, CDC Buteo, McClintock, CDC Raptor) and the Canada Western General Purpose class (Accipiter, Peregrine, CDC Ptarmigan, DH99W181\*45, DH99-55-2, DH99W19H\*16, DH00W31N\*34 and W425). The trials are being conducted at 11 locations across Manitoba: Arborg, Boissevain, Carberry, Carman, Crandall, Portage la Prairie, Reston, Roblin, Rosebank, Stonewall and Winnipeg. *Winter Cereals Manitoba Inc. is supporting winter wheat post registration variety trials as they are sponsoring CDC Buteo and McClintock at all locations.*

Farmers should continually evaluate the performances of old and new varieties, using available data and speaking with experienced growers and extension professionals. For Manitoba farmers SEED MANITOBA will continue to provide the latest unbiased information on new and established winter wheat varieties across Manitoba. SEED MANITOBA is a collaborative effort between the Manitoba Seed Growers' Association, Manitoba Agriculture, Food and Rural Initiatives and the Manitoba Co-operator. Data for winter wheat sites that did not meet publication deadlines, along with data for all crop types, will be published in SEED MANITOBA 2010 December, 2009.

## 2009 Winter Wheat Yield Comparison Table

VARIETY	2009 Average Yield	2009 Yield by Test Location			
		Boissevain	Hartney	Stonewall	Winnipeg
<b>Canada Western Red Winter</b>					
CDC Buteo	100	94	101	106	99
CDC Falcon	100	100	100	100	100
CDC Raptor	103	107	109	96	97
McClintock~	96	100	108	86	91
Radiant~	95	98	94	96	92
<b>Canada Western General Purpose</b>					
Accipiter~	105	111	101	104	104
CDC Ptarmigan	99	109	108	95	88
Peregrine~	112	108	122	110	107
<b>Varieties that are being tested or proposed for registration</b>					
DH99W181*45	96	95	88	100	101
Check (CDC Falcon) Yield in bu/ac	76	90	69	102	
CV (%)	5.5	13.3	10.3	5.7	
LSD %	10	-	-	10	
Significant differences b/n varieties	Yes	No	No	Yes	

~ Indicates a variety that is protected by Plant Breeder's Rights or a variety where protection has been applied for but not yet granted at time of printing.

## Long Term Winter Wheat Yield Data & Variety Description Table

VARIETY	Yield % of CDC Falcon	Site Years Tested	Days to Maturity +/- CDC Falcon	Height (inches)	Resistance to:			Relative Winter Hardiness
					Lodging	Stem Rust	Leaf rust	
<b>Canada Western Red Winter</b>								
CDC Buteo	101	47	+ 4	30	G	G	G	VG
CDC Falcon	100	60	0	26	VG	G	G	F
CDC Harrier	102	46	+ 4	34	G	G	P	G
CDC Raptor	98	55	+ 4	29	VG	VG	G	G
McClintock~	98	54	+ 5	33	VG	VG	G	F
Radiant~	96	37	+ 7	30	VG	VP	VP	VG
<b>Canada Western General Purpose</b>								
Accipiter~	105	4	+ 3	29	VG	VG	G	G
CDC Ptarmigan	104	20	+ 3	34	F	P	P	G
Peregrine~	112	4	+ 2	36	G	VG	G	VG
<b>Varieties that are being tested or proposed for registration</b>								
DH99W181*45	96	4	+ 2	32	VG	VG	VG	G
<b>Check variety CDC Falcon averaged 82 bu/acre over 60 site years</b>								

~ Indicates a variety that is protected by Plant Breeder's Rights or a variety where protection has been applied for but not yet granted at time of printing.

Winter Cereals Manitoba Inc. is proud to provide funding for the MCVET trials on behalf of Manitoba winter wheat producers and our members.