



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

## **Variety and Agronomic Trials Project Annual Report Covering Period: April 1, 2001 to March 31, 2002**

March 26, 2002

### **Annual Report For: Peace River Agriculture Development Fund**

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The responsibility for this report as written, its findings, conclusions, and recommendations herein are the BC Grain Producers Association's alone. The report does not necessarily reflect the opinions of PRAD who partially funded the project.

## Title of Project: Variety and Agronomic Trials

### Objectives:

1. Maintain high quality, small plot testing capability in BC Peace Region
2. Support varietal development of field crops suitable for Peace Region
3. Encourage development of new field crops for Peace Region
4. Identify, conduct and encourage research that builds on the regions natural agronomic strengths (e.g. daylight hours, low incidence of plant diseases and pests, Peace region soils).
5. Work with research industry and the varietal registration system.
6. Develop cooperative agreements with the research industry.
7. Ensure the ongoing testing of varieties that are being grown in the Peace.

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Notes: 1) Field crops= grains, oilseeds, pulses, new crops that might be identified.  
2) Members of the Research Committee of the BC Grain Producers Association re-evaluated their mission statement and objectives. The order presented here represents the objectives as ratified on January 17, 2001 and may not be the order in the original approved proposal.

### Desired Outcomes / Outputs:

**Objective 1:** Maintain high quality, small plot testing capability in BC Peace Region.

#### Outcomes:

- During the funding period, over 4000 plots were successfully established, maintained and harvested by a new Research Manager, 1 seasonal employee during planting & harvest time, and 2 summer students. The new manager was fully in place by March 5<sup>th</sup>, 2001, and had to quickly become acquainted with the equipment, new contacts and cooperators, the layout and crop / chemical use history of the two research farms, the budget, and the needs of the operation prior to planting. The team managed to plant all but flax and a few specialty trials by May 10<sup>th</sup>, with over 1,500 plots being planted in a single day on May 9<sup>th</sup>. All plots were planted in a timely fashion. The manager has and will be placing a new emphasis on higher quality plots, and not necessarily higher quantity of plots. Comments were raised over the growing season of 2001 by invested interest groups, (i.e. clients, local ag-retailers), that the plots looked very well maintained this year, and final results were outstanding.

**Objective 2:** Support varietal development of field crops suitable for Peace Region.

#### Outcomes:

- Varieties of field crops, both traditional and nontraditional for the region, were tested at 2 sites in the Peace region, Meier Site near Dawson Creek and Fines site near Fort St. John.
- Participated in Coop Trials (seed stocks for the future) to test new varieties for registration.
  - For example, the University of Alberta in conjunction with other breeders has a developed a newly registered canola line called "Peace". This line was developed through this testing program, to which the BCGPA were a major part of. "Peace" is approximately one week earlier in maturity than most of the currently registered lines of napus (Argentine type) canola. It is typically slightly less in yield than other later maturing lines, but it is exactly the kind of maturity we need in the Peace River region to make us successful growers of quality canola crops year after year. It is not genetically modified thus not "herbicide tolerant", which is a drawback in the eyes of farmers who prefer such systems for various reasons. However, new material based on "Peace" genetics is now being tested with "herbicide tolerant" genes in place. This is just one success story to which our efforts have contributed.

- Another example is "Alikat" CWRS wheat, again a bit lower in yield than the majority of lines in this wheat class, but much earlier in maturity than the majority, which is again what our Peace River region needs to gain in quality year after year.
- The same holds true in field peas. A whole group of earlier maturing peas are now available to farmers as a result of such a co-operative testing system, to which the BCGPA is a major part of data collection for early maturing zones (zone 4 in peas).
- Conducted Regional Trials to test performance of newly registered varieties against traditional varieties and absorb the risk before producers try these new registered varieties. This is especially important at a time when new varieties are entering the system at an accelerated rate thanks to new breeding methods, but often these lines are developed from much warmer areas and will not do well here unless developed specifically for our short season area. Our results give attention to these inappropriate lines before they are in wide use at great disappointment to the growers.
- During the funding period, the following were tested: 22 varieties of CWRS wheat, 6 varieties of CPS and 4 of CWES wheat, 15 varieties of six row barley, 21 varieties of two row & hulless barley, 10 varieties of malting barley, 16 varieties of oats, 3 varieties of triticale, 5 varieties of Polish canola, 16 varieties of conventional Argentine canola, 34 varieties of herbicide tolerant Argentine canola, 33 varieties of green and yellow field peas.
- Actively pursued varieties of early maturing hard red spring wheat. Consultation with breeders was undertaken to pursue this goal, and several co-op trials were grown to help breeders select for early maturing hard red spring wheat. "Alikat" is one successful line.

