



2004

Annual

Report to

Producer

Investors



Farmer funded, farmer directed.

Chairman's message



Farmers taking the lead

Chairman's Report on farmer funded progress in 2004, from Hughenden, Alta., producer Dr. Keith Degenhardt.

Nobody experiences the value of supporting research that benefits production agriculture better than the farmers who apply it on the front line.

That's why the farmers who fund and direct Western Grains Research Foundation (WGRF) have taken the lead in providing a long-term investment in this research to keep our industry competitive.

Today, we see the benefits of that investment. In 2004, the Wheat and Barley Check-off Funds reached the 10-year milestone of providing funding to wheat and barley breeding programs. That has resulted in important varieties that yield higher, resist major diseases and pests, and meet top quality requirements for a range of classes. At the same time, the Endowment Fund has added to the more than 200 crop research projects it has supported since 1983, by awarding funding to four innovative new projects that address major production issues.

As we look to the future, continuing to build on this investment progress and support farmers' role in research are the top priorities of WGRF - priorities we believe have never been more important, as agriculture enters a new era with many challenges and opportunities.

If you're a western Canadian crop producer, this is your organization. Inside this *Annual Report* you will find an overview of key developments in 2004, including the fundamentals of how the funding is collected, managed and invested in research progress. More in-depth information on all topics covered here is available to producers on the WGRF Web site, www.westerngrains.com, or directly from the WGRF office. The directors of WGRF welcome your comments or questions at any time.

Key developments in 2004

Here are some of the key developments in 2004. Further details are in this report.

Strategic planning for next generation. The past couple years have been important years of transition for the Wheat and Barley Check-off Funds and the Endowment Fund. To bring funding strategies up to date, WGRF has benefited from its established review and advisory processes. The organization has also brought in knowledgeable, independent review teams where appropriate, and delivered information to producers and encouraged their feedback throughout these processes.

Developing new Check-off agreements. The major task on WGRF's agenda has been developing new long-term Check-off funding agreements with research institutions. When the Check-off began in the 1993-94 crop year, WGRF established 10-year funding agreements with research institutions, which detailed funding allocations, breeding targets, review processes and other aspects of how the funding was to be administered.

As those initial agreements expire, WGRF is working with breeding institutions to develop new long-term agreements, which will begin in 2005. *More on page four.*

Fine-tuning Endowment Fund approach. At the same time, WGRF has also been preparing its other major research fund, the Endowment Fund, for a new period of long-term funding. This Fund, the original core fund of WGRF that began in 1983, has traditionally generated up to \$1 million annually in funding support for a broad range of research, covering many different crops and types of research.

However, in recent years, lower interest rates have cut the Fund's capacity significantly, which has meant less dollars for research investment and fewer projects funded. WGRF is pursuing new management options to ensure the Fund continues delivering strong benefits. *More on page five.*

Tax credit for farmers. On the overall investment front, farmers continue to gain recognition as major players in crops research funding - a trend happening around the world. In Canada, a major signal of this recognition in recent years has been a federal tax credit now available to producers who invest in research.

As a result of the federal government extending the Scientific Research and Experimental Development (SR&ED) tax credit to producers, western Canadian wheat and barley producers are eligible to earn a tax credit on the dollars they invest in research through the Wheat and Barley Check-off Funds. *More on page nine.*

Royalties re-invested in research. Another signal of farmers' growing research role is the partial royalties returned to WGRF on sales of farmer-supported wheat and barley varieties. As part of its funding agreements with breeding institutions, the Foundation receives a share of the royalties generated by varieties that were developed with partial Check-off support.

Key report sections

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over \$1.3 million received since 1998 - back into further wheat and barley research.

With more Check-off supported varieties in the field, WGRF is receiving a share of royalties on seed sales.

The Board has funneled these dollars -

Reports, information for producers. Information on all aspects of WGRF progress and activity continues to be delivered regularly through WGRF's communications effort; this *Annual Report* is just one component. Producers are encouraged to take advantage of the information available to help track the progress of WGRF and to help direct their role as major players in crops research. More on page 16.

Visit the Web site,

www.westerngrains.com

for complete, regularly

updated, information on

WGRF progress and activity.

Contact us

Finally, and most important, we encourage you to visit our Web site for more information and further updates, and to contact us directly any time. As a western Canadian grain crop producer, this is your organization and it only works with your continued support.

Western Grains Research Foundation 2004 Board of Directors

- ***Chairman, Dr. Keith Degenhardt**, Wild Rose Agricultural Producers, Hughenden, Alberta
- ***Vice-Chairman, Peter Pepneck**, Alberta Soft Wheat Producers Commission, Vauxhaul, Alberta
- ***Rob Pettinger**, Agricore United, Elgin, Manitoba
- Ken McBride**, Agricultural Producers Association of Saskatchewan, Kindersley, Saskatchewan
- Dr. Jeff Stewart**, Agriculture and Agri-Food Canada, Lethbridge, Alberta
- ***Brian Otto**, Alberta Winter Wheat Commission, Warner, Alberta
- Maurice Fines**, B.C. Grain Producers Association, Fort St. John, British Columbia
- Wayne Bacon**, Canadian Canola Growers Association, Kinistino, Saskatchewan
- Larry Littman**, Canadian Seed Growers Association, Saltcoats, Saskatchewan
- Allan Oberg**, Canadian Wheat Board, Forestburg, Alberta
- Bill Toews**, Keystone Agricultural Producers, Kane, Manitoba
- ***Dave Sefton**, Saskatchewan Flax Development Commission, Broadview, Saskatchewan
- Ray Demong**, National Farmers Union, Cudworth, Saskatchewan
- Robert Anderson**, Prairie Oat Growers Association, Dugald, Manitoba
- Vic Bruce**, Saskatchewan Wheat Pool, Tuxford, Saskatchewan
- Alanna Hermanson**, Western Barley Growers Association, Standard, Alberta
- Hubert Esquirol**, Western Canadian Wheat Growers Association, Meota, Saskatchewan
- Barbara Podhorodeski**, Western Pulse Growers Association, Shipman, Saskatchewan
- ****Lanette Kuchenski**, Executive Director

*Executive Members **Non-voting Executive Member

Executive Director's message



Building a new generation of progress

Executive Director's Report, from Lanette Kuchenski at the WGRF office in Saskatoon.

