



Western Grains Research Foundation
Annual Report 2011



Outlook for 2012

2012 is shaping up to be a very important year for WGRF. Producers want to continue using check-off funds to work with private industry and government to develop new approaches for funding crop research. WGRF is working with other producer organizations to develop a new industry model that will allow for permanent dedicated variety research check-off in wheat and barley. Wheat and barley producers, along with AAFC and provincial governments, have been key funders of wheat and barley variety development. Now is the time for producers, government, and industry to find new ways to increase cereal research investments so that levels are competitive with other crops and other countries.



Dave Sefton, 2012 WGRF Board Chair

2012 will also see WGRF increasing the funding activity of the Endowment Fund by co-funding with producer groups and governments on important research priority areas, including Agronomy, Breeding Tools, Crop Risk Management, New Crop Development, New Crop Uses, and Post Harvest Management.

I am very honoured to have been elected as the WGRF Board Chair for 2012 and I look forward to helping strengthen WGRF's position as a leading funder of agricultural research in western Canada.

A handwritten signature in black ink, appearing to read 'D Sefton', written in a cursive style.

Dave Sefton, 2012 WGRF Board Chair

2012 WGRF Elected Executive Committee

Dave Sefton, Chair – Broadview, SK

Dr. Keith Degenhardt, Vice-Chair - Hughenden, AB

Bob Anderson - Dugald, MB

Gerrid Gust - Davidson, SK

Peter Pepneck - Vauxhall, AB



An Overview of the Western Grains Research Foundation

Western Grains Research Foundation (WGRF) is a farmer funded and directed non-profit organization investing primarily in wheat and barley variety development to benefit western Canadian producers. Through investments of over \$57 million, WGRF has assisted in the development and release of more than 100 new wheat and barley varieties over the past decade and a half. Today, many of these varieties are seeded to large portions of the cropland in western Canada.

Through the Endowment Fund, WGRF also invests in research on other western Canadian crops. Since 1981, the Endowment Fund has supported a wealth of innovation across western Canada, providing over \$26 million in funding for over 230 research projects.

Chair's Message

For WGRF, 2011 was a year filled with growth and change. WGRF continued to strengthen its relationships with Agriculture and Agri-Food Canada (AAFC), University of Saskatchewan, University of Manitoba, and the University of Alberta and Alberta Agriculture and Rural Development (AARD). Over the next five years, WGRF will invest \$23 million in these wheat and barley breeding programs. These agreements mark the largest investment in wheat and barley research by WGRF to date, representing a 30 percent funding increase for wheat and a 12 percent increase for barley compared to previous breeding agreements. These new agreements have enhanced WGRF's profile with the federal government, universities, and agricultural researchers. Within AAFC, these breeding programs are now considered more secure funds since they are linked to signed agreements rather than being affected by the federal budget.



Keith Degenhardt,
WGRF 2011 Board Chair

Thanks to growth of the Endowment Fund over the past few years, WGRF has begun to fund agricultural research in a much larger capacity. Beginning in 2012, WGRF has committed over \$1 million for ten new research projects in a wide variety of areas that will improve productivity and profitability of field crops. Last year, WGRF was proud to establish the WGRF Graduate Scholarship to help and encourage top students to further their studies in crop research. In January, WGRF committed \$3.8 million over five years to a breeding tools project. Funds were also used to access an additional \$8 million in a Genome Canada project that studies the wheat genome.

During the summer of 2011, WGRF began diligently working to ensure that a point of sale check-off existed after August 2012. In the *Marketing Freedom for Grain Farmers Act*, WGRF, the Canadian Malting Barley Technical Centre, and the Canadian International Grains Institute will have a check-off for five years after August 2012. The three organizations have been working together to help formulate regulations that affect the check-offs. WGRF will work with the CIGI and CMBTC on a communications campaign to inform producers and grain buyers about the new check-off program once the regulations are approved.

WGRF will continue to improve its profile over the next five years, reinforcing the importance of producer involvement in agricultural research. Farmers are the ones who pay the bill, and if farmers stay involved they can directly influence the research that is carried out.

I have enjoyed serving as WGRF Board Chair this past year and would like to thank all board members and staff for their hard work and commitment to WGRF.

A handwritten signature in black ink that reads "Dr. Keith J. Degenhardt". The signature is written in a cursive, flowing style.

Keith Degenhardt, WGRF 2011 Board Chair

Executive Director's Message

I have had the opportunity to meet with a number of producer organizations, government officials, and industry representatives since joining WGRF in August. There is renewed enthusiasm about wheat and the importance of attracting increased investment into wheat breeding research. Private industry and public breeding institutions are interested in partnerships that will increase wheat breeding activity and ultimately increase the profitability of producers.

At over \$88 million, the Endowment Fund is large enough to have a significant impact on western Canadian agriculture. It has also attracted the attention of various stakeholders with views on how the fund should be used. The Endowment Fund provides an opportunity for WGRF to be proactive in funding research that is important to western Canadian producers. Staff have continued consultations with producer commodity organizations to refine the research priority areas and better understand how WGRF can best use the Endowment Fund to benefit producers.

With the passing of Bill C-18, the focus of WGRF has been to ensure that wheat and barley check-offs continue. We are working with industry partners and federal AAFC officials to make the transition to a new collection method for check-offs. It will be equally important for WGRF to determine its role in the move towards provincial commissions.

The five year Growing Forward policy agreement expires on March 31, 2013. We expect a successor framework will be in place for implementation on April 1, 2013. WGRF will again be actively involved in developing wheat and barley proposals as well as an agronomy proposal.

One of WGRF's greatest strengths is its broad producer membership from across western Canada. The next three years will be pivotal for WGRF. We are highly respected in the scientific community for our commitment to research. Sound planning and good stakeholder relations can put WGRF in a position to continue providing leadership in agriculture research funding.

