WINTER CEREALS CANADA GROWER

Incorporating Saskatchewan Winter Cereals Development Commission and Winter Cereals Manitoba Inc. News

ISSUE NO. 57 SPRING 2016 OFFICIAL NEWSLETTER OF WINTER CEREALS

SWCDC LEVY CHANGE APPROVED AT SWCDC AGM

Akriti Sharma (Cigi winter wheat Specialist) explains the Cigi Winter Wheat program at the SWCDC 2016 AGM

The 2016 Annual General Meeting of the Saskatchewan Winter Cereals Development Commission was held in Saskatoon on January 11th, 2016. Attendees were presented with a wide range of information on topics as varied as fertilizer and funding variety development.

As was reported in the Fall/Winter Issue of the Winter Cereals Grower one topic of special interest was research funding after July 31, 2017 when the current Western Canadian Research Levy . At the end of July in 2017 the federally managed Western Wheat and Barley levy program is scheduled to come to an end. This levy has been in place since the CWB was abolished and has been the funding source for the Western Grains Research Foundation, Canadian International Grains Institute and the Canadian Malting Barley Technical Centre. With the end of this levy ($0.48 per tonne on wheat and $0.50 on Barley) a portion of the responsibility for funding work carried on by these three organizations will fall on the various provincial wheat and barley commissions or representative bodies (ie: SWCDC and WCMI). This means that SWCDC and WCMI need to adjust levy rates to include the dollars that were collected under the federal levy. This requires that our current levy rate of $0.50 per tonne of grain marketed will need to be increased to $0.98 per tonne. No net change to producers. Only a shift in where the money is directed.

This requires approval of the membership at an Annual General Meeting. Therefore SWCDC brought a motion to the floor of this year's annual meeting to approve the increase and authorize the directors to prepare any necessary documents, Board Orders etc. required and submit them Agri-Food Council to ensure that all regulatory changes are final by July 31, 2017. The Motion as presented and approved by the membership follows.

Motion AGM 2016-5 Moved by John Burns, Seconded by Neil Paulgaard.

Whereas the Western Canadian Wheat and Barley check-off (levy) administered by Alberta Barleya is to expire July 31, 2017 and, Whereas the check-off was designed as a temporary measure to fund WGRF, Cigi and Canadian Malting Barley Technical Center and, Whereas the expectation was for provincial producer organizations to assume the collection and distribution of an equivalent funding amount at the end of the federal levy,

Therefore be it moved that the membership of the Saskatchewan Winter Cereals Development Commission approve the Board of Directors motion 2016-13 concerning Board Order 13-16 which authorizes the SWCDC to increase the levy collected from $0.50 per tonne of marketed grain to $0.98 per tonne of marketed grain effective August 1, 2017 and the general membership directs the Board of Directors to submit Board Order 13-16 to the Agri-Food Council for final approval. Carried

The necessary documentation has been prepared and forwarded to the Agri-Food Council and we have been advised that the Council will process our request in a timely manner so that on August 1, 2017 our new levy rate will become effective. We thank our membership for the support of this motion.

Producer Groups Provide Leadership in Wheat & Barley Breeding

Recognizing the important role producer funding of public breeding has played in delivering new wheat and barley varieties for increased farm profitability, Western Canada's wheat and barley commissions/associations are working together to consider options for continued leadership and influence.

Since producer investments in breeding began in 1995, over 200 new wheat and barley varieties have been made available to farmers by public research institutions. With studies demonstrating that producer investments contribute to increased net profitability per acre for western Canadian farmers, producer organizations have formed a working group to examine opportunities for optimum producer involvement in wheat and barley variety development.

The participating organizations include the Alberta Barley Commission, the Alberta Wheat Commission, the BC Grain Producers Association, the Manitoba Wheat and Barley Growers Association, the Saskatchewan Barley Development Commission, the Saskatchewan Wheat Development Commission, the **Saskatchewan Winter Cereals Development Commission and Winter Cereals Manitoba.** The Western Grains Research Foundation (WGRF) serves as the facilitator.

A recent study commissioned by the WGRF calculated that on average every producer check-off dollar invested into wheat varietal research has returned $20.40 in value to the producer. Barley varietal research saw a return of over $7.56 for each producer dollar invested.

