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# 2005 Annual Report

to Farmer Research Investors



Western  
Grains  
Research  
Foundation

Farmer funded, farmer directed.

# GETTING RESULTS IN FARMER HANDS

Chairman's Report on farmer funded research progress in 2005, from Hughenden, Alta., producer Dr. Keith Degenhardt.



When farmers invest in research through Western Grains Research Foundation (WGRF), the focus of this organization is getting them the biggest bang for the buck possible.

That means investing in research that delivers

high returns. With 10 years of investment in wheat and barley breeding under our belt, WGRF commissioned an independent study to determine the return on investment to farmers who support variety development through the Wheat and Barley Check-off Funds.

The study, conducted by leading agricultural economists, showed strong payback. Every dollar invested in wheat breeding returned a minimum \$4 to the farmer and every dollar invested in barley breeding returned a minimum \$12. (The barley figure is higher because there is less barley research and fewer barley acres).

Bang for the buck also means funding research, not administration. In 2005, administrative costs for the Wheat and Barley Check-off Funds continued a long standing trend of remaining at less than 10 percent of operating budget, meaning the funding went where it should – to research that benefits producers.

Most of all, investment success means delivering results that farmers actually use and benefit from. Variety survey results from 2005 show greater than 50 percent of western Canadian wheat and barley acreage was seeded to varieties developed with WGRF Check-off investment. These varieties yield higher, deliver better quality, and withstand a larger number of disease, insect and other agronomic pressures.

As an organization that is funded and directed by farmers, we're proud of these accomplishments, including those achieved through the many crop research projects supported by the Endowment Fund. Producers have become major players in crop research funding.

They are also driving substantial progress and ensuring a strong farmer voice in research.

At the same time we also realize there's a lot of work ahead. In a period of challenging times, research is more important than ever to help farmers keep competitive. It's something we as farmers can look to as a reliable, high-return investment, and as one of our most powerful ways to build a stronger future. New Check-off funding agreements, established during 2005, provide an updated business framework to meet today's needs and create new opportunities.

We also need to continually focus on minimizing costs for producers. That's a major focus of the producers on the WGRF Board, as they work to represent the interests of farmers across Western Canada in the research area. The WGRF Board is made up of a representative from each of the Foundation's 18 member organizations, including the major commodity organizations representing wheat, barley, oat, flax, pulse and canola; general farm organizations; former co-op grain handlers; Agriculture and Agri-Food Canada and the Canadian Wheat Board.

With poor harvest conditions in many areas in recent years, farmers are noticing higher seed prices. But seed costs for WGRF-backed cereal varieties are well below seed costs for varieties of other crops. In addition, the WGRF Board has strongly supported broad general distribution of varieties, made available as efficiently and cost effectively as possible to all producers who may wish to use them. The lone exception on availability has been when dealing with varieties for niche markets or new opportunities, where controlled production is necessary to support market development efforts.

Overall, the ultimate success of this organization rests with individual farmers. If you're a crop producer in Western Canada, WGRF is your organization. We invite you to review the progress and activity outlined in this *Annual Report*, and we welcome your questions and comments directly at any time.

## KEY DEVELOPMENTS IN 2005

Here are some of the key developments in 2005. Further details are in this report.

### Top new varieties

A range of superior new wheat and barley varieties were both developed and made commercially available in 2005, following years of breeding work funded by the Wheat and Barley Check-off Funds. All have strong packages of traits that result in better results in the field and higher returns in the marketplace. More on page eight (wheat) and 12 (barley).

### Signing of new Check-off agreements

The stage is set for a new era of long-term Check-off progress, as WGRF renewed its long-term Wheat and Barley Check-off funding agreements with research institutions during 2005. More on page four.

### New Check-Off rates

Rates for the Wheat and Barley Check-off were increased effective for the 2005/06 crop year, to provide additional research funding for the development of new wheat and barley varieties. The new rates will be \$0.30/tonne (less than one cent per bushel) for wheat and \$0.50/tonne (one cent per bushel) for barley, which will help the WGRF-funded breeding effort keep up with inflationary costs and strengthen breeding capacity for the future. This is the first rate increase since the Check-off was implemented 10 years ago.