I have enjoyed working with the great staff and dedicated board members at WGRF these past six months and I look forward to a very exciting and productive year in 2012.



Garth Patterson,
Executive Director WGRF

A handwritten signature in black ink, appearing to read 'Garth Patterson', written over a background of a field of wheat.

Garth Patterson, Executive Director WGRF

WGRF Board of Directors 2011

The board that oversees WGRF is comprised of 16 individuals who provide well-rounded representation of the crop production sector in western Canada. Members are farmers, with one non-voting representative from Agriculture and Agri-Food Canada. Each member represents a different agricultural organization within western Canada. The 2011 WGRF Board of Directors included:

Dr. Keith Degenhardt, Chair
Wild Rose Agricultural Producers

Don Dewar, Vice-Chair
Keystone Agricultural Producers

Greg Marshall
Agricultural Producers Association of
Saskatchewan

Dr. Stephen Morgan Jones
Agriculture & Agri-Food Canada (non-voting)

Peter Pepneck
Alberta Soft Wheat Producers Commission

Martin Moore
BC Grain Producers Association

Colin Felstad
Canadian Canola Growers Association

Joe Rennick
Canadian Seed Growers Association

Cam Goff (Resigned Dec 2011)
Canadian Wheat Board (Producer Board Rep)

Bill Gehl
National Farmers Union

Bob Anderson
Prairie Oat Growers Association

Dave Sefton
Saskatchewan Flax Development Commission

Mel Stickland
Western Barley Growers Association

Gerrid Gust
Western Canadian Wheat Growers
Association

Fred Grieg
Western Pulse Growers Association

Garth Butcher
Western Winter Cereal Producers

WGRF Staff

Garth Patterson, M.Sc., P Ag
Executive Director

Tracy Antonenko
Administrative Clerk

Barbara Kammerer, CMA
Financial Officer

Mike Espeseth, B.Comm
Communications Manager

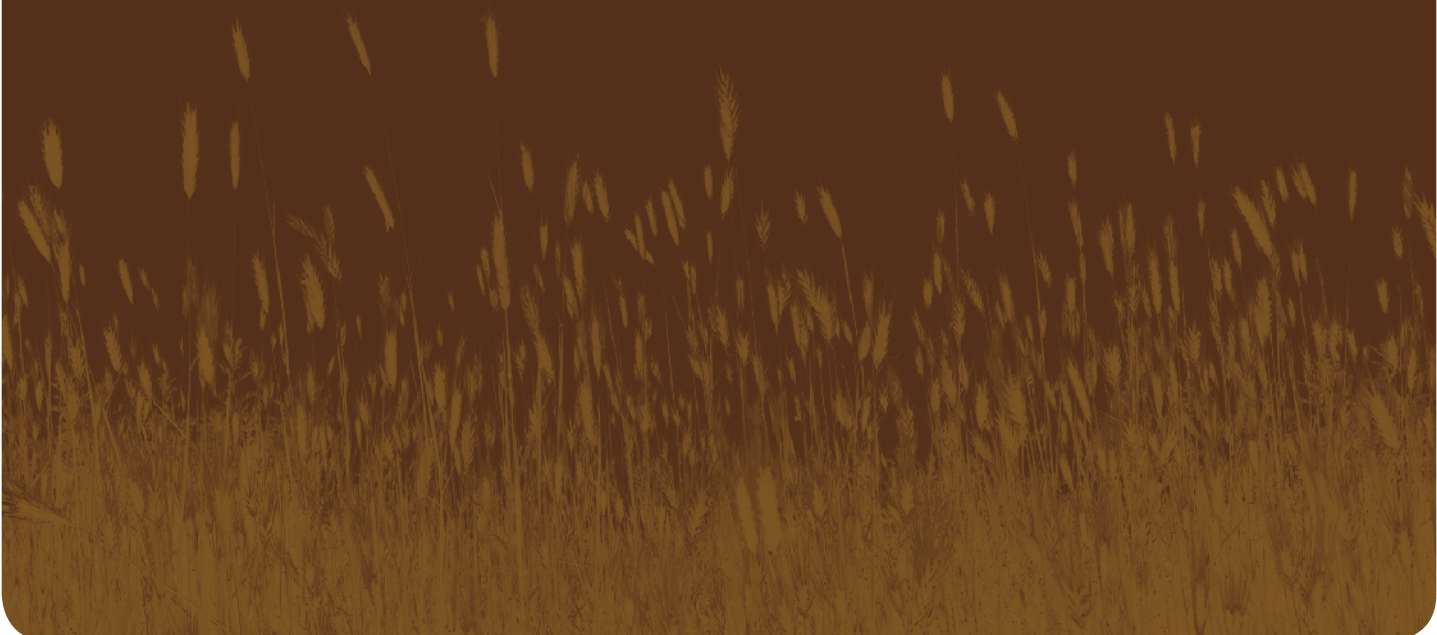
Wayne Thompson
Program Development Manager

Joelle Harris, P Ag
Research Agreements Coordinator

Year in Review

Future of the Wheat and Barley Check-offs

WGRF was pleased that provisions were included in the *Marketing Freedom for Grain Farmers Act* legislation for a temporary point of sale check-off on wheat and barley for variety research and market development. WGRF will be working with other producer organizations and industry to develop a new model that will allow for permanent dedicated variety research check-offs in wheat and barley following this five year transition period.



Opt-Out Numbers

The wheat and barley check-offs are the mainstay of WGRF's revenue and are used to support wheat and barley variety development. The producer opt-out numbers for 2011 again show strong producer support. For the last five years, opt-outs have been

between five and eight percent. Although some producers do opt-out of the check-offs, over 90 percent of producers choose to leave their money with WGRF to help fund future wheat and barley varieties.