**Objective 3:** Encourage development of new field crops for Peace River Region.

**Outcomes:**

- BCGPA research team cooperated with industry partners and other associations to investigate new crops for Peace Region. In 2001 this included both regional triticale and regional flax variety trials. Further testing with flax at the earlier co-op level of testing was undertaken in cooperation with Dr. Scott Duguid of Morden Manitoba, (flax breeder for Agriculture Canada), to begin assessing parent materials for the breeding of very early maturing flax for our region.

**Objective 4:** Identify, conduct and encourage research that builds on the regions natural agronomic strengths (e.g. daylight hours, low incidence of plant diseases and pests, Peace region soils).

**Outcomes:**

- Studied use of foliar fungicides on field peas to protect against foliar diseases. Such diseases can drastically lower yield and quality of peas in our region. Preliminary results have shown to be positive and cost effective.
- Continued to work with granular inoculants on field peas. Studying the negative interaction with the now widespread Alsike Clover, (a common weed in pea fields now).
- Worked with industry to fine tune fertilizer management systems for new crops/ varieties.
- Continued studies with seed treatments against early soil & seed borne disease in cereals that become important in cool wet springs after planting in our region. Promising results.

**Objective 5:** Work with research industry and the varietal registration system.

**Outcomes:**

- Three members of Research Committee participated in Canada wide meetings in Feb 2002 of Prairie Registration Recommending Committee for Grains (PRRCG). Maurice Fines participated on Wheat Committee, Gordon Hill on Barley Committee and Bruce Baxter on Pulse Committee.

- Research Manager and Garry Scott (Research Subcommittee board member) attended Regional Testing Coordinating meeting in Lacombe, Alberta, in December 2001.
- Ross Ravelli as Canola Committee Chair accompanied by several other committee members, represented our region's interests at Canada wide canola meetings in Vancouver British Columbia, March 2002.

Note: Although Investment Agriculture does not fund these key activities; they obviously have important implications to the Variety and Agronomic Trial project. Liaison with these groups has never been more important, and assists the research team in conforming to accepted methods and plot quality standards.

**Objective 6:** Develop cooperative agreements with the research industry.

**Outcomes:**

- Contracts / projects with Canola Council of Canada to test new canola management systems, and canola vigour in grey soils.
- Agreement with Alberta Agriculture to manage Pea Coop Trials for Peace region.
- Contracts with Peace Region Forage Seed Association and Baldonnel Two Rivers Sunrise Association to seed / spray / fertilize / stationary thrash test plots of new forage seed / turf grass seed crops.
- Contracts with various other plant breeding programs to conduct pre-co-op and co-op level testing, (early selection, pre-registration), in wheat, barley, oats, canola, and peas.

**Objective 7:** Ensure the ongoing testing of varieties that are being grown in the Peace.

**Outcomes:**

- Results of variety and agronomic trials were compiled on time and distributed prior to and at the AGM. (A hardcopy of the Annual Results Book was couriered to Investment Agriculture March 1st, 2002).
- 500 copies of book were distributed to agriculture offices, agricultural retail outlets, seed cleaning plants, and at the AGM of the BCGPA.
- The research manager and members of the Research Committee participated in key meetings critical for the success and reputation for the research program in the Peace. This included continuous contact over the year with key interest groups, such as the ag-retailers and ag-suppliers within the area, in an effort to have all such key players involved in our work, making it relevant to, and reflective of, as much of the agriculture sector as possible.