"*Looking long-term is important in any area of investment, but this is particularly true in grains research.*"

In 2004, the major item on WGRF's business agenda was finalizing new agreements and strategies to prepare each of the WGRF-administered funds for a new generation of progress.

This was no simple task. Together, the WGRF funds represent \$4 to \$5 million in annual research funding, which must be carefully administered to provide the greatest value to farmer investors, meet research requirements and hit long-term targets deemed of most benefit to the western Canadian grains industry.

To meet this challenge, WGRF relied upon its established review and advisory process. It also added independent review teams where appropriate, and delivered information to producers and encouraged their feedback.

This provided support to the 18-member producer Board of WGRF, which made all final decisions.

New long-term Check-off agreements

Most prominent on the agenda was the process to develop new long-term funding agreements for the Wheat and Barley Check-off Funds.

Since the 1993-94 crop year, western Canadian grain producers have supported research through these funds, which are allocated to wheat and barley breeding programs. This investment has been directed based on 10-year funding agreements with breeding institutions that outline research targets, accountability measures and other important details of how the funding is to be invested.

With those agreements nearing the end of their decade-long term, WGRF has pursued a process to develop new long-term agreements to begin during 2005.

This has involved many considerations. In addition to looking ahead and determining which breeding priorities are most needed to benefit the grains industry 10 to 15 years from now, and which breeding investments will deliver those benefits,

WGRF also considered how best to handle a range of issues related to the ownership of crop genetics and the role of farmers as investors in research. Each of these considerations also had to be viewed in the context of a rapidly changing grains industry, scientific climate and research environment.

It's important to note that these considerations are ones WGRF discusses and adjusts every year, based on its established review and advisory process. But because breeding is a long-term endeavor that requires stability year after year, most adjustments are a matter of fine-tuning rather than dramatic change. Leading up to the establishment of new agreements, the review process is more thorough, to minimize the adjustments needed over the long-term period and maximize research efficiency.

Independent Review Teams anchor process

To anchor the planning process for new Check-off funding agreements, WGRF selected two independent Review Teams, one for wheat and one for barley. Each team was made up of people with a broad base of experience. The teams were given specific Terms of Reference developed by WGRF, with the basic goal to evaluate current breeding agreements and provide recommendations on approaches to best meet future needs. Producers and organizations were encouraged to provide input throughout the process.

Overall, the Review Teams gave the current Wheat and Barley Check-off Funds a positive report card. To date, they concluded the Funds have met objectives, fulfilled obligations and produced the benefits farmer investors envisioned in the form of superior new wheat and barley varieties. Looking ahead, they concluded the objective of improving farm income through development of grains with specific qualities and improved field performance is still relevant and, perhaps, is even more pressing than it was 10 years ago. They also offered a series of specific recommendations for the WGRF Board to consider.

WGRF prepared two editions of its *Industry Report* newsletter - one on the wheat review and one on the barley review - that provide an overview of what each Review Team recommended. Producers can access copies of these editions, the September and October 2004 editions, on the WGRF Web site, www.westerngrains.com.

Advisory Committees provide recommendations

The Review Team reports were provided to WGRF's Wheat Advisory Committee and Barley Advisory Committee, each made up of half WGRF Board members and half members of the research and marketing community. These Advisory Committees meet every year to provide expert advice to the full WGRF Board on guiding the Check-off Funds administration. Both Advisory Committees have contributed extensively to the new agreement process over the past several years, including an assessment of the Review Team reports.

The full WGRF Board then considered the Review Team reports, along with Advisory Committee recommendations, and used these as a basis to determine its approach for negotiating new long-term Check-off funding agreements with the research institutions.

Those negotiations have continued into 2005, with information on the latest developments available on the WGRF Web site, www.westerngrains.com. WGRF has and will continue to deliver information on new agreements progress as it becomes available.

Updating Endowment Fund strategy

The Endowment Fund, the original core fund of WGRF, has also been the focus of transition planning.

This Fund, which generates annual interest that WGRF invests in a variety of crops research projects, has supported over 200 innovative projects since it began in 1983. At its highest level, the Endowment Fund generated approximately \$1 million annually, but in recent years, lower interest rates have cut that capacity significantly. In response, WGRF has pursued new fund management options to ensure the Fund continues fulfilling producer needs.

This is part of a regular process to guide the Fund amid changing funding realities. The investment climate has been no different for WGRF than it has for many other organizational and individual investors, who are updating their investment strategies in response to the sustained lower interest rates of recent years.

As an interim response to lower returns, WGRF changed the funding criteria for the Endowment Fund and limited the number of projects funded for 2004. As a result, two new projects were approved for funding in the categories of innovation and integrated crop management.

Following this interim step, WGRF has returned the Fund to its broader scope of funding categories for 2005. Funding capacity

has rebounded significantly, but remains substantially below its peak capacity of past years.

Exploring growth options

The WGRF Board's general consensus is now to look for ways to grow the Fund, and the organization is building a business plan around this concept. The Board's activity is guided by recommendations from the Endowment Fund Advisory Committee, which like the Check-off committees is made up of WGRF Board members along with research and industry experts.