Wheat and Barley Varietal Research

In late 2010 and early 2011, WGRF renewed and implemented a number of new research agreements in wheat and barley breeding programs at Agriculture and Agri-Food Canada (AAFC) institutions at three prairie universities: University of Saskatchewan, University of Manitoba, and the University of Alberta and Alberta Agriculture and Rural Development (AARD).

These new breeding agreements mark the largest investment in wheat and barley

research by WGRF to date. They represent a 30 percent funding increase for wheat and a 12 percent increase for barley compared to previous agreements.

Wheat and barley check-off dollars have been funding breeding research since the 1993/94 crop year. The new research agreements provide a framework for farmer investment in wheat and barley breeding research over the next five years. They feature increased funding allocations, breeding targets, and other key provisions to get the most out of farmers' investment. Increased check-off revenue in recent years, strong producer support of the check-offs, and a growing reserve account made this greater investment in variety development possible.

The wheat and barley breeding agreements make it easier for Canadian producers to compete in export markets by developing cultivars with higher yields, improved end use properties, and better disease and insect resistance. Cultivars are widely tested in appropriate environments in western Canada to ensure adaptation to drought, heat, weather damage, diseases such as rust, common bunt, Fusarium Head Blight, leaf spots, and loose smut, and insects such as Orange Wheat Blossom midge and wheat stem sawfly.



Harvesting barley at Glenlea

WGRF-Supported Varieties Top the 2011-12 Variety Survey Results

In 2011, the top wheat varieties in the Canadian Western Red Spring (CWRS) class were again all WGRF-supported varieties: ACTM Harvest, ACTM Lillian, ACTM Unity VB, CDC Go, ACTM Superb, and ACTM Kane. All of these varieties were developed by Canadian wheat breeders at Agriculture & Agri-Food Canada in Winnipeg and Swift Current, as well as the Crop Development Centre at the University of Saskatchewan.

In total, 70 percent of all CWRS wheat acres grown are WGRF-supported varieties.

In the Canadian Western Amber Durum (CWAD) category, another WGRF-supported variety, ACTM Strongfield, continued its popularity, making up 65 percent of the durum acres grown. A newer WGRF-supported variety, CDC Verona, has shown promise, increasing its acres by over five percent since

last year. In total, 85 percent of all durum acres grown are WGRF-supported varieties.

WGRF-supported varieties also topped the list in many of the minor wheat classes, including AC Andrew and ACTM Sadash in the Canada Western Soft White Spring category. CDC Ptarmigan topped the Canada Western General Purpose class, while Radiant, CDC Buteo, and CDC Falcon were again the most popular varieties in the Canada Western Red Winter class.

In the two-row malting barley category, WGRF-supported variety CDC Copeland was again the second most popular variety grown, with 26 percent of the acres planted in 2011. WGRF-supported variety ACTM Newdale remained at five percent and newer variety CDC Meredith gained over three percent of the total acres.



Seed of the Year



WGRF was again honoured to co-chair the Seed of the Year Committee. Seed of the Year West was proud to announce that Fleet meadow brome grass was selected as the 2011-12 winner. For

58 years Dr. Bob Knowles, who passed away in 1998, bred new varieties of perennial grasses for western Canada at the Saskatoon Research Centre of Agriculture and Agri-Food Canada. Many of the most popular dryland grass varieties in western Canada, including Fleet, came from his program.

Fleet was the first Canadian release of meadow brome grass and became the most widely distributed variety in North America. Fleet not only had higher forage yields than previous meadow bromes, it had higher seed yields and improved seed quality. For this reason it is still a leading variety in the marketplace almost 25 years after its 1987 release.

Seed of the Year is designed to provide recognition to publicly-developed varieties

that have made a significant contribution to the economy, agriculture, and the Canadian public. Although the name, Seed of the Year, indicates the contribution in a particular year, the program is broad reaching and considers total lifetime achievement and contribution. It is important to recognize the value of our public plant breeding programs, as well as encourage the entry of new plant breeders to the industry.

Seed of the Year includes a scholarship of \$4000 that is awarded to a student enrolled in a western Canadian university and currently completing a Master's or Ph.D program in plant breeding or genetics.

Seed of the Year West would like to acknowledge its sponsors: Agriculture and Agri-Food Canada, Alberta Barley Commission, Canterra Seeds, Cargill, Canadian Wheat Board, Parrish & Heimbecker Limited, Canadian Seed Growers Association, Viterra, Richardson International, SeCan, and Western Grains Research Foundation. We also wish to thank the judges and other applicants.

Federal Tax Credit for Farmers on Check-off Investments

The federal government provides an annual Scientific Research and Experimental Development (SR&ED) tax credit to producers, offering them money back on their check-off investments.

The tax credit for producers who contributed to the WGRF Wheat and Barley Check-offs in 2011 are 84 percent for wheat and 83 percent for barley.

These percentages are calculated by looking at the check-off dollars spent directly on research. This is determined to be the eligible portion. Each check-off organization has its own eligible percentage.

For more information on claiming your SR&ED tax credit, please consult your accountant or visit the Canada Revenue Agency website, at www.cra-arc.gc.ca/sred.

WGRF Wheat Breeding Enhancement

WGRF believes that our industry must work together to attract public, producer, and private investments to increase the competitiveness of western Canadian wheat producers. Cereals, oilseeds, pulses, and special crops must be profitable for western Canadian producers to have sustainable crop rotations.

In western Canada, public, private, and producer sources invest about \$23 million into wheat breeding research. When this number is compared with international wheat and other crops in Canada, it is apparent that the

Canadian wheat industry is significantly under-investing in research:

Australia Wheat:	\$80 million/year
US Wheat:	\$50 million/year
US Corn:	\$680 million/year
US Soy Bean:	\$340 million/year
Canada Canola:	\$65 million/year
Canada Wheat:	\$23 million/year



Canadian Innovation Outcomes

WGRF believes that as producers, we must increase the competitiveness of wheat and other cereals in crop rotations. To do this, we need investments of \$80 to \$100 million per year for cereal breeding research in Canada.

