

PEACE RIVER AGRICULTURE DEVELOPMENT FUND

ANNUAL REPORT AND ACTUAL EXPENDITURES

APRIL 1, 2017 TO MARCH 31, 2018

Summary of all projects

Actual Total Project Costs	\$1,403,931.00	100.0%
PRAD Trust Fund Share of Projects	\$209,239.78	14.9%
Industry Contribution (cash):	\$656,940.00	46.8%
Industry Contribution (In-kind):	\$105,490.00	7.5%

Administration Expenses (detailed below)

Accounting (Audit)	\$ 4,458.00
Advertising	\$ -
Insurance	\$ 1,623.00
Office Expenses	\$ 450.00
Travel/Meetings/Phone	\$ 929.00
Directors Per Diem	\$ 3,125.00
Coordinator Fees	\$ 3,140.00
Administration Total	\$ 13,725.00
Total PRAD Trust Fund Projects Cost and Administration Expense	\$222,964.78

Large Project details

Sponsoring Organization	Project Title	Total project cost	PRAD Actual Contribution	Industry Contribution	Industry in kind	Amount Released from Trust
PRFSA	The value of Incorporating Forage Seed production with Annual Crop Rotation	\$42,801.00	\$13,000.00	\$19,000.00	\$0.00	\$10,400.00
PRFA	Improving productivity and profitability of Forage Land	\$414,950.00	\$35,000.00	\$68,900.00	\$63,900.00	\$28,000.00
PRFA	Int Approach to Prod Forage Stands Using Livestock	\$109,180.00	\$54,590.00	\$16,290.00	\$16,590.00	\$43,672.00
GPA	YEAR 2: Grain Development & Regional Trials	\$737,000.00	\$56,640.00	\$552,750.00	\$0.00	\$45,312.00
GPA	Pan-Agriculture in the North	\$100,000.00	\$50,000.00	\$0.00	\$25,000.00	\$40,000.00
Total Approved Large Projects	0	\$1,403,931.00	\$209,230.00	\$656,940.00	\$105,490.00	\$167,384.00
0	Recovery of 2016 Project Funds reported in 2017	\$0.00	\$9.78			\$0.00
Total Large Project Costs		\$1,403,931.00	\$209,239.78	\$656,940.00	\$105,490.00	\$167,384.00