**Timing of Activities/ Accomplishments by Quarter**

Time Period	Approved Timing of Activities	Accomplishments	Objectives Addressed
April 1, 2001 to June 30, 2001	Designing plots, weighing seed, preparing plots, seeding, controlling weeds.	<ul style="list-style-type: none"> <li>▪ Set up new manager and hired field crew for 2001.</li> <li>▪ New manager contacted and corresponded with appropriate project coordinators and contacts connected with BC Grain Producers Association's mandate.</li> <li>▪ Equipment serviced and made ready for spring 2001</li> <li>▪ 1-ton truck &amp; trailer combo repaired, inspected, insured, and certified for spring 2001.</li> <li>▪ New manager familiarized himself with most major assets, field equipment, facilities, etc.</li> <li>▪ Seeded over 4000 plots at Dawson Creek, FSJ and Baldonnel sites.</li> <li>▪ All Regional and Co-op testing in cereals, canola, and peas planted by May 10<sup>th</sup>, 2001.</li> <li>▪ The team managed to plant over 1,500 plots in a single day on May 9<sup>th</sup> without compromise to quality.</li> <li>▪ All regional and Co-op testing in flax planted on May 15<sup>th</sup> and 16<sup>th</sup>, 2001. (Very frost sensitive, so delayed).</li> <li>▪ Stakes and labels cleaned and put in place for upcoming field plot labeling.</li> <li>▪ Summarized seeding information, trial entries, weather data and site maps.</li> </ul>	1, 2,3,4
July 1, 2001 to Sept. 30, 2001	Maintaining plots, hosting tours, monitoring plants/ weeds/ diseases, recording appropriate field data, taking field notes, harvest and drying plot samples.	<ul style="list-style-type: none"> <li>▪ Old combine sold at 93% of expected value, and delivery arrangements finalized to co-inside with new combine pickup in July 2001.</li> <li>▪ Warehouse bays cleaned and re-organized for more efficient utilization of available space. Re-evaluation of older equipment, supplies, and storage items.</li> <li>▪ Equipment serviced and repaired in season as needed in a timely fashion, especially our field sprayer. Combine made ready for harvest.</li> <li>▪ Timely help given, via contracted time and supplies, to other organizations when needed, for planting, and spraying (herbicides and insecticides) of grass forage and canola research plots.</li> <li>▪ Bulk seeded margins and unused spaces.</li> <li>▪ Recorded appropriate assessments and field notes.</li> <li>▪ Continuation of weed control, much of it manually.</li> <li>▪ Initiation of harvest.</li> </ul>	1,2,3,5,6
Oct. 1, 2001 to Dec. 31, 2001	Processing samples, compiling data, statistical analysis, compiling report.	<ul style="list-style-type: none"> <li>▪ Completed harvest and fall fieldwork.</li> <li>▪ Dried, cleaned and weighed all samples.</li> <li>▪ Individual trial result information sent to co-operators.</li> <li>▪ Stored equipment for the winter.</li> <li>▪ Compiled results for "Variety Performance" book.</li> </ul>	1,4, 5,6

Jan. 1, 2002 to Mar. 31, 2002	Finalizing report, disseminating results from previous year, planning for next season, securing contracts, ordering seed and supplies.	<ul style="list-style-type: none"> <li>▪ New parameters were included in the "2001 Variety Performance" book, which were collected over the 2001 season in anticipation of this event. This was done in an effort to maximize the usefulness of the Regional Trials undertaken at our two research farms</li> <li>▪ Contacted and corresponded with appropriate project coordinators and contacts connected with BC Grain Producers Association's mandate.</li> <li>▪ Repaired, inspected, insured, and certified 1-ton truck and trailer combo for spring 2002.</li> <li>▪ Ordered field, research supplies &amp; seed.</li> <li>▪ Organized field crops laboratory.</li> <li>▪ Designed site plots as pertinent info became available.</li> </ul>	1 2,3,4,6,7
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**Variances from approved work plan and schedule:**

- There were no deviations from work plan and schedule.

