



# **B.C. GRAIN PRODUCERS ASSOCIATION**

## **Final Progress Report**

**Covering Period: January 1, 2007 to March 31<sup>st</sup>, 2007**

**Reported: May 3<sup>rd</sup>, 2007**

For:

### **PEACE RIVER AGRICULTURE DEVELOPMENT FUND**

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#### **Research Projects:**

1. **Short-Season Variety Selection & Agronomic Performance Project**
2. **Peace Region Growing Degree Days Project**
3. **Determinant Soybean - New Crop Potential Project**
4. **Short-Season Flax Breeding Co-op**
5. **Higher Value Barley - Malt Barley Enhancement Project**

#### **TRANSMITTAL NOTICE:**

"I Clair F. Langlois certify that the information contained in this report is accurate and that this project is being carried out/has been carried out in compliance with the terms as laid out in the PRAD application. I certify that I am authorized to represent and sign on behalf of the organization with regards to these five research projects."

Recipient's Designated Officer:

(Signature)

Clair F. Langlois

(Printed Name)

May 3<sup>rd</sup>, 2007

(Date)

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## Executive Summary:

All research data for all research projects generated from the 2006 final growing-season have been processed, recorded and analyzed appropriately. Severe drought took its toll on the statistical quality of trials grown at Dawson Creek in 2006, and many data sets had to be discarded as a result from Dawson Creek in 2006. Fort St. John had a little more moisture in 2006 and thus fared better regarding results, but wildlife damage (feeding) hit the northern site hard. As a result, and as alluded to in earlier progress reports, a significant amount of data sets were similarly lost from the Fort St. John site in 2006. Wildlife deterrents are in the plans for protecting the Fort St. John site in the future, such as a wildlife exclusion fence, but due to the wildlife in the north Peace and the severe drought in the south Peace, the amount of overall usable data collected in 2006 was greatly reduced.

All research data for all research projects generated from 2002 until the season-end of 2006 has been processed, recorded and analyzed appropriately as well. Final reports for all projects covered under A0348 over this complete time-period are finished and are attached here.

Over the complete five-year period there are some great successes, some disappointments, and some resulting in a need for further study, mainly the flax and soybean project components. The soybean project met with disappointment only because success could not be backed up by final yields in 2006 due to wildlife damaging the plots just prior to harvest. Hard proof on reaching the goal for yield and maturity will have to wait as the project has terminated in the spring of 2007 but it is believed success was met, just unofficially. The flax project has been successful at attracting further assistance from our Alberta Peace River region counterparts and will thankfully continue on a similar yet different route in 2007 but with similar goals as first set out in 2002 for the BC Peace River region by the BC Grain Producers Association themselves. There was enough witness of earlier materials to warrant further effort especially with a single-minded focus of the team for our region on both sides of the provincial border.

Even those projects with disappointing results still produced valid results, just not what was expected or hoped for. A disappointing result is still of value and must not be considered a failure. This is the nature of research and a lot of learning has been accomplished in all areas undertaken, the results and conclusions of which, positive or negative, will be available for all area producers to see on our website sometime this year. All projects will be made available as downloadable PDF versions from our website sometime after the busy spring season of 2007 has ended.

There are no unusual surprises in the attached budget, and we finished the fiscal year by being just a few dollars over-budget, but for all intensive purposes, and as it was at the end of the 2005 fiscal year, it is about as close to a zero balance as one can possibly get.

Since the last progress report, (end of December 2006), our Annual General Meeting (AGM) was held, in which we had a good turnout despite the colder than normal temperatures at the time, and there appeared to be a positive response to the research portion of the meeting. As mentioned in previous spring progress reports, next to the summer tour(s), it is the second most important time to maximize our "reach and communications" portion of the projects. The association and all the many people involved seemed to have done another good job at that at the AGM once again this past February 2006.

Our website, [www.bcgrain.com](http://www.bcgrain.com) displays this year's *2006 Field Crop Variety Performance* book, in which once again we made some improvements to the book, such as a more aesthetically pleasing colour cover. The thought being that most home computer systems downloading the book now have colour printing capacity; our book simply a reflection of current times.

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After experiencing the worst drought in over 35 years apparently, all in all, the 2006 fiscal year and crop-growing season was an acceptable year, but one which we hope never to repeat again with respect to weather conditions. Out of the five years, only 2005 could be called a great crop-growing season, but then that is why a minimum of five crop-years is needed to produce a good average for such a highly variable region as the Peace River region when undertaking research projects in the field.

