The Value at Field The Newsletter of the Saskatchewan wheat development commission MARCH 2019 EDITION

Innovations in wheat expected from cross-country funding collaboration

Canadian wheat farmers will see significant benefits through the newly announced Canadian National Wheat Cluster. The Wheat Cluster, which was announced on January 15, 2019 by the Honourable Lawrence MacAulay, Minister of Agriculture and Agri-Food (AAFC), is worth nearly \$25 million over five years and will fund projects that will lead to improved varieties and agronomic practices.

"The government of Canada is proud to work sideby-side with industry to help keep the Canadian field crops sector on the cutting edge," said MacAulay. "Demand for our field crops continues to grow and these investments in innovation and research will help position our farmers to grow top quality products sustainably, while meeting consumer demands at home and abroad for years to come."

Funding for the Wheat Cluster will come from AAFC through the Canadian Agricultural Partnership's AgriScience program and 10 producer and private organizations from across Canada. The Wheat

Cluster will be administered by the Canadian Wheat Research Coalition (CWRC), which was founded by the Saskatchewan Wheat Development Commission (Sask Wheat), the Alberta Wheat Commission (AWC), and the Manitoba Wheat and Barley Growers Association (MWBGA).

"The CWRC is proud to be the host of the new Canadian National



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From left: Jake Leguee, Ken Rosaasen, Laura Reiter (Chair), Hon. Lawrence MacAulay (Minister of Agriculture), Brett Halstead, Scott Hepworth (Vice-Chair), Dan Danielson

Wheat Cluster," said Terry Young, Chair of the CWRC and AWC director. "This is a unique partnership of organizations, from the federal government to producer commissions from across Canada. We hope to provide Canadian wheat farmers with the technology and information they need to improve their farming operations while maintaining Canada's reputation for providing quality wheat for markets around the globe."

The funders of the Wheat Cluster include:

- Agriculture and Agri-Food Canada (\$13.9 million)
- Alberta Wheat Commission (\$2.6 million)
- Saskatchewan Wheat Development Commission (\$3.1 million)
- Manitoba Wheat and Barley Growers Association (\$932,000)
- Western Grains Research Foundation (\$2.5 million)
- Canadian Field Crop Research Alliance (CFCRA) (\$1.6 million)
 - o Atlantic Grains Council
 - o SeCan
 - o Grain Farmers of Ontario
 - o Producteurs de grains du Québec
- Saskatchewan Winter Cereals Development Commission (\$185,000)
- Winter Cereals Manitoba (\$100,000)

CHAIR'S REPORT:

Expanding our research funding and collaborative activities



The past year has been a productive and rewarding period for Sask Wheat. I enjoyed my first year as Chair and want to thank the other directors for their efforts over the past year. This is truly a team effort.

In the five years since the installation of the first elected Board of Directors, Sask Wheat has steadily and strategically built our research, market development, and advocacy programs while enhancing key relationships within the agriculture sector. Everything we have done is driven by our mission and vision, which the Board of Directors renewed in 2018, with the end goal of improving the bottom line of Saskatchewan's wheat farmers.

Our research activities continue to take the majority of our budget and time, with over \$4.1 million in farmer funding invested in research, agronomy, variety development and post-production projects in 2017-2018, the greatest amount since we were formed. In the current crop year, we have already committed over \$7.1 million, which includes funding that will go towards projects under the Canadian National Wheat Cluster (CNWC) and the Western Grains Research Foundation-led Integrated Crop Agronomy Cluster (ICAC).

The national research clusters are key activities, as they integrate research funding for national and regional issues from the federal government, private companies, and producer organizations from across the country. Importantly, these investments keep farmers involved in research activities, not only providing funding but also providing feedback and direction for activities that will impact their businesses and the future of their industry.

The CNWC has received a lot of attention since being announced at CropSphere, as it should, since there are several important activities and projects funded by it that will bring significant benefits to wheat farmers. The ICAC, in which Sask Wheat invested over \$500,000, will also bring important innovations to farmers from projects focussed on insect and disease monitoring, agroecosystem productivity and sustainability, and fusarium head blight risk mitigation.