### Innovative projects

The Endowment Fund added to the more than 200 crop research projects it has supported since 1983, with the approval of a new project to begin in 2006 that will continue the Fund's tradition addressing major production issues. More on page 13.

### Tax credit for farmers

Western Canadian wheat and barley growers are eligible to receive the Scientific Research and Experimental Development (SR&ED) tax credit on their investment in research through the Wheat and Barley Check-off Funds. More on page nine.

### Latest updates, reports for producers.

New research to benefit farmers, key issues for farmer research investors and latest updates on WGRF activity are all delivered regularly through WGRF's communications effort. More on page 16.

## CONTACT US

Most important, WGRF encourages farmers to visit the WGRF Web site, [www.westerngrains.com](http://www.westerngrains.com), for more information and further updates. Questions, comments and suggestions are also welcome directly to the Foundation office.

### Western Grains Research Foundation 2005 Board of Directors

\*Keith Degenhardt, Chairman. Wild Rose Agricultural Producers  
\*Dave Sefton. Sask. Flax Development Commission  
\*Brian Otto. Alberta Winter Wheat Producers  
\*Rob Pettinger. Agricore United  
Barb Podhorodeski. Western Pulse Growers Association  
Robert Anderson. Prairie Oat Growers Assn. Inc.  
Wayne Bacon. Canadian Canola Growers Assn.  
Vic Bruce. Saskatchewan Wheat Pool  
Ray Demong. National Farmers Union  
Don Dewar. Keystone Agricultural Producers  
Grant Dyck. Western Canadian Wheat Growers Association.  
Maurice Fines. BC Grain Producers Association  
Larry Littman. Canadian Seed Growers Association  
Ken McBride. Agricultural Producers Assn. of Sask.  
Dr. Steve Morgan Jones. Agriculture and Agri-Food Canada  
Allen Oberg. CWB Board of Directors  
Peter Pepneck. Alberta Soft Wheat Producers Commission.  
Mel Stickland. Western Barley Growers Association  
\*\*Lanette Kuchenski. WGRF office.

\*Executive members

\*\*Non-voting member

### Key Report Sections

- Wheat Check-off Fund, page six
- Barley Check-off Fund, page 10
- Endowment Fund, page 13
- Financial summary, page 15

# MANAGING WGRF BUSINESS

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



The purpose of Western Grains Research Foundation (WGRF) is to administer research funds for the benefit of western Canadian farmers and their industry.

Doing that job effectively requires a strong framework for administrative efficiency, planning and accountability. That's what WGRF aims for in managing business activity for the Wheat and Barley Check-off Funds and the Endowment Fund.

## WHEAT AND BARLEY CHECK-OFF

The Wheat and Barley Check-off Funds are the major funding sources administered by WGRF. Both are derived from a producer check-off, deducted from Canadian Wheat Board final payments to producers. Since its inception 10 years ago, on through to the 2004/05 crop year, the check-off level has been \$0.20/tonne for wheat and \$0.40/tonne for barley.

WGRF allocates Wheat and Barley Check-off Funds to research institutions for use in wheat and barley breeding programs, where they support the development of new varieties of those crops with a range of improvements. Targeted benefits for that investment included higher yields, better quality, stronger disease and pest resistance, improved agronomic traits and characteristics for new market opportunities.

Investment of the Funds is carried out according to long-term agreements negotiated between WGRF and the research institutions funded. Those agreements outline how the funds are to be used and the goals to be achieved. They also include several key provisions to ensure accountability and protect the interests of farmers as research investors.

## NEW CHECK-OFF AGREEMENTS

During 2005, the major item dominating WGRF's business agenda was the implementation of new long-term Check-off funding agreements. Until this past year, Check-off funding was based on 10-year agreements established when the Check-off began.

The launch of these agreements was the culmination of several years of review, planning and negotiations, all specific to the new agreements process. This was in addition to WGRF's established review and advisory process, which is ongoing during every year of Check-off Fund investment.

The new agreements process involved many considerations. This included 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. It also included evaluating how best to deal with a range of issues related to the ownership of crop genetics and the role of farmers as investors in research.