In 2015, the working group engaged JRG Consulting Group to explore a range of opportunities for producer involvement and leadership in wheat and barley variety development. The consultant's report was recently received by the working group. The report emphasizes the importance of continued and increased public, producer and private industry investment in wheat and barley variety development, and the benefits to producers. The report identifies and evaluates five options for producers to intensify their leadership and realize the benefits of future variety development.

The consultant's report is available on the websites of the participating organizations. The organizations are encouraging farmers and other interested stakeholders to read the report and provide comments. The five options put forward are intended to stimulate dialogue and none have been endorsed by the working group.

SWCDC members were introduced to the report and the various options outlined on how Canada can move forward on an equitable and efficient method of funding cereal variety research over ne next few decades. Members are encouraged to read the reports on our websites, wcmi.info, swcdc.info and wintercerealscanada.org.

Rigas Karamanos from Koch Fertilizer Canada. ULC captivated the audience with his advice on Nitrogen and Phosphorus application at the SWCDC AGM.

Western Winter Wheat Initiative Welcomes New Partner The Mosaic Company Foundation

Winter wheat in Western Canada is receiving a huge boost as a crop with the recent addition of partner, The Mosaic Company Foundation, the newest member of the Western Winter Wheat Initiative (WWWI). The Mosaic Company Foundation is now helping to fund the WWWI with an investment of $1 million over the next three years.

Continued Page 2

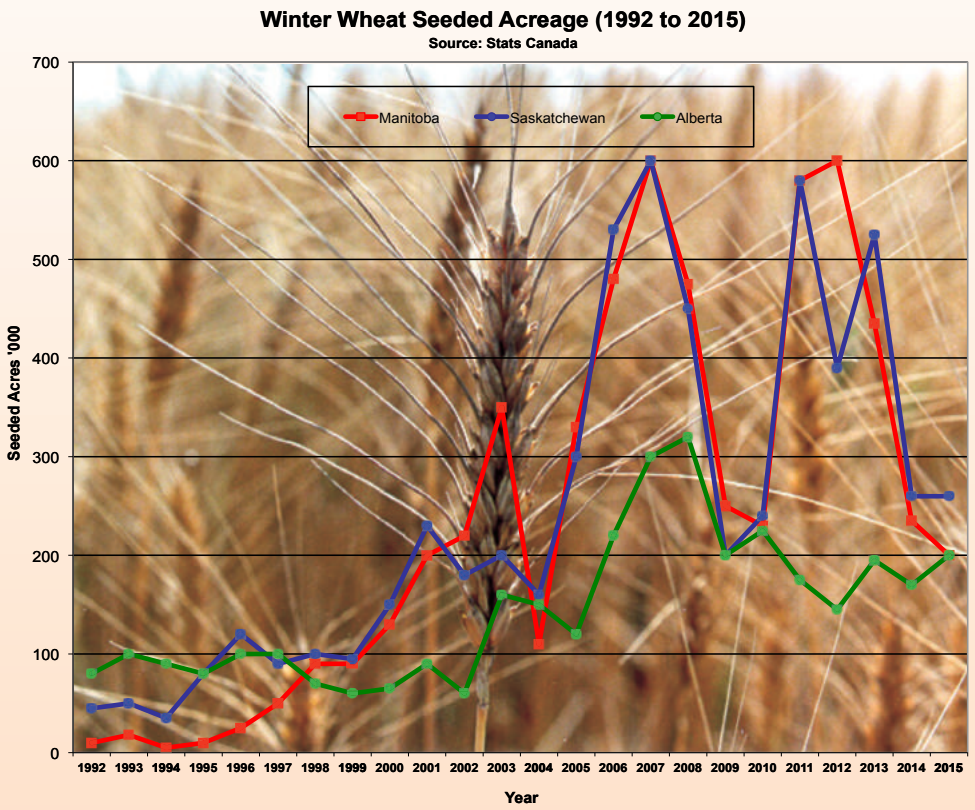
Canada Post
Publication Mail Agreement #40035270