**Variances from approved budget:**

- Due to unexpected cost to relocate the new Research Manager, we finished off slightly over budget.

**Variances from approved management team:**

- There were no deviations from the approved management team.

**Extension and Communication of Results:**

- Summaries of seeding information, trial entries, weather data and site maps were sent to trial cooperators and other interested parties, and were available at each site within the "Self Guided Tour" booklets. These booklets were left available at each site for pickup at any time.
- Two large intensely organized research plot tours occurred, one at Dawson Creek on July 12<sup>th</sup> in conjunction with the Canola Council of Canada, and one on July 26<sup>th</sup> at Fort St. John, in conjunction with Agricore United. Both were well attended by local media, but below expectations for farmer attendance, despite extensive advertisement in print and radio. Later than normal field spraying due to excessive earlier rains, and earlier than normal fescue harvest were thought to be the cause.
- Research Committee chair and Research Manager presented results at the BCGPA AGM / Seminar on February 5<sup>th</sup>, 2002.
- Annual book of trial results was compiled, copied (500 copies) & distributed to all major ag-retail and seed-cleaning outlets in the area, as well as both government agriculture offices. Trial results books are prominently displayed & regularly requested at these outlets.
- Annual book is also available for viewing or downloading, at the BCGPA's new website [www.bcgrain.com](http://www.bcgrain.com), as well as at the traditional government website. This year the information in the book at these two websites is divided into "crop" categories for easier and quicker downloads upon farmers' request.

### **Plans for Future Dissemination and Communication of Results:**

One measure of success of this project is that the "Field Crop Performance" book is constantly in demand and continually requested throughout a given year, and the 2001 book is proving to be no exception. The books are recognized as a quality and reliable decision-making tool, referred to by many producers and most ag-retailers in the Peace Region. It is often the starting point for any seed input discussion at sales counters across the region as well, as it is viewed as a third-party non-bias and quality publication. Now that it is also available widely on the Internet, its use will only increase.

### **Indicators of Project's Success:**

- "Field Crop Performance" books are widely used by producers in their decision-making.
- Average yields of all major field crops grown in the Peace Region have risen dramatically, and average maturity for the most popular varieties grown are shrinking. This is a direct result of this research identifying both appropriate varieties and the best agronomic management practices to capitalize on the best choices for yield and quality potential.
- Cooperative testing and liaisons with many western plant breeders have also helped screen for earlier maturing cultivars. As mentioned earlier in this document, the canola variety "Peace" and the CWRS wheat "Alikat" are two examples of success from breeding programs that have benefited from our program.
- Spin off effects of increased product leaving the area and increased inputs and infrastructure. Another major grain handling facility has come to Dawson Creek. Political and other non-agronomic motivations were likely involved, but the volume and quality of product had to be there to attract such a long-term investment.
- Increased requests for contract trial work by the Field Crops Research Crew on a fee for service basis.

### **Attachments:**

- BCGPA-Variety Trials Operating Income & Expenses
- Field Crop Variety Performance for B.C. Peace River Region 2001 Annual Book