Short Term Projects Council Initiative Fund PRAD Consultation Committee

0	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Short Term Projects		\$ -				

Results Summary

Project Title	Purpose/Objective	Project Results and Outcomes
The value of Incorporating Forage Seed production with Annual Crop Rotation	<p>The main objectives were to develop innovative cropping practises which include forage legumes in rotation with cereal crops and canola in order to minimize soil degradation, improve soil productivity, and maintain environmental quality. The main research activities are:</p> <ol style="list-style-type: none"> 1. Improve and sustain seed production and the economic return of the succeeding wheat and canola crops grown in the forage-based rotation compared to a pea-based rotation, continuous canola and a wheat-canola rotation; 2. Evaluate the effect of a forage legume-based rotation on organic matter, total nitrogen input into the soil and soil structure stability; and 3. Evaluate the mineral nitrogen contribution from the dual use of forage legume crops to the subsequent major crops grown in forage legume-based rotation as compared to pea-based rotations. 	<p>The study conducted from 2013 to 2017 assessed the productivity and profitability of integrating forage seed crops in the annual cropping sequences. The study showed that preceding clover seed crops replaced nitrogen requirement for succeeding sequence of wheat and canola by up to 90 and 45 kg ha⁻¹ respectively, and that inclusion of high value forage seed crops in crop rotation can be more profitable than tight rotations of input-intensive annual crops. The study shows that the intense annual crop sequences have higher costs of production and less gross margins compared to the sequences alternated with perennial forage seed crops. The study outcomes will be useful for designing profitable, resilient and readily adaptable cropping systems. Rational co-existence of forage seed crops and annual crops hold promise for cropping systems resiliency and sustainability of Agri-industry in the Peace region. The study findings were presented at one international and one national level scientific meetings, technology transfer seminars and published in Forage Seed News magazine and also featured in Top Crop Manager magazine.</p> <p>Further longer-term study is needed to understand the impact of different cropping sequences on the soil health and sustainability indicators. For the extension of the study for a longer-term, a 3-year project entitled "Evaluation of economic and agro-ecological merits of diverse cropping sequences with perennial forage seed and annual field crops" has been submitted for funding by AAFC Beaverlodge Research Farm.</p>
Improving productivity and profitability of Forage Land	<p>This project addressed the over arching question: How to increase the productivity, profitability and sustainability of our current forage land base? This question is address through the following specific objectives:</p> <ol style="list-style-type: none"> 1. Improve forage land productivity through increasing soil and forage quality by utilizing, monitoring and ehancing our grazing management practices. 2. Capture more economic and nutrient values from distributing manure through winter feeding practices or from spreading composted manure to determine recommended practices. 3. Evaluate alternate legume species within both haying and grazing systems, and work with seed growers to improve the availability and cost of these alternatives. 4. Evaluate, train, and develop prototypes, as appropriate, of on farm decision making tools such as seeding tool, grazing tool, soil quality field kit and drone field mapping by first developing and then ustilizing a user friendly economic analysis to capture the return on investment for various management practices. 	<p>Accomplishments: The Peace River Forage Association (PRFA) worked with 9 local producers to set up demonstrations and monitor their innovative practices to improve productivity of their forages.</p> <ul style="list-style-type: none"> > Benchmarks were set up within each field demonstration to monitor soil quality, forage response, spatial variability, etc. Plot monitoring was shared with each cooperator. > At strategic stages, throughout the growing season, photo & plant monitoring was done including plant densities and heights. Where appropriate, yields and forage quality were measured. > The results were shared with articles in newsletters & magazines, factsheets, demonstrations at field days & presentations at events, both within and out of the region. > The Peace River Forage Association partnered with PRAD, PRFSA, IAF & GF2 on this project. Several agriculture / industry businesses became enthused after the project started, including South Peace Grain, Blackbird Environmental & Roy Northern. <p>Summary Comments: The project demonstrated 3 key management options that are more productive, profitable and sustainable on forage lands:</p> <ul style="list-style-type: none"> > Increasing soil and forage quality with grazing management practices. > Capturing more economic and nutrient value from distributing manure through feeding practices or from spreading composted manure. > Evaluating alternate legume species within both haying and grazing systems, and working with seed growers to improve the availability and cost of these alternatives. <p>More importantly, this project demonstrated an integrative decision making approach that will facilitate effective adaptation and adoption.</p> <ul style="list-style-type: none"> > Encourage producers to travel and dialog in other regions to bring innovative ideas back to the Peace Region. Participants come back with speaker ideas for future field days and workshops and are enthused to help plan them. > Producers involved in the working group to manage the project from beginning cash flow to keeping expenditures and deliverables on schedule. > Cooperators help define on farm research methods, and which soil and plant properties were to be monitored. Researchers are encouraged to keep a flexible approach to adapt methods, monitoring and evaluations to the unique features of each different farming operation. This ensures our monitoring is relevant to their decision making. > Producers share the results of their demonstrations on their farms and ranches with others during the events.