WGRF's two Check-off advisory teams – the Wheat Check-off Advisory Committee and Barley Check-off Advisory Committee – played a major role in the planning process. These committees are made up half of farmers from the WGRF Board and half of research, marketing and grain quality experts.

The process also included two independent reviews, one for the Wheat Check-off Fund and one for the Barley Check-off Fund, conducted by two expert teams. It also involved broad industry consultation, including farmer input, with overall direction and final decision making handled by the 18-member WGRF Board.

Countless draft agreements were reviewed and many face-to-face meetings occurred before the WGRF Board approval was given to sign the new breeding agreements.

The result of this period of review and planning are new agreements that set the stage for a new generation of

Check-off Funds progress. They set in place work plans, breeding objectives and financial commitments to ensure the long-term continuation of wheat and barley germplasm and varietal breeding programs, while also including key provisions to protect farmers' interests as research investors.

## RENEWED PARTNERSHIPS

The new agreements represent a renewal of WGRF's two core long-term partnerships, with Agriculture and Agri-Food Canada and the University of Saskatchewan's Crop Development Centre, which will account for the vast majority of Check-off-funded research activity. The University of Manitoba, the University of Alberta and Alberta Agriculture, Food and Rural Development will also receive a portion of funds for targeted efforts.

These renewed partnerships are based on a strong track record of success and the commitment of all parties to continue working together to keep Canada competitive in wheat and barley. The initial 10-year Check-off funding agreements with these institutions contributed to the development of more than 50 new varieties, many of which have become widely accepted by farmers and have helped to strengthen Canada's wheat and barley industry.

## RETURN ON INVESTMENT STUDY

With a decade of funding completed and the transition to new long-term agreements forthcoming, WGRF commissioned an independent Return On Investment (ROI) study to determine the return on investment to farmers who support variety development through the Wheat and Barley Check-off Funds.

The ROI study found that every dollar invested in wheat development returns a minimum \$4 to the farmer and every dollar invested in barley returns a minimum \$12. (The barley figure is higher because there is less barley research.)

The study re-confirmed what many in agriculture have long known - that crop development research delivers tremendous investment value to farmers and their industry. More information on the ROI study is available on the WGRF Web site, [www.westerngrains.com](http://www.westerngrains.com).

## STRENGTHENING CHECK-OFF LEVELS

With the positive returns shown through the ROI study, WGRF committed to maintaining strong producer investment in this area, by seeking a modest increase in the wheat and barley check-off rates.

The new rates for the WGRF Check-off will be \$0.30/tonne (less than one cent per bushel) for wheat and \$0.50/tonne

(one cent per bushel) for barley, effective for the 2005/06 crop year.

With previous check-off rates having remained the same for a full decade, the main reason for an increase was to keep up with inflation and ensure the reserve accounts remain at the legislated minimum amount. Despite challenging times for farmers, the increase was needed to ensure strong enough levels to maintain the high returns producers receive over the long-term. The rate increase was backed by unanimous support by the 18 member organizations of WGRF.

## ENDOWMENT FUND INNOVATION

Planning for a new generation has also been the focus for administering the Endowment Fund, the original core fund of WGRF.

The annual earnings from the \$9 million Endowment Fund have been invested into crop research projects for the benefit of western Canadian grain producers and the industry. Since its inception, the Endowment Fund has provided \$18 million to over 200 crop research projects and has filled an important niche, often supporting research that wouldn't otherwise receive adequate funding.

Lower interest rates, inflation and a low risk investment policy have reduced the Endowment Fund's financial capacity over the past five years. At its peak, the Fund generated approximately \$800,000 annually, but investment income has been reduced by approximately half. The income reductions spawned the restructuring of research operational expenditures in 2003 and the implementation of a capital growth strategy, which reinvests 30 percent of the income back into the fund itself. Today, it has rebounded substantially, but remains significantly below activity levels of peak years.

The WGRF Board also uses other options to grow this research fund, such as charitable donations. 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.

## LEARN MORE

More information on each of the funds is available in the major sections of this Annual Report, and key financial details are provided on page 15. We invite producers to learn more about all aspects of WGRF activity – in this report, on the WGRF Web site or by contacting us directly – and we welcome comments, questions or suggestions at any time.

# THE WHEAT CHECK-OFF FUND

Farmers invested \$3.16 million in breeding programs for new wheat varieties in 2005.