Sask Wheat is looking forward to the results of the research being funded by the research clusters, just as we are looking forward to the results of market development activities undertaken by organizations such as the Canadian International Grains Institute (Cigi) and Cereals Canada. Sask Wheat has two seats on the Cigi Board of Directors, where we sit along with directors from the Alberta Wheat Commission and the Manitoba Wheat and Barley Growers Association and directors from grain exporters. Cigi continues to deliver technical support activities and training for customers of Canadian wheat so they can get the best results from our wheat in their products.

Sask Wheat joined Cereals Canada in 2018 and has two seats on their Board of Directors along with representatives of other crop commissions and industry organizations. Scott Hepworth and I had the opportunity to attend the New Crop Missions last fall, with Scott going to north Africa and Italy, while I visited east Asia. These trips were valuable experiences, allowing us to gain a better understanding of the current trade issues facing Canadian wheat.

It is also important that Saskatchewan wheat producers are represented at a national level on issues regarding trade and transportation. In 2018, Sask Wheat joined the Ag Transport Coalition, which includes primary elevator operators, exporters and producer groups. We view this as an important group to monitor railway performance and report performance metrics back to the industry. Performance metrics such as car order fulfillment and network fluidity, on which the Canada Transportation Act now requires railways to report, are key to identifying emerging issues and improving transportation performance.

We are anticipating another busy and productive year ahead. I hope many of you will be able to come to our Think Wheat extension events in Moose Jaw on March 12 and Yorkton on March 13. We would appreciate meeting and hearing from you on our activities and the direction of the industry.

Laura Reiter, Chair



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GENERAL MANAGER'S REPORT:

Farmer input on research and breeding is critical



We are more than half way through the 2018/19 shipping season and movement of wheat has exceeded past performances! This is great news. Recent derailments, cold weather, and competition for rail capacity for the remainder of the year may yet create challenges, but we are in a better position now than we have experienced for the last five years. We will find out whether the new operational communication necessitated by Bill C-49 helps us through some of the capacity

issues that we have experienced recently.

On the research side of Sask Wheat, we have hit a number of key milestones in this last year that are noteworthy. Sask Wheat, along with the Alberta Wheat Commission (AWC) and the Manitoba Wheat and Barley Growers Association (MWBGA), formed the Canadian Wheat Research Coalition (CWRC) in 2017 to lead the effort on regional and national wheat research. The CWRC coordinated all cofunders in the Canadian National Wheat Cluster, which was officially announced by the Minister of Agriculture and Agri-Food, the Hon. Lawrence MacAulay, on January 15 in Saskatoon. This is a five-year funding commitment (2018-23) of nearly \$25 million that covers everything from wheat breeding to wheat agronomy and disease mitigation. Sask Wheat is the current host of the CWRC, so we are busily involved in implementing the wheat cluster agreement to provide a seamless transition for researchers.

The joint efforts of the CWRC are now concentrating on other priorities as well, especially the successor programs to the current Core Wheat Breeding Agreements with Agriculture and Agri-Food Canada (AAFC), and the western universities in Saskatchewan, Manitoba and Alberta. Not all producers are aware that the Western Grains Research Foundation (WGRF), on behalf of producers, has been providing approximately \$28 million over a five-year period through the core breeding agreements to maintain plant breeders,

technicians, and specialists involved in all efforts to enable AAFC and the universities to finish wheat varieties for the benefit of producers. For wheat, research has shown the rate of return to producers has been \$20.40 for every producer dollar invested. That's a great history! Now that the three Prairie wheat commission have taken up the levy collection of the Western Canadian Deduction, we will carry on the investments of the Core Breeding Agreements through the CWRC on behalf of producers.

These agreements represent a huge funding effort by producers – the Core Wheat Breeding Agreements are \$27.9 million; the Wheat Cluster is \$25 million, of which \$11 million is producer dollars; and our additional investments through the provincial funding mechanisms have been \$16 million from Sask Wheat alone since 2013. Adding additional funding from WGRF, AWC, and MWBGA shows the commitment producers have made to research in wheat and the development of new varieties. This is a critical effort that needs to be continued!