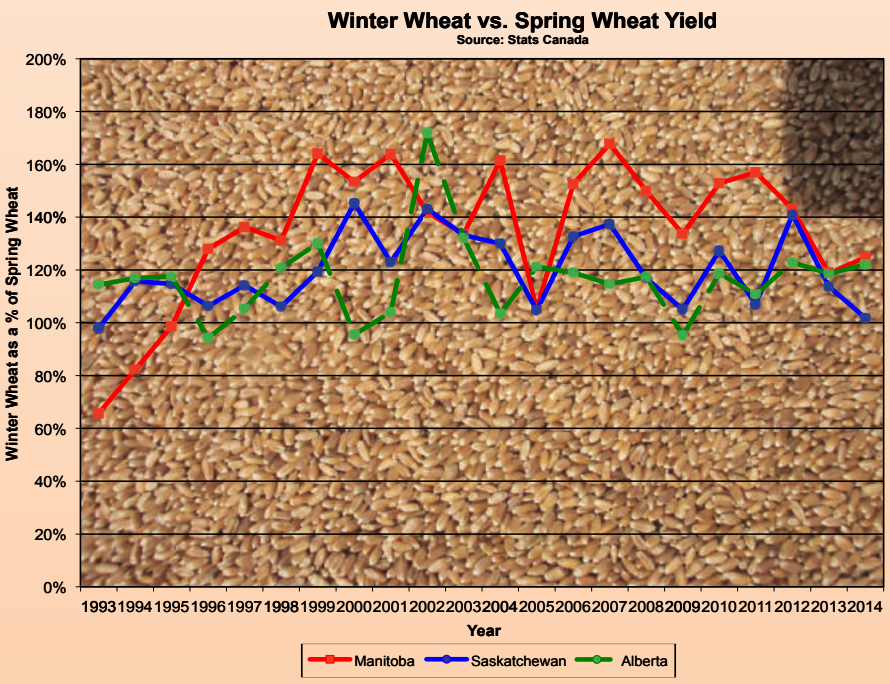
Return Undeliverable copies to:
P.O. Box 689
Minnedosa, MB R0J 1E0

In This Issue

A Look Back At Winter Wheat Acres and Yields

A glimpse of Winter Wheat history courtesy of Paul Thoroughgood, P.Ag. Ducks Unlimited Canada





Western Winter Wheat Initiative *(Continued from Page 1)*

"We are fortunate to have such great industry support for winter wheat as a crop here on the Prairies," says Paul Thoroughgood, with the WWWI. "Now that The Mosaic Company Foundation is on board, we are able to continue supporting the growth of winter wheat across Manitoba, Saskatchewan and Alberta, and have professional agronomists available to help farmers improve their bottom lines."

An excellent fit in crop rotations, winter wheat complements all the WWWI partners' visions for a sustainable agricultural landscape. Not only is winter wheat one of, if not the most, high-yielding and profitable crops grown on the Prairies, it also has a more efficient use of crop inputs, uses reduced tillage, and provides wildlife habitat, making it one of the most environmentally and conservation-friendly crops around.

"As global demand for food increases, farmers are working to sustainably intensify the amount of food they grow while enhancing environmental protection. Winter wheat is a great example of this in action," says Mark Kaplan, Board President of The Mosaic Company Foundation and Senior Vice President of Public Affairs at The Mosaic Company. "We are pleased to support the Western Winter Wheat Initiative as it helps farmers optimize yields and improves nutrient stewardship and water quality outcomes."

The WWWI is a strong advocate for responsible farm management practices and the 4R's for Nutrient Stewardship and recognizes The Mosaic Company Foundation as the perfect addition to its efforts.

Promoting winter wheat as a great sustainable crop option for farmers in Prairie Canada, the WWWI offers expert agronomic support and funds breeding and agronomy research programs thanks to like-minded industry partners Bayer CropScience, Ducks Unlimited Canada, Richardson International Limited, and now, The Mosaic Company Foundation.

For more information, visit growwinterwheat.ca or follow the WWWI on Twitter @growwinterwheat.