WGRF's vision for variety development is to provide producers with rapid access to

improved varieties at a reasonable cost from public and private breeding organizations. WGRF has been investigating a number of possibilities to increase investment in wheat research. We have been engaging with private industry and public breeders to develop partnerships and consortiums to increase wheat breeding activity.

Rail Cap Revenue

WGRF received approximately \$1.3 million from the Canadian Pacific Railway Company (CPR). The Canadian Transportation Agency ruled that the revenue of the CPR for the movement of western grain had exceeded the cap for crop year 2010-2011. CPR's grain revenue of \$443,822,775, which was \$1,252,034 above the cap of \$442,570,741.

The agency also ruled that the revenue from grain transportation of the Canadian National Railway Company (CN) for the same period was below the cap. CN's grain revenue was \$508,403,510, which was \$913,447 below its cap of \$509,316,957.

Under the Canada Transportation Act, amounts received by the railways for grain movement in excess of the revenue cap are paid into the WGRF Endowment Fund. The interest earned on the Endowment Fund is used to support research on all crop types. It should be noted that the WGRF Endowment Fund is completely separate from funds collected on the wheat and barley check-offs.

Following is a complete history of the funds WGRF has retained through the revenue cap:

2003-04 crop year Canadian Pacific Railway (CPR) exceeded the revenue cap, WGRF retained a net amount of \$338,007.

2004-05 crop year Canadian National Railway (CN) exceeded the revenue cap, WGRF retained a net amount of \$124,650.

2005-06 crop year CPR and CN both exceeded the revenue cap and WGRF retained a net amount of \$3,412,780.

2006-07 crop year CPR exceeded the revenue cap and WGRF retained a net amount of \$3,532,820.

2007-08 crop year CN and CPR exceeded the revenue cap and WGRF retained a net amount \$66,620,585.

2008-09 crop year CN exceeded the revenue cap and WGRF retained a net of \$717,432.

2009-10 crop year The Canadian Transportation Agency announced that revenue of CN and CPR did not exceed their respective caps.

2010-11 crop year CPR exceeded the revenue cap and WGRF retained a net amount of \$1,314,636.

WGRF Graduate Scholarships

We are pleased to announce that we have established the WGRF Graduate Scholarship. As of June 2011, WGRF will award \$100,000 a year to graduate students at the three prairie universities.

This scholarship will encourage top students to further their studies in crop research. WGRF believes that attracting the best minds to crop research will help generate improved technology and productivity for western crop producers. The scholarship will be administered on a rotating basis by the University of Manitoba, the University of Alberta, and the University of Saskatchewan. Each university will receive \$100,000 every three years. Each university can choose to fund one Ph.D student at the rate of \$33,000 per year for three years or two master's students at \$25,000 per year for two years.

WGRF believes that committing money to graduate students who have demonstrated outstanding academic achievement is a worthwhile investment for producers. WGRF has been investing producer dollars in agriculture research and breeding programs at these institutions for a number of years.

The University of Manitoba selected Sean Asselin as the recipient of the first ever WGRF Graduate Scholarship. The main focus of Sean's work will be characterizing the diversity and breeding potential of perennial sunflower species native to western Canada with regards to crop improvement and novel crop development.

The University of Alberta will be accepting applications for the WGRF Graduate Scholarship in 2012, followed by the University of Saskatchewan in 2013.



The University of Saskatchewan is one of three universities to receive scholarships from WGRF.

WGRF Research Highlights

Western Grains Research Foundation Approves \$3.8 Million Breeding Tools Initiative

In January, WGRF announced funding for a new research initiative that will strengthen and advance public cereal breeding programs across western Canada. WGRF approved funding of \$3.8 million over the next five years for an initiative to develop genomic tools, increase genomic capacity, and enhance the use of doubled haploid in cereal crop breeding programs.

Most Canadian breeding programs already utilize some doubled haploid and genomic technology. However, the full potential of these technologies is not being fully exploited because implementation has not kept pace with changing technology. Breeders currently rely on marker technology with limited throughput capacity, restricting breeding programs to evaluating only a few marker-trait combinations in a few targeted plant populations.

Greater use of genomic technologies will mean faster, more accurate identification of the best genes available in seed germplasm to breed into varieties for commercial production.

Doubled haploid technology accelerates the cycle of crop breeding. Together, these technologies can get improved varieties into farmers' fields quicker, adding to the producer's bottom line.

"WGRF is excited about the impact this breeding tools initiative can have for producers," says Don Dewar, WGRF Vice-Chair and Chairman of the Endowment Fund Advisory Committee. "The potential to accelerate the crop breeding cycle and speed the release of improved varieties to market is a worthwhile and powerful investment for producers to make."

The research initiative being funded is a joint initiative led by Dr. Curtis Pozniak at the University of Saskatchewan's Crop Development Centre and Dr. François Eudes and Dr. Brent McCallum, both with Agriculture and Agri-Food Canada.

A portion of WGRF funds were used by Dr. Pozniak to access an additional \$8 million in a Genome Canada project looking at the wheat genome.