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Reporting Period: From January 1<sup>st</sup>, 2007 to March 31<sup>st</sup>, 2007

Due Date	Activities		Status			Comments	Internal Use - Staff Comments
	Proposed	Delivered	Not Started	In Progress	Complete		
Jun 30/06	Seed delivery and weighing, plot preparation, seeding, planting, weed and pest control	Yes			✓	Executed as planned	
Oct 31/06	Plot maintenance, conducting tours, plant/weed disease monitoring and control, in-field data collection, harvesting, drying samples, Fall site management and seeding winter crops	Yes			✓	Executed as planned. Discussed in earlier Progress Reports.	
Dec 31/06	Processing harvest samples, compiling data, conducting statistical analyses and drafting reports	Yes			✓	Was executed ahead of schedule for 2006 trials. Statistical analysis completed for 2006 trials. Reports are finished. Raw data has been processed and sent to those who need it.	
Mar 31/07	Finalizing reports, disseminating results to industry. Planning for next season, ordering supplies, and equipment maintenance	Yes			✓	Report writing for 2006 trials completed as well as the production of final reports for all five years. Supply orders are being tabulated, but this usually occurs in the new fiscal year.	

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Due Date	Outputs/Deliverables		Status			Comments	Internal Use - Staff Comments
	Proposed	Delivered	Not Started	In Progress	Complete		
Oct 31/06	Farm Tours	Yes			✓	A total of three tours occurred in 2006, two for the benefit of our funding organizations to better understand our needs and concerns, and one sponsored by the BCGPA directly for the purpose of disseminating information gathered by our research to the local agricultural community. All three tours were well attended, but the main tour on July 19 <sup>th</sup> produced lower attendance than that of 2005. A depressed outlook across the agricultural community at the time, mainly from drought, was the suspected reason for the lower attendance. It was still a fairly good turnout.	
Mar 31/07	Presentations to growers	Yes			✓	This occurs on farm tour days and at AGM held in Feb of each calendar year, both were a success in the summer of 2006, and February of 2007.	
Mar 31/07	Field Crop Variety Performance Report	Yes			✓	Was released in the third week of January 2007 slightly ahead of schedule.	
Mar 31/07	Research results on the development of a heat unit model for wheat, barley, oats and peas	Yes			✓	Please see attached final report for this project.	
Mar 31/07	Research results on lines of soybeans tested in 2005.	Yes			✓	Annual results were produced the best they could be after harvest 2006, severely hindered by wildlife damage and drought in 2006. The idea of planting the beans at the very beginning of the season (same time as field peas), in an effort to get them blooming earlier while nights are shorter and warmer, and thus get yields up and have the maturation period finish sooner too, worked well, but hard proof alluded us due to wildlife damage at the one site (FSJ) that was not affected by a severe drought.	

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Mar 31/07	Research results on linseed flax lines tested in 2005	Yes	✓	Dr. Scott Duguid has received our locally produced raw data from us after the limited 2006 harvest. Only DC has yield data but good maturity data was collected from both sites. He will summarize the data and likely move some lines on into the co-op trials (last stage before registration) post-completion of this project. Please see attached final report for our view on final results of this project.	
Mar 31/07	Research results on barley trials	Yes	✓	The final report is attached; please refer to it for a complete report. It has three separate sections for the barley project.	
Mar 31/07	Identification of high performing varieties of wheat, barely, oats, argentine canola and field peas which mature 7 days earlier on average and identification of high performing varieties of triticale and flax which mature 14 days earlier on average	Yes	✓	At the AGM meeting the earliest materials are identified during the research annual update presentation. Annual results are included in our annual "Field Crop Variety Performance Book", which was released ahead of schedule in January 2007.	
Mar 31/07	Model that results in a heat unit value being assigned to any current or future variety linked with a heat zone map of the BC Peace River region	Yes	✓	This is part of the weather data project, as predicted in earlier progress reports, fell together nicely once all data was in. Hopes of attaching a steady Growing Degree Day measurement to all lines tested in the BC Peace River region seem to have been dashed due to high variability and the influence of other factors now known to be of fair importance to the overall equation unlike in southern latitudes, however, please see attached final report for full details.	
Mar 31/07	Determination of whether soybeans can be a viable crop in the Peace	Yes	✓	The final report is attached. In the end results are disappointing due to wildlife damage, but please refer to report for complete details.	
Mar 31/07	Identification of at least 3 lines of high quality linseed flax which mature 14 days earlier on average than those tested in 2001	Yes	✓	When we started this project, there was basically only one line that showed any promise (Norlin), and during the past five years we have identified several others that show promise, but it is up to the breeder to move them forward who may have information we are not aware of as to why they should not proceed. Please see attached report for more details on our findings.	
Mar 31/07	Identification of at least two or more barley varieties which consistently produce quality traits desired by the malt and brewing industry	Yes	✓	Great success has occurred in this project. Three new malt barley lines have come out of this system that we participated in, that showed excellent potential to meet our goals here in the Peace.	