About the Western Winter Wheat Initiative

*The **Western Winter Wheat Initiative** is a collaboration between industry members who support a sustainability model for Canada's agricultural landscapes. The purpose of this initiative is to build awareness and credibility of winter wheat as a highly productive crop option for western Canadian farmers.*

About The Mosaic Company and The Mosaic Company Foundation

***The Mosaic Company** is the world's leading producer and marketer of concentrated phosphate and potash, two essential crop nutrients. Driven by its mission to help the world grow the food it needs, Mosaic is committed to working toward improved global food security and protecting critical water resources. **The Mosaic Company** and **The Mosaic Company Foundation** make investments in and partner with best-of-class leaders in the focus areas of food, water and local community investments. More information about Mosaic is available at: www.mosaicco.com.*

Have an idea for as article in the Grower?

E-Mail jake@wintercerealscanada.org
And we will try and get the information you want in our next issue.

If you no longer wish to receive the Winter Cereal Grower newsletter, please send us either an e-mail with your name and address or send us a note with your mailing label requesting that your name be removed from the mailing list.

THE RYE REPORT

Dr. Jamie Larsen, AAFC, Lethbridge

Saskatchewan Winter Cereals Development Commission and WGRF have been instrumental in moving fall rye agronomy research forward. With the introduction of fall rye hybrids like Brasetto, Guttino and Bono into the marketplace, there has been considerable interest and questions on how to manage these high performing varieties. One year of research has been completed for a demonstration-type agronomy project examining hybrid and open pollinated lines under conventional and intensive management practices. Certainly, two years of data is better than one, but the results from the 2015 crop year are quite interesting and important for farmers to consider.

Take home points from the first year of data from this trial:

1) When managed properly, fall rye can yield a tremendous amount of grain. The overall trial yields across six locations averaged 83 bu/ac and ranged from 167 bu/ac, under irrigation at Lethbridge to 36 bu/ac, under severe drought conditions at Medicine Hat (Table 1). While you might laugh at 36 bu/ac, it should be noted that the spring cereals yielded 0 bu/ac, which really shows the benefits of a winter cereal that uses snow melt and early season moisture to be productive.
2) The heterosis (hybrid yield boost) in hybrid rye comes from all three grain yield components, but predominantly from increased number of kernels per head (approximately 7-9 kernels). It is interesting to note that seed size and number of kernels per head were not influenced by management strategy (Table 2).
3) Intensive management leads to an increase in the number of tillers per unit area. While this was not statistically significant (P=0.055), the trend certainly indicates that tillering is something that farmers can influence in fall rye through crop management (Table 2).
4) Both open-pollinated and hybrid rye reacted similarly to intensive management, meaning that hybrids do not react to intensive management better (or worse) than open-pollinated varieties (Table 2).
5) A major concern with rye is ergot. One somewhat surprising finding was the relationship with increased tillering and ergot production. The overall trend, which was statistically significant, was that the intensive management treatment had significantly higher levels of ergot for both OP and hybrid fall rye lines (Table 2). We have several untested theories on why this might be the case.
   - The intensive management treatment had 150kg/ha applied to the crop. This ensured that there was more than enough nitrogen to encourage lush growth. With the very dry conditions changing to very wet conditions at several locations, it is possible that not all of the applied nitrogen was initially taken up by the crop. This led to nitrogen being available for regrowth or late tillering well after the initial flush of tillers in the spring. If you know rye, it certainly has the potential to do this and when this occurs, you get asynchronous tillers flowering over a long period of time. Since rye is open-pollinated, it relies on a huge amount of pollen being released over a short period of time to get good seed set. With late tillers there is a small amount of pollen released over a longer period of time leading to some florets not being pollinated and ergot infection.

The question is how do we fix this? We don't have research supporting some of these solutions, but agronomic research for cereals suggests that one way reduce tillering is to increase seeding rates. This likely means seeding into the 350-400 seeds/m2 range, similar to what is encouraged in winter wheat production. The other option could be to limit your nitrogen rates to reasonable levels based on the yield potential of the crop. This is a very tricky proposition, but remember, you generally don't get paid for grain protein in rye, so having extra nitrogen around for a protein bump is likely a waste and may cause late tillering. This area needs more research, however it appears that there may be ways of limiting ergot production in fall rye through agronomic management. We'll see what this year brings…

Table 1. Grain yield (bu/ac) averages for Hybrid and Open-Pollinated fall rye under conventional and intensive management practices.