Endowment Funding

Through the Endowment Fund, WGRF has committed over \$1 million for ten new research projects that will begin in 2012. Below is a summary of ongoing research projects being funded through the WGRF Endowment Fund:

Researcher	Location	Term	Funds	Title
Dosdall, Lloyd	U of A, AFNS	2009-2011	\$143,175	Controlling the Cereal Leaf Beetle with Natural Enemies
Hucl, Pierre	CDC, U of S	2009-2012	\$150,000	Enhancing Nitrogen Management through genetics in cereal-legume crop rotations
Beattie, Aaron	CDC, U of S	2009-2011	\$150,000	FHB resistant Oat for the FHB prone eastern Prairie Region
Haber, Steve	AAFC, Winnipeg	2009-2011	\$60,000	Meeting the challenges posed by virulent new forms of Wheat Diseases on the Prairies
Pozniak, Curtis	CDC, U of S	2010-2011	\$14,100	Rust Resistance Genetic Resources for the Cdn Wheat Industry
Gray, Richard	U of S	2010-2011	\$78,178	Proposal for Investigating Optimal Commercialization Relationships in Crop Breeding
Pozniak, Curtis	CDC, U of S	2010-2012	\$163,470	Protecting Canadian Farmers from the Threat of Ug99
Gilbert, Jeannie	AAFC, CRC	2010-2012	\$60,000	Reducing overlooked losses in Wheat: a novel approach to control Leaf Spot Diseases
Holliday, Neil	U of Manitoba	2010-2012	\$60,000	Biological Control of Root Maggots in Canola
Shah, Shaleh	Alberta Innovates-Technology Futures	2010-2013	\$108,000	Developing canola (<i>Brassica napus</i>) with reduced pod shattering
Turkington, Kelly	AAFC, Lacombe	2010-2013	\$279,000	Net Blotch: variability in relation to virulence, resistance and fungicide sensitivity
Saskatchewan Flax	SFDC	2011-2013	\$120,000	Northern adapted flax variety development project
Chibbar, Ravindra	U of S	2011-2013	\$151,800	Molecular characterization of Low Temperature Tolerance in Cereals
Fox, Stephen	AAFC, Winnipeg	2011-2013	\$136,000	Genetic Male Sterility Facilitated Recurrent Selection in Spring Wheat

Researcher	Location	Term	Funds	Title
Booker, Helen	U of S	2011-2013	\$147,145	Genetic Analysis of Transgenes in Flax Germplasm
Ayele, Belay	U of Manitoba	2011-2013	\$121,900	Hormonal Regulation of Pre-harvest Sprouting in Wheat
Bueckert, Rosalind	U of S	2011-2013	\$160,000	Pea Yield Formation in Warming Temperatures
Singh, Danny	AAFC, Lethbridge	2011-2013	\$165,025	Increased Crop Performance through Wheat-Mycorrhizal Interaction
Selvaraj, Gopalan	NRC-PBI Saskatoon	2011-2014	\$134,912	Building durable clubroot resistance in canola: Identification of multiple clubroot resistance genes from <i>Brassica napus</i> and <i>B. rapa</i> for marker-assisted gene stacking in canola breeding
Beattie, Aaron	CDC, U of S	2012- 2014	\$180,000	FHB resistant oat for FHB prone eastern prairie region
Otani, Jennifer	AAFC, Beaverlodge	2012- 2014	\$45,000	Coordinated monitoring, forecasting and risk warning systems for field crop insect pests
Spaner, Dean	U of A	2012- 2014	\$150,000	Pyramiding stripe, stem and leaf rust genes into bread wheat
Bailey, Karen	AAFC, Saskatoon	2012- 2014	\$110,000	Broadleaf weed control in alfalfa using the bioherbicide <i>Phoma macrostoma</i>
DeRosa, Maria	Carleton University	2012- 2014	\$225,000	Aptamer-based TLC technology for mycotoxin detection in grains
Sapirstein, Harry	U of M	2012- 2014	\$161,540	Improving farinograph absorption of CWRW wheat screening for pentosan content
Hucl, Pierre	CDC, U of S	2012- 2014	\$155,018	Potential vernalization response and crop development of canary seed
Kutcher, Randy	CDC, U of S	2012- 2014	\$153,001	Searching for stripe rust resistance in wheat
Beres, Brian	AAFC, Lethbridge	2012- 2014	\$150,000	The role of genetics, growth habit and cultural practices in the mitigation of fusarium
Borhan, Hossein	AAFC	2012- 2014	\$224,250	Developing molecular markers for determining race structure of <i>Leptosphaeria maculans</i> in Western Canada

Research Priority Areas

At over \$88 million, the WGRF Endowment Fund is large enough to have a significant impact on western Canadian agriculture. This provides a real opportunity for WGRF to be proactive in funding research that is important to western Canadian producers.

Based on consultations with producers, industry, and researchers in western Canada, WGRF has developed six important research areas to support with the Endowment Fund. WGRF has established relationships with provincial agriculture funding bodies in Manitoba, Saskatchewan, and Alberta to co-fund projects.

1. **Agronomy:** Cropping systems and fertility research for significant western Canadian crops.
2. **Breeding Tools:** Pre-breeding and breeding research for significant western Canadian crops.
3. **New Crop Development:** Breeding and agronomy research for minor or new western Canadian crops.
4. **New Crop Uses:** Utilization research on western Canadian crops with the potential to provide significant benefit to producers.
5. **Crop Risk Management:** Monitoring, forecasting, and control of diseases (e.g. Fusarium), weeds, and insects in cropping systems.
6. **Post Harvest Management:** Post harvest handling and storage research and its impact on grain quality (e.g. ochratoxins), as well as storage costs of western Canadian crops.



Financials

As an organization funded and directed by farmers, WGRF is committed to transparency in all areas of the organization, including the reporting of its financial position, operating results, and cash flow. PricewaterhouseCoopers LLP annually audits WGRF's financial statements. The audited financial statements have been reviewed and approved at the WGRF Annual Meeting.

To aid your reading of the Financial Summary on the following pages, below are a few explanatory notes. If you require more information, please contact our office.

Under the heading Equity

The category Capital represents the original dollars that were transferred by the federal government from the discontinued emergency program under the Prairie Farm Assistance Act as an endowment. This was the base on which WGRF was founded.

Endowment shows the year-end balance of interest earned on the principal dollars listed under Capital, as well as income from the excess railway charges and penalties received under the federal railway revenue cap for prairie grains.

A full listing of revenue cap dollars paid to the WGRF is listed on page 13 of this report.