Specific strategies WGRF is working towards include: returning a small portion of funding/interest back to the fund to grow the principal over time, looking for opportunities to co-fund research with other funding organizations, seeking new sources and/or avenues of funding to enhance the capital investment and investigating more opportunities for charitable donations.

Producers can provide feedback to this process through the WGRF Web site, at www.westerngrains.com, by contacting their representative on the WGRF Board or by contacting the WGRF office.

Regular review process guides funds

- *Funding agreements govern research projects*
- *Researchers submit annual progress reports*
- *WGRF expert Advisory Committees review progress, provide recommendations*
- *Independent review conducted before mid-term of funding agreements (Check-off)*
- *Independent reviews conducted to anchor process toward new agreements (Check-off)*
- *WGRF producer Board makes all final decisions*
- *Reports available to producers on all WGRF progress and activity*
- *Producer feedback encouraged and welcome any time*

Harvesting new varieties to drive Canada's success

The Wheat Check-off Fund

In 2004, farmers invested \$3.1 million in breeding programs for new wheat varieties.

Background

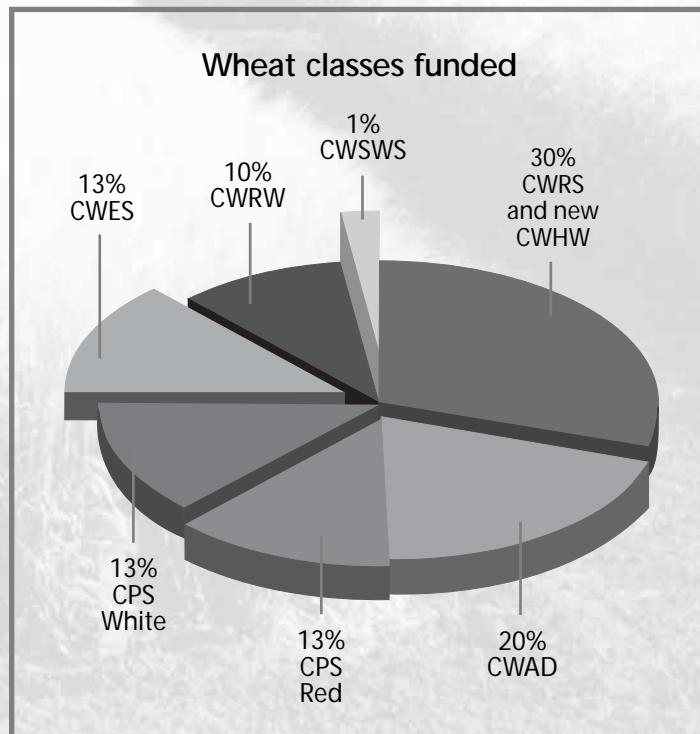
The Wheat Check-off Fund is the largest producer-supported fund for wheat breeding research in Western Canada.

The Fund is based on an annual check-off of \$0.20/tonne, deducted from Canadian Wheat Board final payments to producers. The Fund has generated over \$3 million annually for wheat breeding research. This has doubled the activity of breeding programs and has resulted in many new wheat varieties for producers - with higher yields, improved quality, greater disease resistance and other valuable traits.

The Check-off began in the 1993/94 crop year, set up by Bill C-50, an Act of Parliament, which also named Western Grains Research Foundation to administer the Wheat Check-off Fund and set provisions for opt out.

Breeding programs funded

- 73.5% Agriculture and Agri-Food Canada (AAFC)
- 20.8% University of Saskatchewan, Crop Development Centre (U of S CDC)
- 1.9% University of Manitoba (U of M)
- 1.9% University of Alberta (U of A)
- 1.9% Alberta Agriculture, Food and Rural Development (AAFRD)



Advisory Committee

Board decisions on wheat research funding are based on the advice of a Wheat Advisory Committee, comprised of half Foundation members and half representatives from the research and marketing community. Members in 2004 included:

- Bill Toews, Kane, Man., WGRF Board, Committee Chair
- Dr. Keith Degenhardt, Hughenden, Alta., WGRF Board Chair (*ex officio*)
- Maurice Fines, Fort St. John, B.C., WGRF Board
- Peter Pepneck, Vauxhall, Alta., WGRF Board
- Brian Otto, Warner, Alta., WGRF Board
- Gordon Flaten, Winnipeg, Man., Canadian Wheat Board
- Wilfred Harder, Lowe Farm, Man., Canadian Wheat Board, Board of Directors
- Dr. Pierre Hucl, Saskatoon, Sask., University of Saskatchewan
- Dr. Ron DePauw, Swift Current, Sask., AAFC - SPARC
- Dr. Ken Preston, Winnipeg, Man., Grain Research Laboratory, Canadian Grain Commission

Funding activity

The following chart shows funding activity in 2004 and how it compared to recent years. These seven points explain how to read each section of the chart.

1. Potential Check-off before opt out. This figure indicates the volume of CWB wheat deliveries and the potential Check-off dollars they represent. The mechanism of collecting the Check-off from CWB final payments to producers is efficient and allows WGRF to keep administrative costs low. However, it does not capture the growing volume of domestic feed wheat handled outside CWB.

2. Received by WGRF. Dollars collected from wheat producers participating in the Check-off are received by WGRF from CWB. The WGRF Board then annually approves the amount that will be allocated to wheat breeding programs. The Check-off level, the amount needed for breeding consistency, administrative costs and Reserve Fund levels all factor into the Board decision. The 2004 figure is lower because there was no CWB final payment on spring wheat due to unexpected marketing circumstances.

3. To/From Reserve Fund. This figure shows the amount of annual Check-off funding added to or withdrawn from the Wheat Check-off Reserve Fund, which was set up as a safeguard

against major fluctuations in the market. In early years, larger annual allocations were made to build up the reserve.