## BACKGROUND

The Wheat Check-off Fund is the largest producer-supported fund for wheat breeding research in Western Canada. The Fund has been based on an annual check-off of \$0.20/tonne, deducted from Canadian Wheat Board final and contract payments to producers. (The rate has been increased to \$0.30/tonne, effective for the 2005/-6 crop year.)

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

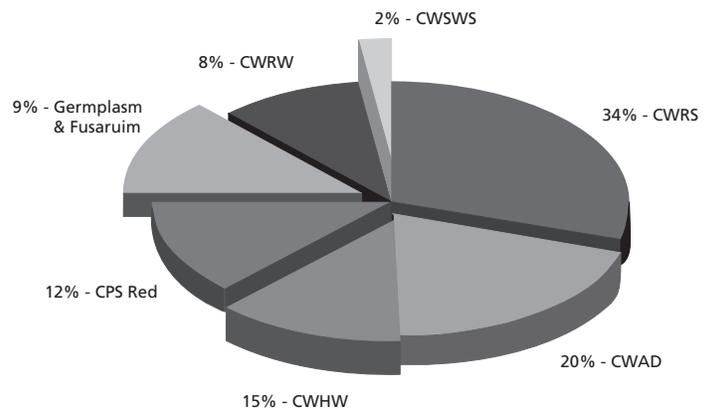
- 71.6% Agriculture and Agri-Food Canada (AAFC)
- 19.5% University of Saskatchewan, Crop Development Centre (U of S CDC)
- 1.9% University of Manitoba (U of M)
- 1.9% University of Alberta (U of A)
- 1.9% Alberta Agriculture Food and Rural Development, Lacombe (AAFRD)
- 3.2% Fusarium Nursery, University of Manitoba (U of M)

## 2005 ADVISORY COMMITTEE

Board decisions on wheat research funding are based on the advice of a Wheat Advisory Committee, comprised of half representatives from research, marketing and industry.

- **Brian Otto**, Committee Chair, Warner, Alta., WGRF Board
- **Grant Dyck**, Niverville, Man., WGRF Board
- **Maurice Fines**, Fort St. John, B.C., WGRF Board
- **Peter Pepneck**, Vauxhall, Alta., WGRF Board
- **Dr. Keith Degenhardt**, Hughenden, Alta., WGRF Board (ex-officio)
- **Graham Worden**, Winnipeg, Man., Canadian Wheat Board
- **Bill Toews**, Kane, Man., Canadian Wheat Board, Board of Directors
- **Dr. Ron DePauw**, Swift Current, Sask., Agriculture and Agri-Food Canada
- **Dr. Pierre Hucl**, Saskatoon, Sask., University of Saskatchewan Crop Development Centre
- **Nancy Edwards**, Winnipeg, Man., Canadian Grains Commission - Grain Research Laboratory
- **Gordon Carson**, Winnipeg, Man., Canadian International Grains Institute (Representing Canadian Millers Association)

## WHEAT CLASSES FUNDED



## FUNDING ACTIVITY

The following chart shows funding activity in 2005 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 and contract 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.

**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 and contract 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 remitted.** 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

		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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 Remitted (\$)
2005	03-04	3,091	2,965	-370	3,160,266	4.07	4,489,265	165,066
2004	02-03	2,500	680	-2,679	3,118,520	8.16	4,252,038	417,729
2003	01-02	3,315	2,879	–	3,526,825	5.79	6,647,506	437,731
2002	00-01	3,525	3,109	–	3,337,681	5.03	6,767,212	231,468
2001	99-00	4,081	3,592	–	3,197,506	5.23	6,561,361	71,220

# 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

**PT211 (2005).** Features high grain yield combined with reduced FHB susceptibility and early maturity. Particularly well suited to the Peace River Region and Parkland Region, where it respectively yielded 14.8 percent and 8.4 percent higher than AC Splendor. AAFC Swift Current.

**PT425 (2005).** Very early maturing wheat - half a day earlier than AC Splendor. Good leaf rust and loose smut resistance. Improved grade protection compared to top varieties grown in the Peace River Region and Parkland Region. AAFC Winnipeg.