It is an effort that also must be recognized in the current consultations on value creation/capture mechanisms that is being undertaken by Agriculture and Agri-Food Canada (AAFC) and the Canadian Food Inspection Agency. Producers have significant money on the table and have a unique interest in the direction of new variety development. They want a voice in how the public wheat breeding institutions develop and release varieties in the future. Sask Wheat is engaged in this discussion on the future of the value creation/capture mechanism. The development of a mechanism that delivers value to producers and that recognizes their investments in the research process is critical. This value creation/capture consultation will take place over the course of 2019 and needs producer input. See page four of this newsletter for more information on what has taken place to date. Please take note of the consultations, and provide your feedback to AAFC and to Sask Wheat.

Harvey Brooks, General Manager

SR&ED tax credits for 2018

The Scientific Research and Experimental Development (SR&ED) Program is a federal government program that encourages research and development by providing tax-based incentives.

By using levy contributions to finance research and development work that benefits Saskatchewan wheat producers, Sask Wheat is able to participate in this program and distribute these tax-based incentives to producers.

The program gives registered wheat producers access to investment tax credits (by means of cash refunds and/or reduction to taxes payable) for their levy contributions that are spent on qualifying research.

For the crop year ending July 31, 2018, producers may claim 21.25 percent of their levy contributions as a qualifying SR&ED expenditure on their federal tax return.

Investment tax credits may be claimed by filing form T2038 (IND) for farm individuals orT2SCH31 for farm corporations.

In addition, farm corporations may also claim 18.11 percent of their levy contributions as a qualifying expenditure towards the Saskatchewan Research and Development Tax Credit program. This credit may be claimed by filing form T2SCH403.

Producers that have requested a refund of their levy are not eligible for either tax credit.

Please see the Sask Wheat website for links to the tax forms and more information.

Sask Wheat working to ensure producers are heard in value creation consultations

by Kelsey Tollefson

In October 2018, Agriculture and Agri-Food Canada (AAFC) and the Canadian Food Inspection Agency (CFIA) initiated an engagement process on a potential new funding mechanism for cereals research and variety development in Canada. The proposed models are described by AAFC and the CFIA as follows:

End Point Royalties (EPR): royalties collected on all harvested grain, including production from farm-saved seed, and distributed to plant breeders/rights holders.

Royalty collection enabled via production contracts (trailing royalty): contractual restrictions on farm-saved seed use or royalty payments made directly to variety developers by producers for their farm-saved seed use.

In December 2018, AAFC and the CFIA held their first consultation session on the proposed models in Saskatoon. From that session, it was clear that more consultation was needed to provide producers with an opportunity to voice their concerns. Sask Wheat worked with the other Saskatchewan crop commissions to bring Carla St. Croix with AAFC to CropSphere to host an engagement session on the proposed models. At the CropSphere session Sask Wheat Chair, Laura Reiter, presented a producers' perspective on research funding mechanisms and highlighted joint concerns that all Saskatchewan commissions share.

The strong producer turnout at both consultation sessions shows how important this issue is to producers. Sask Wheat encourages

producers to continue to be engaged and participate in the upcoming online consultations hosted by AAFC and the CFIA.

The Sask Wheat Board of Directors does not support either of the options as presented by the federal government. Sask Wheat believes that more opportunity for producer discussion and input is needed in the current consultation. Furthermore, development of additional options is needed. There are other models available to producers to support varietal development efforts, and these need to be explored through further consultation with producers. The critical feature of any system is the creation of value to producers.

Producers have provided variety development capacity funding through Core Breeding Agreements with AAFC, and the western universities as well as research project funding through the Canadian National Wheat Cluster, Genome Canada, and provincial funding intakes. Producers have partnered with both public and private sectors to fund wheat research. Producer funded varietal development of wheat has led to improved varieties with increased yields, resistance to serious pests and diseases, and desirable enduse characteristics.

Sask Wheat is committed to being a part of a system that will maintain producer involvement and grow funding for wheat research in Canada. This system needs to include a strong continued research effort by the public sector and continue to provide for public, private, producer partnerships.