Agronomic Variety	Treatment	Indian Head	Brandon	Medicine Hat	Lethbridge	Hat	Melfort	Vauxhall	Mean
Hybrid	Conv	98	63	160	51	66	119	93	
Hybrid	Inten	117	73	167	66	67	122	102	
OP	Conv	87	45	110	36	48	82	68	
OP	Inten	91	50	112	50	46	76	71	
Mean		98	58	137	51	57	100	83	
Tukey (0.05)			20	9	22	11	12	30	7
Treatment differences									
Hybrid vs OP			Sig	Sig	Sig	Sig	Sig	Sig	Sig
Conv vs. Inten			Sig	Sig	N.S.	Sig	N.S.	N.S.	Sig
Variety X Treatment		N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S	

Table 2. Grain yield component and ergot data for hybrid and open-pollinated fall rye under conventional and intensive management practices.

Agronomic Variety	Kernel Treatment	Kernels Weight (g)	Tillers per per Spike	Grain Yield m2 (Kg/ha)		Ergot (%)	
Hybrid	Conv	0.0312	40.9	569.3		5841.6	0.5
Hybrid	Inten	0.0309	39	607.3		6406.3	0.6
OP	Conv	0.0296	32.2	526.2		4275.8	0.4
OP	Inten	0.0294	32.3	559.4		4446.9	0.5
Treatment differences							
Hybrid vs. OP		Sig	Sig	Sig	Sig	Sig	
Conv vs. Inten		N.S.	N.S.	N.S.	Sig	Sig	
Variety x Treatment		N.S.	N.S	N.S.	N.S.	N.S.	

Cigi in Action: Update on Winter Wheat Projects and Data on Newer Varieties of Interest

Akriti Sharma, Technical Specialist, Winter Wheat, Cigi

The evolution of Canada Western Red Winter (CWRW) quality continues and the story is gaining momentum. With new varieties offering producers good agronomics and potential end users the right quality profile, all the pieces are in place to build volume and sales for the class.

In recent years, the CWRW class has improved with respect to its quality profile. The variety Falcon which made up over 50% of the class in 2013 is no longer available for delivery as CWRW. Instead, it has been replaced by new improved varieties such as CDC Chase, Emerson, Flourish, AAC Gateway, and Moats. To evaluate the quality of these newer varieties, Cigi (Canadian International Grains Institute) worked closely with seed growers and industry contacts last year to gather CWRW varietal samples from single source locations. Four commercial US Hard Red Winter (US HRW) samples were also sourced for comparison. Since the samples analyzed only came from single source locations we recognized the data was not representative of quality for a single variety. As a result, the CWRW sample became the average of results generated separately on the five CWRW varieties (CDC Chase, Emerson, Flourish, AAC Gateway, and Moats). These results were compared to HRW data generated by the average of four separate commercially sourced samples.

The findings showed that the CWRW composite results had higher flour extraction, low ash content, and white flour. The white salted noodles and steamed bread produced from CWRW were higher in quality with excellent exterior appearance and textural properties in comparison to the US HRW sample. The CWRW composite results showed pan breads with higher specific volume and total bread score in comparison to the US HRW sample, indicating better bread-making properties regardless of the lower protein content observed. Based on this data, the CWRW composite performed very well overall in comparison to the US HRW composite. CWRW results were within expected values typical of the CWRW class.

Future work at Cigi will be focused on projects that demonstrate how winter wheat quality will meet customers' needs and its potential for being an excellent choice in their end products. We recognize the need to source a more representative sample set of new individual varieties to best explain the quality improvements of the class overall. Any improvements made to the CWRW varieties in terms of quality will be noted and communicated to potential customers. There is also the goal to source competitor samples of wheat that would be of similar quality to CWRW in terms of protein, strength and market use.