**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.

## CANADA WESTERN SOFT WHITE SPRING

**Bhishaj (2004).** Outyields acreage leader AC Reed by nine percent, features stronger adult-plant resistance to the new race of stripe rust, and carries a solid overall agronomic and quality package. AAFC Lethbridge.

### TAX CREDIT FOR PRODUCERS

Producers continue to be eligible for a tax credit on the dollars they invest in research through the Wheat and Barley Check-off Funds.

The Scientific Research and Experimental Development (SR&ED) tax credit was made eligible to producers following years of work by WGRF and other farmer research funding organizations.

For the 2005 tax year, 90 percent of the Wheat Check-off contributions and 88 percent of the Barley Check-off contributions are eligible for the tax credit calculation. Information on how to claim the tax credit for 2005 is available on the WGRF Web site, [www.westerngrains.com](http://www.westerngrains.com)

# THE BARLEY CHECK-OFF FUND

Producers invested just over \$700,000 in breeding programs for new barley varieties in 2005.

## BACKGROUND

The Barley Check-off Fund is a major producer-supported fund for barley breeding research in Western Canada. The Fund has been based on an annual check-off of \$0.40/tonne, deducted from Canadian Wheat Board final and contract payments to producers in Saskatchewan and Manitoba. (The rate has been increased to \$0.50/tonne, effective for the 2005/6 crop year.) Alberta barley is not covered by the WGRF check-off, however it is 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

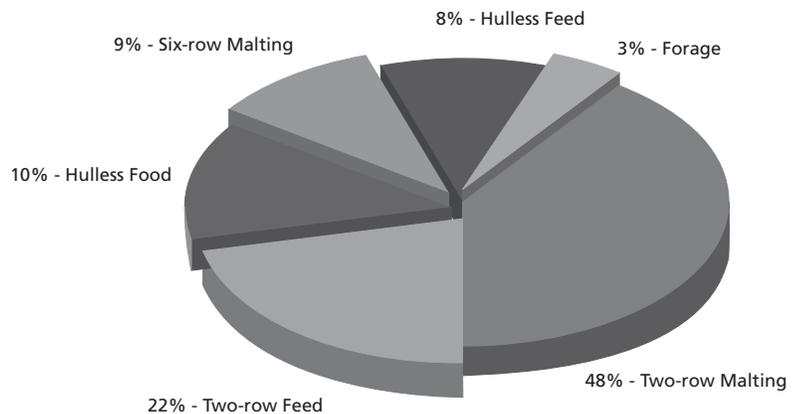
- 50% University of Saskatchewan Crop Development Centre (U of S CDC)
- 50% Agriculture and Agri-Food Canada, Brandon Research Centre (AAFC)

## 2005 ADVISORY COMMITTEE

Board decisions on barley research funding are based on the advice of a Barley Advisory Committee, comprised of half representatives from research, marketing and industry.

- **Wayne Bacon**, Committee Chair, Kinistino, Sask, WGRF Board
- **Dave Sefton**, Broadview, Sask., WGRF Board
- **Ken McBride**, Kindersley, Sask., WGRF Board
- **Larry Littman**, Saltcoats, Sask., WGRF Board
- **Dr. Keith Degenhardt**, Hughenden, Alta., WGRF Board (ex-officio)
- **Michael Brophy**, Winnipeg, Man., Canadian Wheat Board
- **Erin Armstrong**, Winnipeg, Man., Brewing and Malting Barley Research Institute
- **James Chatenay**, Red Deer, Alta., Canadian Wheat Board, Board of Directors
- **Michael Edney**, Winnipeg, Man., Canadian Grains Commission - Grain Research Laboratory
- **Dr. Bill Legge**, Brandon, Man., Agriculture and Agri-Food Canada
- **Dr. Brian Rossnagel**, Saskatoon, Sask., University of Saskatchewan Crop Development Centre

## BARLEY CLASSES FUNDED



# FUNDING ACTIVITY

The following chart shows funding activity in 2005 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 and contract 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.