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Due Date	Results		Status			Comments	Internal Use - Staff Comments
	Proposed	Delivered	Not Started	In Progress	Complete		
Mar 31/07	Improved access by BC Peace growers to varieties of wheat, barely, oats, argentine canola, field peas, triticale and flax suitable to their growing conditions	Yes			✓	Every year we produce valuable data (much of it confidential to protect plant breeder's breeding rights) but which results in new registered lines available to the public involving many public and private breeders from across Western Canada and covers all major Western field crops. The end result is that the breeders (which are usually located in more southern climates) get a better understanding of our area. This then results in better choices of available varieties for BC Peace growers to choose from, which exhibit traits more suited to this short-season environment.	
Mar 31/07	Improved crop selection by growers in specific heat zone areas of the BC Peace Region and improved performance	Yes			✓	As stated above, the maturity issue has not proven completely reliable, in fact it has proven to be highly variable, suggesting that other issues like available moisture, solar radiation, etc., may play a bigger role here at higher northern latitudes than originally expected. We have at the very least gained an understanding of the available heat units each crop type needs as an average. Please see attached final report on "growing degree-days" for more details	
Mar 31/07	Increased diversification of crops grown in the area	Yes			✓	Please refer to the attached final reports on both soybean and flax, but it is unfortunate that it seems apparent that the diversification of crops is proving to be an attractive alternate feed source for local wildlife. It has to a large degree been the new crops tested (such as soybean and flax) that have been having the largest impact from wildlife for food. Are we going to restrict growers of the Peace region to traditional crops in order to live with wildlife? This is still an on-going question society will have to ask itself.	

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## Reach and Communications:

Other than the easily made available printed reports which come out January, the most in-season verbal communication and dissemination of results produced by these five projects occurs on farm tour days and at the AGM held in February of the following calendar year. The farm tours have occurred on schedule and went well overall, and the AGM was a good success too. The five years worth of data for this group of projects has been summarized (and is attached) into reports that we perceive as both science-based and follow proper scientific report writing protocol, yet also user-friendly to the end-user, the local producers and agri-business people of the Peace River region. The reports will be released to the local farming community via PDF downloadable files from our website [www.bcgrain.com](http://www.bcgrain.com) by the end of the summer 2007.

## Final Comments:

With such a promising spring in 2006, the effects of both a severe drought and wildlife damage was hard to except but beyond our control. Much of the data was still acceptable and was used for report productions, but it was not the type of year we had hoped to end our five-year projects on. Overall, data from the last five years collectively encompass some very good data, which collectively allowed us to produce a good set of final reports. Over the complete five-year period there has been some great successes, some disappointments, and some resulting in a need for further study, mainly the flax and soybean project components. The flax has been chosen to move on with into a joint venture with our Alberta Peace counterparts, and possibilities are exciting. The soybean project lacks final proof of success due to wildlife damage and drought in 2006, but it will have to wait final proof for another time, as the slate is full for the next five-year period.

As reported in the opening remarks, even those projects with disappointing results still produced valid results, just not what was expected or hoped for. A disappointing result is still of value and must not be considered a failure. If research knew in advance that everything would work according to plan or assumption, it would not be research. It is the job of the BCGPA research department to test new ideas as well as to provide the best non-bias local research data on currently available options and ideas in order to help assist Peace River producers in their cropping decisions, and to that end, we think we have fulfilled that mandate as witnessed in the attached project reports.

Our budget finished just slightly above budget, and so we finished the five-year project on budget. We look forward to starting a new set of projects in 2007.