Wheat represents the wheat reserve or contingency, plus funds in the wheat operating account at year-end.

Barley represents the barley reserve or contingency, plus funds in the barley operating account at year-end.



Independent Auditor's Report

January 27, 2012

To the Members of Western Grains Research Foundation

We have audited the accompanying financial statements of Western Grains Research Foundation, which comprise the balance sheet as at December 31, 2011 and the statements of fund revenue and expenditures and changes in fund balance and cash flows for the year then ended, and related notes including a summary of significant accounting policies.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Western Grains Research Foundation as at December 31, 2011 and its financial performance and cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

PricewaterhouseCoopers LLP

Chartered Accountants

PricewaterhouseCoopers LLP, Chartered Accountants

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"PwC" refers to PricewaterhouseCoopers LLP, an Ontario limited liability partnership.

Balance Sheet

As at December 31 , 2011

Assets

Current assets

	2011	2010
Cash	\$ 913,587	\$ 865,164
Cash and short-term notes held by investment dealer	1,547,132	438,015
Accounts receivable	177,679	348,327
Prepaid expenses	3,625	3,513
Accrued interest receivable	405,336	281,243
Investment in debt instruments (note 5)	52,482,625	56,189,681
Portfolio investment in equity securities	52,482,725	49,061,242
	<u>108,012,709</u>	<u>107,187,185</u>

Liabilities and Fund Balances

Current liabilities

Accounts payable and accrued liabilities	<u>823,802</u>	<u>2,102,430</u>
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Fund balances (notes 2 and 8)

Capital Fund	9,066,972	9,066,972
Endowment Fund	79,335,767	80,559,468
Wheat Fund	16,788,443	13,521,907
Barley Fund	1,997,725	1,936,408
	<u>107,188,907</u>	<u>105,084,755</u>
	<u>108,012,709</u>	<u>107,187,185</u>

Approved by the Board of Directors

Dr. Keith J. Degenhardt

Director

Dr. J. L. ...

Director

Statement of Fund Revenue and Expenditures and Changes in Fund Balance

For the year ended December 31, 2011

	2011	2010
Endowment Fund		
Revenue		
Investment income	\$ 2,163,840	\$ 1,780,379
Other income (note 7)	—	1,863,507
Gain (loss) on sale of investments	(413,206)	2,710,640
Write-down of bond investment	—	(903,336)
Foreign exchange gain (loss)	(4,733)	(39,164)
	<u>1,745,901</u>	<u>5,412,026</u>
Expenditures		
Research funding (note 12)		
Agronomy	160,556	170,037
Breeding tools	73,875	63,775
Crop breeding	432,293	209,066
Pest/weather	2,500	7,500
Post harvest	60,000	—
Fusarium	43,522	—
Other/economics	29,317	39,089
	<u>802,063</u>	<u>489,467</u>
Donation to University of Saskatchewan	—	1,000,000
Scholarships	100,000	—
Operating (schedule)	364,311	140,262
	<u>1,266,374</u>	<u>1,629,729</u>
Excess of revenue over expenditures for the year	<u>479,527</u>	<u>3,782,297</u>
Endowment Fund - Beginning of year	<u>80,559,468</u>	<u>74,634,886</u>
Accumulated unrealized gains on investments in equity securities at beginning of year	(3,160,025)	(1,017,740)
Accumulated unrealized gains on investment in equity securities at end of year (note 6)	1,456,797	3,160,025
Endowment Fund - End of year	<u>79,335,767</u>	<u>80,559,468</u>

Statement of Fund Revenue and Expenditures and Changes in Fund Balance

For the year ended December 31, 2011

	2011	2010
Wheat Fund - Operating Account		
Revenue		
Payments received from producers (net of opt-outs)	\$ 6,146,318	\$ 5,399,834
Refunds to producers	(3,112)	(5,815)
Royalties (note 1)	1,265,782	350,601
Other income (note 7)	947,163	372,901
Investment income	2,156	767
	<u>8,358,307</u>	<u>6,118,288</u>
Expenditures		
Research funding		
Agriculture and Agri-Food Canada	2,882,750	2,462,000
University of Alberta	97,721	64,500
University of Manitoba	336,054	153,000
University of Saskatchewan	1,151,898	540,000
Alberta Agricultural and Rural Development	134,841	57,000
	<u>4,603,264</u>	<u>3,276,500</u>
Royalties (note 1)	274,287	425,527
Operating (schedule)	655,363	844,081
	<u>5,532,914</u>	<u>4,546,108</u>
Excess of revenue over expenditures for the year	2,825,393	1,572,180
Transfer to wheat reserve account	(1,821,017)	(2,487,629)
Operating account - Beginning of year	(803,463)	111,986
Operating account - End of year	<u>200,913</u>	<u>(803,463)</u>
Wheat Fund - Reserve Account		
Revenue		
Investment income	441,143	374,536
Transfer from wheat operating account	1,821,017	2,487,629
Reserve account - Beginning of year	14,325,370	11,463,205
Reserve account - End of year	<u>16,587,530</u>	<u>14,325,370</u>
Wheat Fund - End of year	<u>16,788,443</u>	<u>13,521,907</u>