4. To wheat breeding. WGRF allocates Check-off funding to wheat breeding programs, based on long-term funding agreements that include breeding targets and other specifics. Year-to-year funding consistency is a major priority.

5. Opt-out percent. Rough estimate of the percentage of eligible producers who choose not to support wheat breeding research through the Check-off. Producers who complete a specific annual opt-out procedure by the August 31 deadline each year will not have the Check-off deducted from their CWB final payments.

6. Year-end Reserve Fund. Used to supplement the Check-off when annual grain marketings are low. When the Reserve Fund drops below \$4.8 million, dollars are added from that year's Check-off, based on specific guidelines.

7. Royalties received. As part of funding agreements with breeding institutions, WGRF receives a share of the royalties generated by Check-off funded varieties. The major jump in this figure indicates that farmer-supported wheat varieties are becoming widely used. WGRF has re-invested these royalty funds into further wheat breeding research.

WHEAT CHECK-OFF FUND ACTIVITY AND TRENDS

		1	2	3	4	5	6	7
Calendar Year	Crop Year	Potential Check-off (\$ Thousands)	Received by WGRF (\$ Thousands)	To/From Reserve (\$ Thousands)	To Wheat Breeding* (\$)	Opt-out Percent	Year-end Reserve (\$)	Royalties Received (\$)
2004	02-03	2,500	680	-2,679	3,118,520	8.16	4,252,038	437,731
2003	01-02	3,315	2,879	-	3,526,825	5.79	6,656,163	246,372
2002	00-01	3,525	3,109	-	3,337,681	5.03	6,312,326	231,468
2001	99-00	4,081	3,592	-	3,197,506	5.23	5,955,219	71,220
2000	98-99	3,483	3,040	-	3,050,098	5.84	5,624,656	32,321

Harvesting new varieties to drive Canada's success

New wheat varieties

Producers' annual Wheat Check-off Fund investment has supported in part more than 35 new varieties of wheat since the Fund began in 1993/94.

Developing a new wheat variety can take from seven to 10 years. As a result, most new lines supported by the Wheat Check-off Fund are only now emerging from the breeding pipeline, and more will continue to surface over the coming years. The following is a class-by-class listing of registered varieties that have been supported in part by the Wheat Check-off Fund. Years listed indicate year of registration.

Canada Western Red Spring

Infinity (2004). High-yielding, high protein variety with very strong overall performance. AAFC Swift Current.

CDC Go (2004). High-yielding, medium maturity variety with high test weight and intermediate disease resistance. U of S CDC.

CDC Osler (2004). High-yielding, medium-early maturity variety with standard height, targeted at Parkland production. U of S CDC.

Lillian (2003). Sawfly-resistant wheat with higher grain yield and protein potential than AC Abbey. AAFC Swift Current.

Lovitt (2002). Early maturing, leaf rust resistant AC Barrie-type with pre-harvest sprouting resistance. AAFC Swift Current.

Harvest (2001). High yielding variety with improved sprouting resistance. One day earlier maturity than the checks. AAFC Winnipeg.

Superb (2000). Very high-yielding semi-dwarf with short, strong straw and good sprouting resistance. AAFC Winnipeg.

CDC Bounty (1999). High yield potential and higher protein percentage than Neepawa. U of S CDC.

Alikat (1999). Adapted to acidic soils and agronomically similar to Neepawa. U of A.

AC Abbey (1998). First semi-dwarf, solid stemmed wheat in this class. AAFC Swift Current.

AC Intrepid (1997). High yield, early maturity, strong straw and very large kernels. AAFC Swift Current.

AC Splendor (1996). Very early maturity, very high protein and very good leaf rust resistance. AAFC Winnipeg.

AC Elsa (1996). Higher yield than AC Barrie, with high protein, and improved leaf spot resistance. AAFC Swift Current.

AC Cadillac (1996). High yield, high protein, large kernels, very high test weight. AAFC Swift Current.

Canada Western Hard White

Snowbird (2004). First variety of this new class, which offers preferred colour and higher flour extract. AAFC Winnipeg.

Kanata (2004). Similar to Snowbird, with slightly different quality profile. AAFC Winnipeg.

HY475 (2004). Earlier maturity and higher test weight than AC Vista. Seven percent higher yield than Snowbird. AAFC Swift Current.

HY476 (2004). Features new gene for resistance to common bunt and higher yield than Snowbird. AAFC Swift Current.

Canada Western Amber Durum

Strongfield (2004). Touted as a successor to AC Avonlea, with lower cadmium content, higher gluten strength, seven percent higher yield, slightly higher test weight and similar disease profile. AAFC Swift Current.

AC Napoleon (1999). Features low cadmium accumulation, along with higher yield and stronger gluten than AC Avonlea in the Black Soil Zone. AAFC Winnipeg.

AC Avonlea (1997). High yield, high protein, shorter and stronger straw than Kyle, with improved yellow colour and good quality. AAFC Swift Current.

AC Morse (1996). Improvements to yield, quality and gluten strength. AAFC Winnipeg.

Canada Prairie Spring White

AC 2000 (2000). Improved milling properties and gluten strength compared to AC Karma and AC Vista. AAFC Swift Current.

AC Vista (1996). First in class with sprouting resistance similar to red varieties. AAFC Swift Current.

Canada Prairie Spring Red

AC Crystal (1996). Much stronger gluten combined with good performance characteristics. AAFC Swift Current.

Canada Western Extra Strong

CDC Walrus (2004). Softer, easier-grinding wheat than Glenlea, with three to seven percent higher yield. U of S CDC.

CDC Rama (2002). Yield and maturity similar to Glenlea, with much higher protein content and improved disease resistance. U of S CDC.

AC Glenavon (1999). Slightly higher yield, earlier maturity and improved test weight compared to Glenlea. AAFC Winnipeg.