These samples will be assessed for milling and end product quality to help Cigi understand the quality requirements desired by these potential markets. This information will also help Cigi determine if there is a fit for CWRW quality to enter these markets. Once we have all the data analyzed on these competitor samples, we will develop communication material for producers, the Canadian industry and milling customers of winter wheat and use Cigi programs and customer visits to promote CWRW as appropriate. As we head into the 2016 crop year Cigi will continue to work closely with the value chain.

Elwin Hermanson Retires After 8 Years as Chief Commissioner of the Canadian Grain Commission

After 8 years as Chief Commissioner of the Canadian Grain Commission Elwin Hermanson retired on January 20, 2016, exactly 8 years to the day he took over the reins of the commission.

A reception was held in the Commission's board room and was attended by a large crowd of well-wishers that included Mr. Gerry Ritz (who was responsible for Elwin's appointment), Mr. Cam Dahl (former Assistant Commissioner and current Executive Director of Grains Canada), Jake Davidson (representing Winter Cereals Manitoba and the Saskatchewan Winter Cereals Development Commission), GCG staff and industry representatives.

In his farewell speech Elwin recognized the strong support he received from producers, the grain industry and government during the past 8 years when change in the industry has become the norm rather than the exception.

In the photo Assistant Commissioners Murdoch MacKay and Jim Smolik present Elwin with a copy of a rare photo from the CGC archives that hangs in the Commissions Winnipeg office.

SWCDC and WCMI wish Elwin Hermanson a long and enjoyable retirement

SWCDC Board Chairman's Annual Meeting Comments

Dale Hicks Chair, SWCDC, Outlook, Saskatchewan

2015 proved to be another challenging year for winter wheat producers. Mother Nature played her usual part in making things difficult resulting in a harvested crop below normal acreage and no increase in this years seeded acreage. Reduced tonnage equals reduced levy income making it more difficult for SWCDC to fund winter wheat research, however as in past years all our commitments to agronomy and breeding research, and our marketing efforts with Cigi continue as planned. Good financial planning by the board and our executive director ensures research and marketing efforts will continue.

Interest in winter wheat remains strong, and given a normal fall acres will rise again. As I suggested last year growers that seed many acres of canola should consider new earlier maturing canola varieties that yield well and assist you with swath timing. Acres have been down for a couple of years so be sure to line up seed and supplies early.

Over the past year SWCDC put considerable time and effort into the huge WGRF co-ordinated Wheat and Barley Working Group study into the future of wheat and barley variety research and how this research will be funded. The SWCDC needs member direction on how we will position winter wheat and producer generated funds to ensure maximum returns come from your money. We encourage you to read the final report (on our website) and help us shape the future of wheat breeding in western Canada.

In addition we have continued our support of wheat gene mapping, agronomy research and rye agronomy and varietal development. Our focus is on returning value for your producer dollars.

VISIT WWW.WCMI.INFO AND WWW.SWCDC.INFO FOR ALL YOUR MANITOBA AND SASKATCHEWAN WINTER CEREALS NEWS

A quick Review: Assessing Winter Survival:

1. Sod Extraction Method – A producer can extract several 'sods' from the field with a shovel. Warm up the sods inside while keeping the soil moist. In 5 to 7 days, assess the crowns for new root growth which indicates the plant has survived. When sampling, extract sods from average areas of the field and also from less than average areas, such as knolls, headlands where lower snow trapping usually occurs, and low spots where excess moisture and winter icing could have happened.

2. Bag Test Method – This method was developed by Ducks Unlimited in North Dakota and involves five easy steps: 1) Dig or chisel plants out of the soil without damaging the crown. 2) Rinse the soil off the crown and roots. 3) Using scissors, trim off the roots and leaves and all but one inch of the stem above the crown. Put the crowns in a Ziploc bag and puff some air into it before sealing. Keep at room temperature and observe every 2 days. Repeat the rinsing and air every 2 days. Plants that are alive will extend leaves and grow new white roots. If new growth is not observed after 6 days, consider the plant dead.

Keep in mind the sod extraction method and the bag test allows producers to catch a sneak peek of winter survival in their fields. Producers will still have to wait until growth resumes in the spring to properly assess plant stands. Optimum plant stands are 20 to 30 plants per square foot. However, winter wheat has a great ability to aggressively tiller, which can help compensate for lower plant densities.

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