Statement of Fund Revenue and Expenditures and Changes in Fund Balance

For the year ended December 31, 2011

	2011	2010
Barley Fund - Operating Account		
Revenue		
Payments received from producers (net of opt-outs)	\$ 682,324	\$ 996,276
Refunds to producers	(579)	(2,113)
Other income (note 7)	165,000	144,800
Royalties (note 1)	88,904	112,441
Investment income	325	164
	<u>935,974</u>	<u>1,251,568</u>
Expenditures		
Research funding		
Agriculture and Agri-Food Canada	469,235	488,674
University of Saskatchewan	336,600	300,000
	<u>805,835</u>	<u>788,674</u>
Royalties (note 1)	38,841	37,039
Operating (schedule)	93,753	123,441
	<u>938,429</u>	<u>949,154</u>
Excess (deficiency) of revenue over expenditures for the year	(2,455)	302,414
Transfer from (to) barley reserve account	141,600	(420,070)
Operating account - Beginning of year	(130,938)	(13,282)
Operating account - End of year	<u>8,207</u>	<u>(130,938)</u>
Barley Fund - Reserve Account		
Revenue		
Investment income	63,772	58,656
Transfer from (to) barley operating account	(141,600)	420,070
Reserve account - Beginning of year	2,067,346	1,588,620
Reserve account - End of year	<u>1,989,518</u>	<u>2,067,346</u>
Barley Fund - End of year	<u>1,997,725</u>	<u>1,936,408</u>

Schedule of Operating Expenditures

For the year ended December 31, 2011

	2011			2010
	Endowment Fund	Wheat Fund	Barley Fund	Total
Expenditures				
Wages and benefits	\$ 206,788	\$ 281,013	\$ 42,417	\$ 530,218
Communications	18,508	131,292	3,803	153,603
Office (note 9)	41,964	57,840	9,430	109,234
Professional fees	28,141	51,273	8,129	87,543
Consulting fees	6,636	16,308	1,361	24,305
Travel and other	46,261	93,560	22,297	162,118
Directors per diem	16,013	24,077	6,316	46,406
Operating expenditures for the year	364,311	655,363	93,753	1,113,427

Statement of Cash Flows

For the year ended December 31, 2011

Cash provided by (used in)

Operating activities

	2011	2010
Excess of revenue over expenditures for the year	\$ 3,302,465	\$ 5,656,891
Revenue reported in reserve accounts for the year	504,915	433,192
Items not affecting cash		
Amortization of net premiums on bonds	32,628	484,446
Write-down of bond investment	—	903,336
Loss (gain) on sale of investments	413,206	(2,710,640)
	4,253,214	4,767,225
Net change in non-cash working capital items (note 11)	(1,232,185)	677,246
	3,021,029	5,444,471

Investing activities

Funds used for investments purchased	(59,145,738)	(69,339,326)
Proceeds on investments redeemed	57,282,249	62,905,963
	(1,863,489)	(6,433,363)

Increase (decrease) in cash

1,157,540 (988,892)

Cash - Beginning of year

1,303,179 2,292,071

Cash - End of year

2,460,719 1,303,179

Cash is comprised of

Operating cash	913,587	865,164
Cash and short-term notes held by investment dealer	1,547,132	438,015
	2,460,719	1,303,179

Notes to Financial Statements

December 31, 2011

1. Summary of significant accounting policies

Investments and investment income

Effective January 1, 2007, Western Grains Research Foundation (the "Foundation") adopted the CICA Handbook accounting requirements for Section 3855 "Financial Instruments – Recognition and Measurement".

The standard requires recording financial assets and liabilities at fair value, except for loans and receivables, and certain instruments held to maturity. Loans and receivables and certain instruments that are held to maturity are measured at amortized cost based on the effective interest rate at the date the asset is acquired. For financial instruments measured at fair value, unrealized changes in fair value from year to year are recognized in earnings, unless the instrument is an available-for-sale asset, in which case the unrealized changes in fair value are recorded directly against the fund balance.

Investments in bonds, bond strip instruments and guaranteed investment certificates have been designated by the Board as held-to-maturity investments. As such, these investments are recorded at the amortized cost based on the effective interest rate at the date of purchase.

Investments in equity securities have been designated by the Board as available-for-sale. As such, these assets are recorded at market value. Unrealized gains/losses are recorded as a direct credit/charge to the fund balance.

Investment income includes interest and dividend income earned in the year and realized gains and losses from dispositions of investment assets in the year.

Revenue recognition

a) Wheat and barley funds

Revenue earned by the wheat and barley funds is primarily payments received from producers

that are collected by the Canadian Wheat Board via a deduction from the final payments on grain sold by producers in a particular crop year and remitted to the Foundation. The payment from producers is recognized in the operating account of the respective funds as revenue in the year received from the Canadian Wheat Board.

Royalties earned by the wheat and barley funds are recognized in the operating accounts of the respective funds in the year received.

b) Endowment Fund

Investment income including any resulting gains/losses on disposition of investments is recognized as income earned the year.

The endowment fund has in past years been awarded funds by the Canadian Transportation Agency ("CTA") as a result of Canadian Pacific Railway Company ("CP") and Canadian National Railway Company ("CN") exceeding their annual revenue caps for movement of grain in western Canada. The funds awarded by the CTA have generally been challenged by CP and CN through appeals to the Federal and/or Supreme Courts of Canada. As such, this revenue is recognized and recorded as other income in the endowment fund operations when received.

Fund operations

Revenue earned, net of operating expenditures, is allocated to designated funds. Research funding for a particular year is charged against the respective fund.

Royalties

The Foundation's share of royalties derived from wheat and/or barley varietal developments are recorded as royalty revenue in the respective wheat and/or barley statement of fund revenue and expenditures. The royalty funds are subsequently reinvested with research organizations for the funding of specific projects and recorded as royalty expenditures in the respective statement of fund revenue and expenditures for wheat and/or barley.

Foreign currency translation

The Foundation follows the temporal method of accounting for the translation of foreign currency amounts into Canadian dollars. Under this method, monetary assets and liabilities denominated in foreign currencies are translated into Canadian dollars at the exchange rate in effect at the balance sheet date. Non-monetary assets are translated at the historical rate of exchange. Revenue and expenses are translated at the rate of exchange prevailing on the transaction date. Gains and losses on translation are reflected in income.

Use of estimates

The preparation of financial statements in conformity with Canadian generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. The inherent uncertainty involved in making such estimates and assumptions may impact the actual results reported in future periods.