Sask Wheat Chair Laura Reiter addresses the crowd at the value capture engagement session at CropSphere on January 16

Sask Wheat commits \$1.5 million to collaborative wheat research

The Saskatchewan Wheat Development Commission (Sask Wheat) has committed \$1.5 million to support wheat research projects funded under the Saskatchewan Agriculture Development Fund (ADF) in 2018. Saskatchewan's Minister of Agriculture, the Hon. David Marit, announced the funding of all crop-related ADF projects at CropSphere 2019 on Wednesday, January 16.

"The ADF funding process is a key mechanism to connect researchers and wheat breeders with Saskatchewan's wheat producers, keeping producers involved in developing new varieties and finding solutions to pests, diseases and environmental stressors," says Laura Reiter, Sask Wheat Chair. "These projects will allow Sask Wheat to continue to achieve our mandate of maximizing returns on producer checkoff investments and building long-term, sustainable growth for the industry."

Sask Wheat has committed over \$7.4 million to projects through the ADF process since 2014. This research falls into the areas of variety development, production and post-production.

"Investing in targeted research and allowing researchers and wheat breeders to leverage funding from several sources will benefit Saskatchewan wheat producers now and in the future," Reiter says. "We are very pleased to partner with the Government of Saskatchewan and collaborate with other ADF co-funders to fund new opportunities for wheat producers and strengthen the future of Canadian agriculture."

For a look at currently funded research, visit www.saskwheat.ca.



Grade School 2018



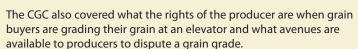
Once again, Sask Wheat joined with the Canadian Grain Commission (CGC), the Canadian International Grains Institute (Cigi), SaskCanola and SaskBarley to bring producers information on grain grading at the Grade School events in November 2018.

More than 80 producers and others within the grain industry attended Grade School in Swift Current and Humboldt. The Grade School events included presentations from the crop commissions as well as technical presentations on flour and grain quality tests from Cigi.

The majority of the Grade School events were spent on presentations and demonstrations from Joey

Vanneste and Ross Warkentin from the CGC's Saskatoon office. The demonstrations included techniques for gathering a representative sample and what factors CGC

inspectors look for when providing a grade.



For more information on grain grading in Canada, please go to the CGC website: *grainscanada.gc.ca*. Information on export market requirements and on the quality and uses of Canadian wheat can be found at *canadianwheat.ca*.







2019 wheat midge risk map With files from the Saskatchewan Ministry of Agriculture

The Saskatchewan Wheat Midge Forecast Map for 2019 continues to show reduced risk from the insect pest for much of the province. Only a few areas, in the northeast part of the grain-growing region and in the southeast, were identified to have higher populations of the wheat midge. Numbers in these regions appear

higher than those from last year.

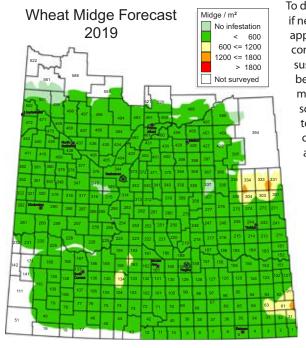
Good moisture favours this insect. Continued dry conditions in 2018 in much of Saskatchewan are the primary reason for the decline in wheat midge populations. Research has shown that if there is less than 25 mm of precipitation prior to the end of May, midge emergence will be affected. Emergence of the adult flies can be delayed, extended or erratic and may not coincide with the susceptible stage of the wheat crop.

Keep in mind that areas of infestation indicating more than 600 wheat midge per square metre (yellow and orange) on the wheat midge map may still result in significant damage and yield loss, especially if environmental

conditions are favourable for the wheat midge. Not all fields are sampled. In the soil survey, 420 samples were collected to produce the 2019 forecast map. The intention of the forecast is to provide a regional representation of wheat midge populations present in the fall of 2018.

> To determine midge populations and, if necessary, timing of an insecticide application, growers are urged to monitor conventional wheat fields during the susceptible period—when the wheat head becomes visible as the boot splits until mid-flowering (anthesis). Regular field scouting on successive nights is important to understand wheat midge population changes in a particular field. Temperature and wind conditions significantly influence egg-laying by the adult female midge. High temperatures and high winds tend to reduce activity of egglaying female midge.

> > For more information on the wheat midge risk and for links to wheat midge management resources, please go to saskwheat.ca.