<p>Int Approach to Prod Forage Stands Using Livestock</p>	<p>The objectives of this project were to:</p> <ol style="list-style-type: none"> 1) Adopt training protocols to successfully train livestock to graze Canada thistle on pastureland 2) Conduct an economic analysis of using livestock as weed managers, including a cost/benefit analysis comparing the cost to train livestock versus the benefits achieved. 3) Determine how Canada thistle responds to grazing pressure in a conventional and intensive management system (i.e. frequency of grazing, timing of grazing) 4) To share information on the study findings with producers through factsheets, video compilations, newsletter articles and websites. 	<p>This project is getting good interest across the region. It compliments rotational grazing management systems well. Producers are seeing animals consuming more variety of forages after training, even plants they were not trained on. Crown land situations has limited success without stocking density management. The cows will not avoid the new plant but free range and too much choices usually means they continue to use the landscape in a traditional manner, spending time in favorite spots which may not coincide with targeted species. Crown land continues to be a challenge to quantify the scope of the issue and the multiple values of uses are often at odds with each other. Increasing weed consumption may also see some trees target which would be an undesired outcome if there is also a timber lease holder on the same piece of land. Short term indicators of success:</p> <ul style="list-style-type: none"> • Livestock were successfully trained to graze Canada thistle on pasture sites. Thistle populations were monitored and the results indicated significant decrease in thistle populations exposed to trained cattle . A cost/benefit analysis was completed and used as a tool for producers to determine the best way to manage invasive plants on their operations. It indicated that the training saw best results when paired with rotational grazing system • User friendly resources were created including one advertisement video for training livestock and a training manual summarizing PRFA findings over 3 years. Also 2 fact sheets were completed in this project to provide further how-to guidance that will enable producers to train livestock at their home operations. Long Term Indicators of Success: • Producers beyond project cooperators begin to train livestock to utilize weed by utilizing resource materials created during the project. Several producers have expressed interest in completing training on their livestock this summer • Increased utilization of nutritious forage resources on pasture and an opportunity for increased AUM allocations – this project saw livestock on range begin to utilize Canada Thistle. Further monitoring would be needed to assess how prevalent this trend is.
<p>YEAR 2: Grain Development & Regional Trials</p>	<ul style="list-style-type: none"> • to provide multi-year regional variety data: <ul style="list-style-type: none"> o on newly registered varieties in order to provide producers information that would highlight the new varieties which show an advancement in yield, quality and/or disease tolerance relative to current varieties grown in the region; o on new plant genetics in order to provide plant breeders the necessary information required to support registration of new varieties (specifically peas, western barley, western wheat and western oat varieties), which are appropriate for the Peace River region climate and growing conditions. • to provide a tool (through the collection of this regional data) that will assist producers in the selection of new varieties which will best suit the individual needs and growing conditions of each farming operation, thereby reducing producer exposure to risk (meaning that the growers do not have to learn by trial and error with greater expense). • to work with various plant breeders (preferably those with experience regarding Peace region growing conditions, for example, Dr. DJ Bing, pea breeder, AAFC Lacombe, AB) on the development of genetics to establish varieties with desirable traits (earlier maturing, higher yielding, disease tolerant etc.) appropriate for northern latitude short-season climates. • to work with appropriate plant breeders in an effort to stay on the cutting edge of research and to support the development of truly northern crop-types as well as to even steer research in favor of support for northern crop varieties (currently, much of the pre-registration work on wheat, barley and oats is done in more southern areas and northern stations are needed to drive varietal selection appropriate for the climate and conditions in the Peace). 	<p>The BCGPA 'Field Crop Variety Performance' book, known locally as 'The Book' by farmers, was published in 2017. In Addition, fact sheets were created, similar to those created in 2016. The purpose of the factsheets in 2017 was to give the producers a quick first look at the data collected while 'The Book' was being created. This dual approach was welcomed by the farmers, especially when it came to the canola trials, as most farmers purchase their seed well before the publishing of the full trial book. Furthering the reach of this project beyond our own region, the trials that are coordinated through Alberta Agriculture include the data collected at our sites in the 'Alberta Seed Guide', published every year. You can find a copy of this guide here: http://www.seed.ab.ca/variety-trials/ Agriculture research, in particular variety trials, is a never ending quest for earlier maturing, disease resistant, higher yielding crops. This project was instrumental in helping move the benchmark forward in prairie wide cooperative projects in peas, barley, wheat, oat and flax. It is through projects like this that allow producers to stay in the drivers seat on their own farms by choosing varieties and crops that are best suited to their own location. It takes more than 2-years of data to show a pattern of data and when you add years like 2016 (excessive in-season rain) and 2017 (excessive rain, followed by near drought conditions) it shows the importance of continued small plot trial research. With the pressures of a changing climate and added pest stresses, whether weed or insect, projects like this one are important to add to data already collected in previous trials.</p>

Pan-Agriculture in the North	<p>The key objective of this project was to address issues affecting all farmers in the BC Peace in a timely and effective manner. Agricultural producers of all commodities are relying on the directors of the organization to be proactive in their approach to dealing with agriculture matters and bringing attention to these issues, both locally and outside our region. The project has been broken into six concerns that have been flagged as important to all agriculture producers across the BC Peace Region: Business Risk Management, Climate Awareness & Biosecurity, Commerce of Grain & Oilseed, Community Building & Public Trust, Crop Movement and Regional Input on National Agricultural Innovation.</p>	<p>The Pan-Agriculture in the North (PAIN) project was instrumental in ensuring that agricultural producers in the Peace Region had an opportunity to make a difference at the regional, provincial and federal levels. This includes all 336 members of the BC Grain Producers Association (BCGPA), as well as members of other agricultural organizations in our area. Board members and staff of the BC Grain Producers Association were able to represent regional agriculture at various meetings and events held throughout the year.</p>
Recovery of Funds	Recovery of unused Prad Funds from 2017 projects recorded in 2018-19	The BCGPA reconciled completed PRAD projects and returned \$10,383.32