AC Corrine (1998). Superior sprouting resistance to Glenlea. AAFC Winnipeg.

Laser (1997). Higher yielding than Wildcat. U of A.

Canada Western Red Winter

Radiant (2004). High yielding variety with good drought tolerance and resistance to the wheat curl mite, which carries wheat streak mosaic. AAFC Lethbridge.

CDC Buteo (2002). Yield similar to CDC Osprey, with shorter straw than CDC Kestrel, and good lodging resistance. U of S CDC.

CDC Raptor (1999). High-yielding, winter hardy, strong strawed variety, with superior stem and leaf rust resistance. U of S CDC.

CDC Falcon (1998). First winter wheat for Western Canada with leaf and stem rust resistance. U of S CDC.

AC Bellatrix (1998). First winter wheat for Western Canada with common bunt resistance. AAFC Lethbridge.

AC Tempest (1997). Replacement for the southern Alberta variety AC Readymade, with higher flour yield. Has stronger straw, high protein and moderate bunt resistance. AAFC Lethbridge.

Tax credit for producers

Farmers around the world continue to gain recognition as major players in crops research funding. In Canada, a major signal of this recognition in recent years has been has been a federal tax credit now available to producers who invest in research.

As a result of the federal government extending the Scientific Research and Experimental Development (SR&ED) tax credit to producers, western Canadian wheat and barley producers are eligible to earn a tax

credit on the dollars they invest in research through the Wheat and Barley Check-off Funds.

For the 2004 tax year, 83 percent of the Wheat Check-off contributions and 80 percent of the Barley Check-off contributions are eligible for the tax credit calculation. Information on how to claim the tax credit for 2004 is available on the WGRF Web site, www.westerngrains.com.

Homegrown progress to capture new opportunities

The Barley Check-off Fund

In 2004, producers invested \$700,000 in breeding programs for new barley varieties.

Background

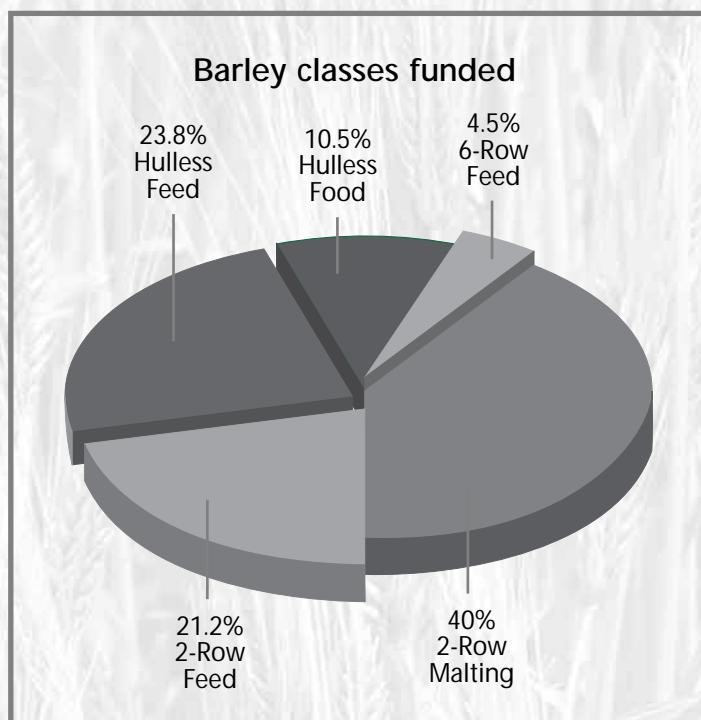
The Barley Check-off Fund is a major producer-supported fund for barley breeding research in Western Canada.

The Fund is based on an annual check-off of \$0.40/tonne, deducted from Canadian Wheat Board final payments to producers in Saskatchewan and Manitoba (Alberta barley is an exception, covered by a separate barley check-off administered by the Alberta Barley Commission.) The Fund has generated over \$600,000 annually for barley breeding research. As a result, barley breeding programs have doubled their capacity and produced many new barley varieties for growers, featuring everything from higher yield potential and greater disease resistance to superior quality.

The Check-off was set up by *Bill C-50*, an Act of Parliament, and began in the 1993-94 crop year. The Act also named Western Grains Research Foundation to administer the Barley Check-off Fund and set provisions for opt out.

Breeding programs funded

- 57% University of Saskatchewan Crop Development Centre (U of S CDC)
- 43% Agriculture and Agri-Food Canada, Brandon Research Centre (AAFC)



Advisory Committee

Board decisions on wheat research funding are based on the advice of a Barley Advisory Committee, comprised of half Foundation members and half representatives from the research and marketing community. Members in 2004 included:

- Alanna Hermanson, Standard, Alta., WGRF Board, Committee Chair
- Dr. Keith Degenhardt, Hughenden, Alta., WGRF Board Chair (*ex officio*)
- Dave Sefton, Broadview, Sask., WGRF Board
- Wayne Bacon, Kinistino, Sask., WGRF Board
- James Chateney, Red Deer, Alta., Canadian Wheat Board, Board of Directors
- Mike Brophy, Winnipeg, Man., Canadian Wheat Board
- Dr. Bill Legge, Brandon, Man., AAFC Brandon Research Centre
- Dr. Michael Edney, Winnipeg, Man., Grain Research Laboratory, Canadian Grain Commission
- Dr. Brian Rossnagel, Saskatoon, Sask., University of Saskatchewan
- Dr. Erin Armstrong, Winnipeg, Man., President and CEO, Brewing and Malting Barley Research Institute

Funding activity

The following chart shows funding activity in 2004 and how it compared to recent years. These seven points explain how to read each section of the chart.