2. Funds

Capital Fund

The Foundation was funded by the Canadian Ministry of Agriculture on May 2, 1983 by a \$9,066,972 contribution to the Capital Fund. The funding contribution represented an amount equivalent to the balance remaining in the Prairie Farm Emergency Fund, which was derived entirely by deductions from prairie farmer grain sales.

Endowment Fund

Annual investment revenue earned from the initial Capital Fund contribution and funds awarded by the CTA to the Foundation as a result of CN and CP exceeding their revenue caps for the movement of grain in Western Canada, net of operating and research grant expenditures, is allocated to the Endowment Fund.

Wheat Fund and Barley Fund

The Foundation receives funding, collected by the Canadian Wheat Board, from western wheat and barley producers. The producers have the option to have \$0.30 per tonne for wheat and \$0.50 per tonne for barley deducted from their final Canadian Wheat Board payment. The funds are invested and directed to fund research projects for wheat and barley. Separate accounting of the wheat and barley check-offs is required by federal legislation.

On an annual basis, each of the Wheat Fund and Barley Fund is required to allocate a percentage of their net revenue, before research funding, to reserve accounts to ensure that any future financial commitments can be met. For the current year, 12.5% of net revenue is to be allocated to the reserve account when the balance in the wheat fund goes below \$4.8 million and when the balance in the Barley Fund goes below \$1.1 million. When the balance in the Wheat Fund goes below \$2.4 million and in the Barley Fund goes below \$500,000, the amount to be allocated is 25% of the fund net revenue.

In 2009, the Board approved a motion to increase the minimum Wheat Fund reserve account balance from \$4.8 million to \$8.8 million.

3. Income tax status

The Foundation is a registered charity, designated as a Public Foundation under the Income Tax Act of Canada. As such, it is not subject to income taxes.

4. GST refunds

The Foundation is a registered charity, designated as a Public Foundation and, as such, is entitled to a rebate of 50% of the GST paid in the year. This rebate is calculated at the end of each year and the related expense accounts have been reduced for the GST receivable by the Foundation.

5. Investment in debt instruments

Investments included are bonds, bond strip instruments, and guaranteed investment certificates.

	Cost	2011 Market Value	Cost	2010 Market Value
Endowment Fund	\$ 34,351,316	\$ 34,753,726	\$ 39,976,947	\$ 40,208,881
Wheat Fund	16,212,911	16,473,892	14,169,251	14,418,075
Barley Fund	1,918,398	1,937,901	2,043,483	2,077,795
	52,482,625	53,165,519	56,189,681	56,704,751

6. Accumulated unrealized gains (losses) on investment in equity securities

Endowment Fund

	2011	2010
Unrealized gains in opening fund balance	\$ 3,160,025	\$ 1,017,740
Change in unrealized gains (losses) during the year	(2,116,434)	4,852,925
Recognition of realized losses (gains) during the year	413,206	(2,710,640)
	1,456,797	3,160,025

7. Other income

Endowment Fund

	2011	2010
Other income includes the following:		
Funds received from Canadian National Railway Company for exceeding the revenue cap for grain movement for 2008-2009	\$ —	\$ 717,432
Funds received from Canadian National Railway Company for exceeding the revenue cap for grain movement for 2007-2008	—	1,146,075
	—	1,863,507

On December 22, 2011, the CTA awarded the Foundation \$1,314,636 from CP for exceeding its revenue cap for the movement of grain in western Canada in the 2010 – 2011 crop year. This award will be recognized as income in the year received.

Wheat Fund

	2011	2010
Other income includes the following:		
Support for Wheat Midge communications program	\$ 91,492	\$ 180,472
Support for Wheat Midge Agriculture Sustainability Initiative	8,400	—
Support for Post-Registration Varietal Trails (PVT) communications program	—	1,500
Agriculture and Agri-Food Canada funding for development of Wheat Cluster research program	—	49,200
Agriculture and Agri-Food Canada funding for research under the Wheat Cluster research program	657,782	—
Agriculture and Agri-Food Canada funding for operations costs of the Wheat Cluster research program	189,489	141,729
	947,163	372,901

Barley Fund

	2011	2010
Other income includes the following:		
Agriculture and Agri-Food Canada funding for development of Barley DIAP research program	—	12,300
Research funding from partners in the Barley DIAP research program	165,000	132,500
	165,000	144,800

8. Commitments

The Foundation has approved and is committed to certain research funding over the next five years as follows:

	Endowment Fund	Wheat Fund	Barley Fund	Total
2012	\$ 2,725,978	\$ 4,147,704	\$ 677,549	\$ 7,551,231
2013	1,888,028	3,312,540	538,265	5,738,833
2014	1,436,222	3,236,838	565,249	5,238,309
2015	875,331	941,599	52,267	1,869,197
2016	389,299	—	—	389,299
	7,314,858	11,638,681	1,833,330	20,786,869

9. Operating lease

The minimum annual lease payments under the operating lease for office space that expires in 2014 is \$51,552 plus Goods and Services taxes.

10. Financial instruments

The Foundation's recognized financial assets and liabilities consist of cash, cash and short-term notes held by investment dealer, accounts receivable, investment in debt instruments, portfolio investment in equity securities, and accounts payable and accrued liabilities. The fair values of these items approximate their carrying values except for investments in bonds; the fair values of which are disclosed in note 5.

11. Net change in non-cash working capital items

	2011	2010
Decrease (increase) in accounts receivable	\$ 170,648	\$ (279,490)
Increase in prepaid expenses	(112)	(75)
Decrease (increase) in accrued interest receivable	(124,093)	30,125
Increase (decrease) in accounts payable and accrued liabilities	(1,278,628)	926,686
	(1,232,185)	677,246

12. Comparative figures

The prior year's comparative figures for the Endowment Fund Statement of Fund Revenues and Expenditures and Changes in Fund Balance have been reclassified by type of research funding expenditures as presented in the current year.



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