**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 remitted.** 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 Remitted (\$)
2005	03-04	771	714	-89	707,394	7.3	771,590	28,394
2004	02-03	234	201	-883	745,075	8.16	1,546,363	45,112
2003	01-02	629	536	-	723,291	5.79	1,272,286	19,198
2002	00-01	760	653	-	646,049	5.03	1,474,847	13,956
2001	99-00	824	715	-	636,363	5.21	1,425,743	1,924

# 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

**CDC Coalition (2005).** Two-row with exceptional straw strength - stronger than CDC Bold and would be strongest variety registered. Yield potential equal to Zena. Reasonable spot blotch resistance. U of S CDC.

**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

**TR03903 (2005).** Two-row with good straw strength and similar yield potential to AC Metcalfe. U of S CDC.

**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.

# THE ENDOWMENT FUND

Producer fund invested \$330,000 in crops research in 2005.

## 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.

- **Dave Sefton**, Broadview, Sask., WGRF Board, Committee Chair
- **Brian Otto**, Warner, Alta., WGRF Board
- **Barbara Podhorodeski**, Shipman, Sask., WGRF Board
- **Keith Degenhardt**, Hughenden, Alta., WGRF Board (ex-officio)
- **John Culley**, Ottawa, Ont., Agriculture and Agri-Food Canada
- **Dean Spaner**, Edmonton, Alta., University of Alberta
- **Rachael Scarth**, Winnipeg, Man., University of Manitoba
- **Bryan Harvey**, Saskatoon, Sask, University of Saskatchewan
- **Mike McAvoy**, Regina, Sask., Canada Committee on Crop Production Services

## NEW PROJECT APPROVED DURING 2005

- **Helping canola farmers win battle with blackleg.** This three-year study will build a new base of knowledge on changing populations of the pathogen that causes blackleg. This will allow producers to better select canola varieties that have resistance to the pathogen types of most concern to their specific growing area. It will also fuel the development of new canola varieties that have better resistance against the ever-shifting pathogen population.

## ADDITIONAL TRANSPORTATION CAP FUNDING

WGRF has received \$330,000 in railway funds, based on railway revenue received in 2004 that was in excess of the Western Grain Revenue Cap. The funds, allocated under new Canada Transportation Act legislation, will be added to the principal of the Endowment Fund.

"When the Act was implemented, the federal government, with input from the railways and the agriculture industry, needed to decide what to do with the money if there was an overage on the cap," says Lanette Kuchenski, WGRF Executive Director. "The funding is farmer money, but there was no practical or fair way to return those dollars to individual producers. They identified the WGRF Endowment Fund as a good solution, due to low administrative cost, strong investment value and the ability to benefit all western Canadian crop producers equally.

"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."

# ENDOWMENT FUND PROJECTS

PROJECTS COMPLETED DURING 2005		TOTAL \$ FUNDING ALLOCATED
2003-01	Biological control of cabbage root maggots in canola using parasitic beetles. Dr. Neil Holliday, U of M.	72,000
2003-03	Application of plant tissue culture to improvement of tolerance to Fusarium Head Blight toxins in barley. Dr. William Legge, AAFC Brandon.	99,000
2003-02	Developing bioactive edible films and coatings from yellow field peas to improve food quality and safety. Dr. Jung Han, U of M. (extended for one year)	112,500
PROJECTS ONGOING		TOTAL \$ FUNDING APPROVED
2005-01	Identifying and incorporating resistance to Fusarium Head Blight (FHB) in oat. Dr. Andy Tekauz, AAFC Winnipeg.	127,500
2005-02	Intellectual property rights and the future of crop breeding in Canada. Dr. Richard Gray, U of S CDC.	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.	121,500
2005-04	Flea beetle and drought resistance in canola. Dr. Margaret Gruber, U of S CDC.	79,450
2004-01	Efficient, sustainable wheat improvement through genotyping and informatics resources. Dr. Daryl Somers, AAFC Winnipeg.	120,000
2004-02	Improving integrated crop management by reducing herbicide application rates. Dr. Lloyd Dosedall, U of A.	135,000
PROJECT APPROVED TO BEGIN IN 2006		TOTAL \$ FUNDING APPROVED
2006-01	Long-term control of blackleg in canola. Dr. Roger Rimmer, AAFC Saskatoon.	75,000

# 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 organization. Below is an overview of the core information. The WGRF office welcomes questions from western Canadian crop producers at any time.