1. Potential Check-off before opt out. This figure indicates the volume of CWB barley deliveries and the potential Check-off dollars they represent. The mechanism of collecting the Check-off from CWB final payments to producers is efficient and allows WGRF to keep administrative costs low. However, it does not capture the large volume of domestic feed barley handled outside CWB.

2. Received by WGRF. Dollars collected from barley producers participating in the Check-off are received by WGRF from CWB. The WGRF Board then annually approves the amount that will be allocated to barley breeding programs. The Check-off level, the amount needed for breeding consistency, administrative costs and Reserve Fund levels all factor into the Board decision. The 2004 figure is lower due to lower volumes of malting barley moving through the CWB system.

3. To/From Reserve Fund. This figure shows the amount of annual Check-off funding added to or withdrawn from the Barley Check-off Reserve Fund, which was set up as a safeguard

against major fluctuations in the market. In early years, larger annual allocations were made to build up the reserve.

4. To barley breeding. WGRF allocates Check-off funding to barley breeding programs, based on long-term funding agreements that include breeding targets and other specifics. Year-to-year funding consistency is a major priority.

5. Opt-out percent. Rough estimate of the percentage of eligible producers who choose not to support barley breeding research through the Check-off. Producers who complete a specific annual opt-out procedure by the August 31 deadline each year will not have the Check-off deducted from their CWB final payments.

6. Year-end Reserve Fund. Used to supplement the Check-off when annual grain marketings are low. When the Reserve Fund drops below \$1.1 million, dollars are added from that year's Check-off, based on specific guidelines.

7. Royalties received. As part of funding agreements with breeding institutions, WGRF receives a share of the royalties generated by Check-off funded varieties. The rise in this figure shows that farmer-supported barley varieties are becoming widely used. WGRF has re-invested these royalty funds into further barley breeding research.

BARLEY CHECK-OFF FUND ACTIVITY AND TRENDS

		1	2	3	4	5	6	7
Calendar Year	Crop Year	Potential Check-off (\$ Thousands)	Received by WGRF (\$ Thousands)	To/From Reserve (\$ Thousands)	To Barley Breeding* (\$)	Opt-out Percent	Year-end Reserve (\$)	Royalties Received (\$)
2004	02-03	234	201	-883	699,963	8.16	725,923	19,198
2003	01-02	629	536	-	723,291	5.79	1,546,363	9,000
2002	00-01	760	653	-	646,049	5.03	1,463,671	8,665
2001	99-00	824	715	-	636,363	5.21	1,378,118	1,924
2000	98-99	592	506	-125	632,563	5.84	1,300,962	902

Homegrown progress to capture new opportunities

New barley varieties

Producers' annual Barley Check-off Fund investment has supported in part more than 20 new varieties of barley since the Fund began in 1993/94.

Developing a new barley variety can take from seven to 12 years. As a result, most new lines supported by the Barley Check-off Fund are only now emerging from the breeding pipeline, and more will continue to surface over the coming years. The following is a type-by-type listing of registered varieties that have been supported in part by the Barley Check-off Fund. Years listed indicate year of registration.

Feed and forage

Rivers (2003). Two-row hulled. Early maturing with moderate yields for the eastern Prairies. Excellent combination of disease resistance. AAFC Brandon.

CDC Trey (2002). Two-row hulled. High yielding for the eastern Prairies. Very strong straw, early maturity and very high test weight - higher than CDC Dolly. U of S CDC.

CDC Helgason (2000). Two-row hulled. High-yielding, heavy and plump, with disease resistance for the eastern Prairies. U of S CDC.

AC Ranger (2000). Six-row forage. High grain yield potential, good disease resistance for the eastern Prairies and straw strength. AAFC Brandon.

CDC McGwire (1999). Two-row hulless. Features combination of good yield, threshability and disease resistance for Western Canada. U of S CDC.

CDC Speedy (1999). Two-row hulless. Features very early maturity for delayed seeding situations. U of S CDC.

CDC Bold (1999). Two-row semi-dwarf hulled. Improved quality, straw strength. U of S CDC.

CDC Freedom (1998). Two-row hulless. Improved threshability, straw strength and net blotch and FHB resistance. U of S CDC.

AC Bacon (1998). Six-row hulless. High yield potential and good disease resistance package. AAFC Brandon.

CDC Gainer (1997). Two-row hulless. Low beta-glucan and good straw strength. U of S CDC.

CDC Fleet (1996). Two-row hulled. Early maturity, good grain quality and strong straw. U of S CDC.

AC Rosser (1996). Six-row feed barley with good yield and disease resistance. AAFC Brandon.

AC Hawkeye (1996). Six-row hulless feed barley with good plumpness, threshability and yield. AAFC Brandon.

Malting and brewing

Calder (2002). Two-row, particularly well adapted to Saskatchewan. High yielding. Resistance to loose smut, moderate resistance to stem rust, net blotch, surface-borne smuts and FHB. AAFC Brandon.

Newdale (2001). Two-row, outyields Harrington by 24 percent across all soil zones. Shorter and stronger straw than Harrington. Moderate resistance to spot blotch. AAFC Brandon.

CDC Select (2000). Two-row malting barley with 11 percent higher yield potential than Harrington across the Prairies, and with quality tailored to North American brewers. Good kernel weight, plumpness, resistance to lodging, net blotch and stem rust.

CDC Copeland (1999). Two-row featuring high yield, good plumpness, test weight and maturity. A unique malting quality profile. Moderate net blotch and stem rust resistance. U of S CDC.

AC Bountiful (1999). Two-row with high yield, good resistance to the smuts, moderate resistance to net blotch and FHB, and malting quality similar to Harrington. AAFC Brandon.

Food potential

CDC Fibar (2003). Two-row waxy hulless targeted at food markets. Features nearly 100 percent amylopectin starch, high levels of beta-glucan and acid extract viscosity. U of S CDC.