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Seed variety trials deliver valuable information to Saskatchewan producers

By Dallas Carpenter

When you are investing in a grain variety for your farm, you want to ensure you are getting a variety that yields well, can withstand environmental stresses, and is resistant or tolerant to pests and diseases in your area.

To provide Saskatchewan farmers with unbiased data, the Saskatchewan Variety Performance Group (SVPG) was formed to test and report on commercially available varieties of cereal crops and flax. Formed in 2006, the SVPG is an informal group made up of stakeholders who are interested in post-registration, variety performance testing in Saskatchewan.

SVPG members include the Saskatchewan Wheat, Barley, Oats and Flax Development Commissions, the Saskatchewan Seed Growers Association, and the Saskatchewan Ministry of Agriculture. SVPG collaborators include Agriculture and Agri-Food Canada, the University of Saskatchewan's Crop Development Centre, Agri-ARM sites, Nutrien and private research companies.

"SVPG is very fortunate to have excellent collaborators across the province that grow the trials and collect the data on SVPG crops," says Mitchell Japp, Provincial Cereals Specialist with the Saskatchewan Ministry of Agriculture. "SVPG has 18 locations growing one or more SVPG crop. In recent years, SVPG has reached out to neighbouring provinces to jointly collect data at locations very near the border in areas where SVPG identified a gap in testing.

SVPG's mandate includes testing on spring wheat, durum, barley, oats, flax, fall rye and triticale. The data collected from these trials is entered into the annual Varieties of Grain Crops publication and the SaskSeed Guide. These publications are valuable resources for producers and seed growers who are looking for unbiased comparisons of variety data.

Varieties are submitted for testing by either a plant breeder or the seed company that markets the variety. Once entered, varieties are tested for five years. After that, they may be retained in the SaskSeed Guide for several years.

"This is why it is important to make any comparisons directly to the check variety," explains Japp. "Unfortunately, it is neither practical nor feasible to test all varieties each year. Including a check variety that is consistent for many years allows growers to make comparisons to a variety that is commonly grown throughout the province."

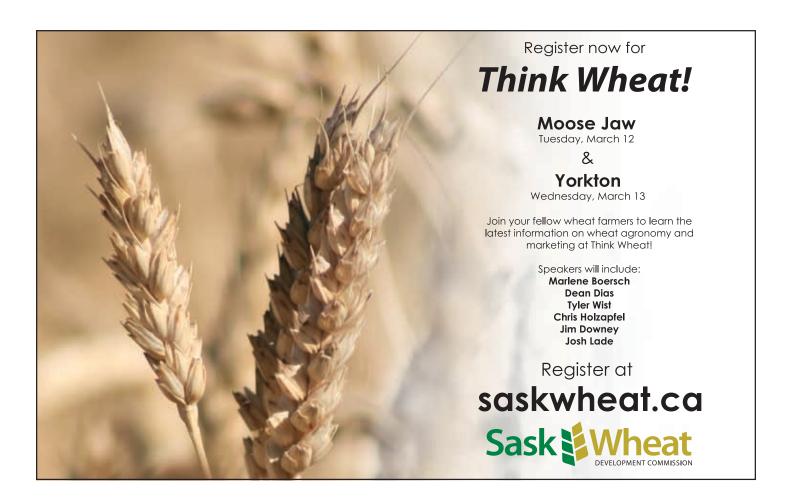
The agronomic and disease data of wheat varieties will be enhanced thanks to a recently-undertaken project focused on wheat. In this project, SVPG will collect additional data on priority traits including maturity, height, lodging, test weight, thousand-kernel weight, wheat midge, and ergot, providing farmers with more productive information on farming decisions.

"So far, the most notable change has been the revision of the lodging ratings," says Japp of the new variety trials. "The additional data collected on lodging provided enough evidence to support changing the lodging ratings to be more reflective of what was happening in the field."

With the support of Sask Wheat, SVPG has been able to continue to collect the additional data for wheat and durum to make the data in the SaskSeed Guide even more robust. The data from the SVPG is available in the 2019 SaskSeed Guide, which is available on *saskseed.ca*. The Varieties of Grain Crops publication is available at *saskatchewan.ca*.









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