BCGPA-Variety Trials		
Operating Income & Expenses		
<b>REVENUE</b>	2001-02 <b>Actual 3\31\02</b>	2001-02 <b>Budget</b>
<b>Revenue</b>		
Levy Council	8,100.00	9,000.00
PRAD II	120,800.00	132,000.00
Investment Agriculture	33,000.00	44,000.00
Total Funding Revenue	161,900.00	185,000.00
<b>Other Revenue</b>		
Contract Work (retained earnings)	35,706.74	35,000.00
Interest Revenue	145.34	0.00
Miscellaneous Income	1,864.61	0.00
<b>Total Other Revenue</b>	<b>37,716.69</b>	<b>35,000.00</b>
<b>TOTAL REVENUE</b>	<b>199,616.69</b>	<b>220,000.00</b>
<b>EXPENSE</b>		
<b>A) General Expenses</b>		
<i>i) Materials &amp; Supplies</i>		
Seed Purchase	127.64	1,000.00
Fertilizer & Sprays	1,928.28	3,000.00
Drying & Storage	0.00	500.00
General Supplies & Services	5,528.40	4,500.00
Freight Expense	457.62	0.00
<b>Total : Materials &amp; Supplies</b>	<b>8,041.94</b>	<b>9,000.00</b>
<i>ii) Fuel &amp; Travel</i>		
Fuel & Lubricants	3,596.88	3,500.00
Travel\Mileage	2,294.46	2,500.00
<b>Total: Fuel &amp; Travel</b>	<b>5,891.34</b>	<b>6,000.00</b>
<i>iii) Analyses &amp; Lab Fees</i>		
	216.00	1,000.00
<i>iv) Plot Costs</i>		
Plot Maintenance Costs	2,041.78	2,000.00
Plot Lease cost	3,000.00	3,000.00
<b>Total : Plot Cost</b>	<b>5,041.78</b>	<b>5,000.00</b>
<i>v) Equipment Lease &amp; Rental</i>		
Equipment Lease & Rental	48,000.00	60,000.00
Tractor Lease	1,122.80	2,000.00
<b>Total: Equipment Lease &amp; Rental</b>	<b>49,122.80</b>	<b>62,000.00</b>
<i>vi) ICBC Licenses &amp; Insurance</i>		
	5,317.00	5,000.00
<i>vii) Repairs &amp; Maintenance</i>		
General Equipment Repairs & Maintenance	2,006.95	3,000.00
Pick-up Repairs & Maintenance	5,068.74	3,000.00
Seed Drill Repairs & Maintenance	4,372.07	500.00
Tractor Repairs & Maintenance	848.18	1,000.00
Combine Repairs & Maintenance	137.37	500.00
Trailer Repairs & Maintenance	1,520.29	500.00
Mower Repairs & Maintenance	1,033.96	500.00
Cultivator Repairs & Maintenance	131.04	500.00
Sprayer Repairs & Maintenance	1,572.57	500.00
<b>Total : Equipment Repairs &amp; Maintenance</b>	<b>16,691.17</b>	<b>10,000.00</b>
<i>viii) Warehouse</i>		
Warehouse - Rent	4,200.00	4,500.00
Warehouse - Utilities	941.79	2,500.00
<b>Total : Warehouse Cost</b>	<b>5,141.79</b>	<b>7,000.00</b>
<b>Total (A) General Expenses</b>	<b>95,463.82</b>	<b>105,000.00</b>



BCGPA-Variety Trials  
 Operating Income & Expenses continued ...

	2001-02 Actual 3\31\02	2001-02 Budget
<b>B) Payroll Expenses</b>		
Wages & Salaries	36,580.80	44,400.00
EI Expense	1,286.55	0.00
CPP Expense	1,530.67	0.00
WCB Expense	2,001.46	0.00
Employee Benefits-Meal reimbursement	421.66	600.00
Ag-Quest Consultant	54,645.36	56,000.00
Ag-Quest Consultant relocation & management fee	13,503.00	0.00
<b>Total (B) Payroll Expense</b>	<b>109,969.50</b>	<b>101,000.00</b>
<b>C) Administrative &amp; Project Management</b>		
Advertising & Promotions	893.95	0.00
Project Management	12,000.00	20,000.00
Industry Meetings	92.02	0.00
Interest & Bank Charges	248.11	0.00
Office Supplies	768.21	0.00
Miscellaneous	147.59	0.00
Contract write off\Funder repayment	4,667.39	0.00
Tel\Cell\Internet	1,099.67	0.00
Cost of Combine Exchange	482.11	0.00
<b>Total (C) Administrative &amp; Project Management</b>	<b>20,399.05</b>	<b>20,000.00</b>
<b>TOTAL EXPENSE (A+B+C)</b>	<b>225,832.37</b>	<b>220,000.00</b>
<b>NET INCOME</b>	<b>(26,215.68)</b>	<b>0.00</b>