CDC Rattan (2003). Two-row waxy hulless. Features high test weight and several improvements over CDC Candle, particularly in agronomic performance, disease resistance, levels of beta-glucan and acid extract viscosity, and 95 percent amylopectin starch. U of S CDC.

CDC Alamo (1999). Two-row specialty waxy hulless barley with pure amylopectin starch. U of S CDC.

Innovative projects to strengthen crop production

The Endowment Fund

Producer fund invested \$394,505 in crops research in 2004.

Background

The Endowment Fund began in 1983 with \$9 million in producer dollars turned over by the federal government from the discontinued Prairie Farm Assistance Act, a forerunner of today's crop insurance program.

Each year, WGRF allocates the Fund's annual interest to crop research projects that benefit the western grains industry. The Endowment Fund is relatively small compared to today's mega research funds, but its long-term production has been formidable. The Fund has provided over \$18 million to more than 200 crop research projects since its inception and has filled an important niche, often supporting research that wouldn't otherwise receive adequate funding.

Advisory Committee

WGRF Board decisions are based on the advice of an Endowment Fund Advisory Committee, comprised of half

Foundation members and half representatives from research, marketing and industry.

- Peter Pepneck, Vauxhall, Alta., WGRF Board, Committee Chair
- Dr. Keith Degenhardt, Hughenden, Alta., WGRF Board (ex officio)
- Dr. John Culley, Ottawa, Ont., AAFC
- Dr. Rachael Scarth, Winnipeg, Man., University of Manitoba
- Dr. Dean Spaner, Edmonton, Alta., University of Alberta
- Dr. Bryan Harvey, Saskatoon, Sask., University of Saskatchewan
- Mike McAvoy, Regina, Sask., Canada Committee on Crop Production Services
- Brian Otto, Warner, Alta., WGRF Board
- Barbara Podhorodeski, Shipman, Sask., WGRF Board

Managing transportation cap funding

Based on 2004 activity, WGRF has received over \$300,000 in excess railway revenue, the first allocated under new Canada Transportation Act legislation passed in 2001. The funds will be added to the principal of the WGRF-administered Endowment Fund, which supports a variety of crops research to benefit western Canadian farmers.

"The federal government, with input from the railways and various agriculture industry players, identified the WGRF Endowment Fund as a good place for these dollars, due to low administrative cost, strong impact and the ability to benefit all western Canadian crop producers equally," says Lanette Kuchenski, WGRF

Executive Director. "The WGRF Board agreed to accept this arrangement and, as it does with all Endowment Fund investments, to invest the funds generated in crop research projects deemed of greatest investment value and benefit to crop producers."

Delivering excess railway funds directly back to individual producers was deemed unfeasible and, along with other options considered, was predicted to carry costs that would severely cut or eliminate entirely the funds available to benefit producers, says Kuchenski. "With the low-cost administration already in place for the Endowment Fund, railways can simply provide a direct payment to WGRF and ensure nearly the full amount is added to the Fund principal."

New projects to begin in 2005

		2005 \$	2006 \$	2007 \$	Total \$
2005-01	Identifying and incorporating resistance to Fusarium Head Blight (FHB) in oat, Dr. Andy Tekauz, AAFC Winnipeg.	42,500	42,500	42,500	127,500
2005-02	Intellectual property rights and the future of crop breeding in Canada, Dr. Richard Gray, U of S CDC.	20,000	20,000	20,000	60,000
2005-03	Genetics and genomics of yellow pigment content, an important quality trait in durum wheat, Dr. Curtis Pozniak, U of S CDC.	39,500	39,500	42,500	121,500
2005-04	Flea beetle and drought resistance in canola, Dr. Margaret Gruber, U of S CDC.	25,500	26,350	27,600	79,450

Ongoing projects

		2004 \$	2005 \$	2006 \$
2004-01	Efficient, sustainable wheat improvement through genotyping and informatics resources, Dr. Daryl Somers, AAFC Winnipeg.	67,000	67,000	67,000
2004-02	Improving integrated crop management by reducing herbicide application rates, Dr. Lloyd Dosdall, U of A.	45,000	45,000	45,000
2002-01	Assembling the best chickpea canopy strategy for different production zones. Dr. Rosalind Ball, U of S CDC.	28,545	26,955	-
2002-02	Helping field pea producers against Mycosphaerella blight. Dr. Bob Conner, AAFC Morden.	28,600	29,200	-
2002-03	Investigate the role of self-regenerating medic legume plants for late-season N-fixation and weed suppression. Dr. Martin Entz, U of M.	30,000	30,000	-
2002-04	Developing canola with enhanced deterrence to flea beetle feeding. Dr. Margaret Gruber, AAFC Saskatoon.	32,100	33,850	-
2002-05	Developing a DNA map of durum end-use quality traits. Dr. Ronald Knox, AAFC Swift Current.	28,000	28,000	-
2002-06	Improving the efficiency of multi-factor, multi-location agronomic experiments. Dr. Guy Lafond, AAFC Indian Head.	14,000	14,000	-
2002-07	Developing a quicker test to measure beta-glucan levels in cereal crops. Dr. Christof Rampitsch, AAFC Winnipeg.	33,000	35,000	-
2003-01	Biological control of cabbage root maggots in canola using parasitic beetles. Dr. Neil Holliday, U of M.	24,000	24,000	-
2003-02	Developing bioactive edible films and coatings from yellow field peas to improve food quality and safety. Dr. Jung Han, U of M.	38,000	37,000	-
2003-03	Application of plant tissue culture to improvement of tolerance to Fusarium Head Blight toxins in barley. Dr. William Legge, AAFC Brandon.	33,000	33,000	-
2003-04	Development of pheromone-based control for the orange wheat blossom midge. Dr. Gerhard Gries, Simon Fraser University.	24,752	24,752	-

Farmers' investment

Financial summary

WGRF is committed to open reporting to producers through its member organizations. Complete financial information is provided each year to each WGRF member organizations. Below is an overview of the core information. The WGRF office welcomes questions from Western Canadian crop producers at any time.