	2005 \$	2004 \$	2003 \$	2002 \$	2001 \$
<b>ASSETS</b>					
Cash and other	3,142,305	329,434	783,029	1,782,025	1,707,087
Investments	14,854,328	14,526,592	17,331,520	16,939,690	17,000,991
Total	17,996,633	14,856,026	18,114,549	18,721,715	18,708,078
<b>LIABILITIES</b>					
Cash advances	31,955	740,898	960,754	1,047,886	1,083,879
Accounts & grants payable	31,955	32,892	15,526	15,873	25,095
Total	63,910	773,790	976,280	1,063,759	1,092,693
<b>EQUITY</b>					
Capital	9,066,972	9,066,972	9,066,972	9,066,972	9,066,972
Endowment	294,546	37,303	151,505	348,925	561,309
Wheat	4,489,265	4,252,038	6,647,506	6,767,212	6,561,361
Barley	771,590	725,923	1,272,286	1,474,847	1,425,743
Total	14,622,373	14,082,236	17,138,269	17,657,956	17,615,385
Net	14,654,328	14,856,026	18,114,549	18,721,715	18,708,078
<b>ENDOWMENT FUND Operating</b>					
Revenue	648,057	319,115	383,339	512,302	714,251
Expenditures					
Research grants	330,000	394,505	534,780	633,605	675,791
Operating	60,814	38,812	45,979	91,081	101,415
Total	390,814	433,317	580,759	724,686	766,519
Net	257,243	(114,202)	(197,420)	(212,384)	(52,268)
<b>WHEAT FUND Operating</b>					
Revenue	3,509,931	1,104,313	3,351,117	3,393,960	3,758,522
Expenditures					
Research grants	2,995,200	3,118,520	3,089,094	3,106,195	3,126,286
Royalties	165,066	417,729	437,731	231,468	71,220
Operating	297,847	238,573	287,835	207,553	185,060
Total	3,458,113	3,774,822	3,814,660	3,545,216	3,406,934
Net	51,818	(2,670,509)	(463,543)	(151,256)	351,588
<b>BARLEY FUND Operating</b>					
Revenue	776,299	262,049	560,601	669,698	744,441
Expenditures					
Research grants	679,000	699,963	704,093	632,093	634,409
Royalties	28,394	45,112	19,198	13,956	1,954
Operating	73,133	126,273	122,563	60,098	55,207
Total	780,527	871,348	845,854	706,147	691,591
Net	(4,228)	(609,299)	(285,253)	(36,449)	52,850
<b>COMBINED FUNDS Operating</b>					
Revenue	4,934,287	1,685,477	4,295,057	4,575,960	5,217,214
Expenditures					
Research grants	4,004,200	4,212,988	4,327,967	4,371,893	4,436,486
Royalties	193,460	462,841	456,929	245,424	73,174
Operating	431,794	403,658	456,377	358,732	355,384
Total	4,629,454	5,079,487	5,241,273	4,976,049	4,865,044
Net	304,833	(3,394,010)	(946,216)	(400,089)	352,170

# POWER OF COMMUNICATION

WGRF delivers a broad range of reports and updates to keep farmers up to date on key issues, activity and investment progress.

Information is critical to successful investment strategies in any area, and grains research is no exception. That's why WGRF continues to deliver 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 reports and other information tools that are regularly delivered or made available to producers and other key WGRF audiences. All of these reports and information items are available on the WGRF Web site:

**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](http://www.westerngrains.com), and short versions of key articles are also delivered as news releases.

**Annual Report.** All the year's progress and activity, summed up in one annual package for farmer research investors. Also includes key financial information. 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.

**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 2005 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.

**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](http://www.westerngrains.com).** A one-stop destination for farmers to get complete, updated information on the Foundation and farmer-funded research progress.

With a strong news section of reports and latest updates, combined with comprehensive background information, it is arguably the best source of wheat and barley breeding information in Western Canada.

The site also provides a section with reports on all crop research projects supported by the Endowment Fund. All of the above WGRF information is archived on the Web site.

## CONTACT WGRF

Effective communications is a two-way process. WGRF continues to invite specific producer feedback on key on key issues and encourages general input on any aspect of WGRF business.

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