	2004 \$	2003 \$	2002 \$	2001 \$	2000 \$
ASSETS					
Cash and other investments	329,434	783,029	1,782,025	1,707,087	1,432,846
Total	14,526,592	17,331,520	16,939,690	17,000,991	16,311,597
Net	14,856,026	18,114,549	18,721,715	18,708,078	17,744,443
LIABILITIES					
Cash advances	740,898	960,754	1,047,886	1,083,879	863,852
Accounts & grants payable	32,892	15,526	15,873	8,814	25,095
Total	773,790	976,280	1,063,759	1,092,693	888,947
EQUITY					
Capital	9,066,972	9,066,972	9,066,972	9,066,972	9,066,972
Endowment	37,303	151,505	348,925	561,309	613,577
Wheat	4,252,038	6,647,506	6,767,212	6,561,361	5,879,210
Barley	725,923	1,272,286	1,474,847	1,425,743	1,295,737
Total	14,082,236	17,138,269	17,657,956	17,615,385	16,855,496
Net	14,856,026	18,114,549	18,721,715	18,708,078	17,744,443
ENDOWMENT FUND Operating					
Revenue expenditures	319,115	383,339	512,302	714,251	812,311
Research grants	394,505	534,780	633,605	675,791	718,856
Operating	38,812	45,979	91,081	90,728	101,415
Total	433,317	580,759	724,686	766,519	820,271
Net	(114,202)	(197,420)	(212,384)	(52,268)	(7,960)
WHEAT FUND Operating					
Revenue expenditures	1,104,313	3,351,117	3,393,960	3,758,522	3,152,895
Research grants	3,118,520	3,089,094	3,106,195	3,126,286	3,017,768
Royalties	417,729	437,731	231,468	71,220	32,321
Operating	238,573	287,835	207,553	209,428	185,060
Total	3,774,822	3,814,660	3,545,216	3,406,934	3,235,149
Net	(2,670,509)	(463,543)	(151,256)	351,588	(82,254)
BARLEY FUND Operating					
Revenue expenditures	262,049	560,601	669,698	744,441	515,572
Research grants	699,963	704,093	632,093	634,409	632,563
Royalties	45,112	19,198	13,956	1,954	902
Operating	126,273	122,563	60,098	55,228	55,207
Total	871,348	845,854	706,147	691,591	688,672
Net	(609,299)	(285,253)	(36,449)	52,850	(173,100)
COMBINED FUNDS Operating					
Revenue expenditures	1,685,477	4,295,057	4,575,960	5,217,214	4,480,778
Research grants	4,212,988	4,327,967	4,371,893	4,436,486	4,369,187
Royalties	462,841	456,929	245,424	73,174	33,223
Operating	403,658	456,377	358,732	355,384	341,682
Total	5,079,487	5,241,273	4,976,049	4,865,044	4,744,092
Net	(3,394,010)	(946,216)	(400,089)	352,170	(263,314)

Communications

Information for producers

Producers can access all reports and information on the WGRF Web site, www.westerngrains.com.

Key tools

In today's complex, fast-changing world, information is critical to successful investment strategies in any area, and grains research is no exception. That's why WGRF delivers a range of high-quality reports and timely information releases to help western crop producers keep up to date on research progress, WGRF business activity and issues important to farmers' role as research investors.

This effort includes a variety of information tools:

- News and information releases.** These deliver the latest updates on Foundation activity and progress, distributed regularly throughout the year. Many of the releases are reprinted in local newspapers, industry newsletters and publications, and are broadcast on local radio stations.

- Industry Report newsletter.** This four-page newsletter discusses major issues and developments shaping Western Grains Research Foundation.

- Western Grains Research Magazine.** This innovative Web-based magazine is updated monthly with articles that cover "Ideas and issues for farmer research investors." It is available at www.westerngrains.com, and short versions of key articles are also delivered as news releases.

- Grain Matters insert.** *Grain Matters* - a Canadian Wheat Board publication that goes to all CWB permit book holders - included a special edition of *Industry Report* in one of its 2004 editions. This report included an update on key Foundation developments and an overview of research progress. The Foundation has produced a *Grain Matters* insert the past several years, which reaches producers directly.

- Research Reports.** These short, easy-to-read summaries of the over 200 research projects funded by the Endowment Fund since 1983 are available on the WGRF Web site.

- Annual Report.** This overview of activities and fiscal information from the Foundation is distributed to member organizations, media, extension and others. This publication

is also available on the Web site and copies are available free-of-charge to any western producer.

- Special Reports.** These Foundation-sponsored publications provide independent reports on topics and issues important to farmer research funding. These reports are available through the Foundation Web site or directly from the Foundation office.

- Web site:** www.westerngrains.com. This is the fastest way for farmers to get complete, updated information on the Foundation and farmer-funded research progress. It features sections on progress with the Wheat and Barley Check-off Funds - including descriptions of the latest farmer-supported wheat and barley varieties and an overview of who's doing what in research. The site also provides a section with reports on all crop

research projects supported by the Endowment Fund. Background on the Foundation is also provided, along with a range of other key information.

All of the above WGRF information is archived on the Web site.

Contact WGRF

Overall, WGRF emphasizes that effective communications is a two-way process, says Keith Degenhardt, WGRF Chair. Over the past year, WGRF has invited specific producer feedback on the process toward new Check-off funding agreements and on preparing the Endowment Fund for the future. It continues to invite specific producer feedback on key issues and encourages general input on any aspect of WGRF business.



Farmer funded, farmer directed.

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