



Annual Report

2018/2019

Introduction

This annual report details the seventh year of Alberta Oat Growers Commission (AOGC) operations. This is the twenty-second year that oat growers from Saskatchewan, Manitoba and Alberta have worked together to give voice to the needs of oat growers.

Shawna Mathieson is now in her ninth year as Executive Director of the Prairie Oat Growers Association (POGA), AOGC as well as the Saskatchewan and Manitoba oat commissions. She leads all the administrative duties of the three provincial organizations as well as POGA. In 2017, POGA also hired a part-time assistant. Cyndee Holdnick is a farmer and rancher based out of Manitoba and assists with the administration of the four commissions.

POGA

AOGC is the third largest funding partner in POGA, the prairie wide organization representing oat growers in Western Canada. POGA funding partners include the Saskatchewan Oat Development Commission (SaskOats), the Manitoba Oat Grower Association (MOGA) and the Alberta Oat Growers Commission (AOGC). MOGA and SaskOats are the equivalent oat grower check-off funded organization in their respective provinces.

All six Alberta directors are represented on the POGA board. Typically, there are also six directors from Manitoba and six directors from Saskatchewan on the POGA board although, due to a sudden death of a Saskatchewan director in 2018, Saskatchewan only had 5 directors for the 2018-2019 year.

The goal of POGA is to handle all administration duties of the provincial organizations and the overall approval and monitoring of projects of mutual benefit to AOGC, SaskOats and MOGA. Some projects continue to be provincially directed and therefore funded directly from the provincial organization. An example of this is the Alberta Regional Variety Trials (ARVT) led by the Government of Alberta. In 2018, 14 sites were established and results of 13 were added to the ARVT database, in 2019 13 sites were established. This information is valuable for Alberta producers in selecting varieties for their area.

Education

One priority of AOGC has been the education of our producers and industry on current oat initiatives, issues, and relevant regulatory changes. As such, we distribute the "Oat Scoop" newsletter a minimum of two times annually to the AOGC, MOGA and SaskOats membership and oat industry organizations. This newsletter is also available on our website, www.poga.ca.

AOGC also hosts an Annual General Meeting every year to encourage Alberta Oat Growers to learn about where their check-off is being used, talk to the industry and vote on important issues. These AGMs are held the day prior to FarmTech in Edmonton, AB each year; the next one will be on January 27, 2020 at the Edmonton Westin.

AOGC is co-host to the POGA annual conference, a day-long seminar on oat production and marketing held every third year in Alberta. In 2019 POGA's Annual Conference will be in Winnipeg, MB, and in 2020 it will be held in Banff, Alberta.

As a partner to the Prairie Oat Growers Association, AOGC Directors have been active ambassadors to the oat milling and processing side of the industry and have made many key contributions to promoting and advancing our oat industry.

Policy

AOGC has an ongoing dialogue with our provincial government. In November 2019, AOGC will again sponsor and participate in "Chops and Crops" in Edmonton to discuss several current issues affecting Alberta oat growers with members of the Government of Alberta. This has become an annual event for AOGC, and one that invites collaboration between various Alberta commodity groups and government personnel.

AOGC, through MOGA, holds a membership in Grain Growers of Canada (GGC) which represents oat growers on many policy issues at the national level. Some concerns worked on through GGC this year included the value creation models, which continue to be a priority, and proposed federal tax changes that were eventually made more farmer friendly and, later in 2019, the CN Rail strike.

A current issue facing oat growers is the proposed mycotoxin standards in food grains in Canada. AOGC, and POGA, are actively providing input into these standards, have co-funded a publication of a study addressing these standards and have conducted further research, through the Canadian Grain Commission (CGC) to measure the occurrence of fungi and mycotoxins on oats. This project, titled "Occurrence and fate of Toxigenic Fungi and the Associated Mycotoxins in Saskatchewan Grown Oats and Oat Milling Products," was co-funded with the Agricultural Development Fund (ADF) of Saskatchewan. In addition, AOGC, through POGA funded a project titled "Mitigating mycotoxins in the Canadian food value chain," led by Food and Consumer Products Canada and partially funded by Western Grains Research Foundation and many industry participants. This project is now complete and looked at developing rapid and reliable methods for sampling and testing Vomitoxin, also known as deoxynivalenol (DON) and Ochratoxin A (OTA) at wheat grain elevators using aspirated dust particles, developing best practices for post-farm storage and processing to minimize the development of OTA, reviewing agronomic practices to determine the relative benefits of the advances in seed and farming practices, and developing reliable, rapid, cost effective tests to quantify the presence of fungi responsible for toxin production both in raw and processed grain. A tear out on farm storage was provided to producers in the Oat Scoop to encourage use of this research by producers. These projects were completed in the 2018/2019 year.

AOGC, through POGA, is also represented at the Western Grains Research Foundation (WGRF), the Prairie Grain Development Committee (PGDC) and has participated in industry wide meetings such as the Grains Roundtable and the Canadian Global Grains Symposium in addition to attending meetings with the Market Access Secretariat.

AOGC, through POGA, has taken a very active role in the transportation issues that have plagued Canada. One aspect of POGA's Ottawa mission continues to be discussing transportation and the current concerns in regard to agricultural

commodities. Other issues discussed in Ottawa with key delegates were the carbon tax, oat market access through various proposed trade negotiations such as USMCA, CPTPP and ASEAN, the health benefits of oats, the national food policy, the Canadian Grain Commission Surplus, and the potential “value creation” models. These discussions have been extremely important, and AOGC, through POGA, continues to see value in this mission.

Continued work on building key relationships, such as the Ottawa trip, has been vital to POGA’s position, and thus AOGC’s, within the industry and government agencies. POGA has been requested at various government meetings for input, often where only few commodity groups are invited. For example, POGA is one of a few commodities that has a representative on the Crop Logistics Working Group focused on Canadian Transportation issues.

Select POGA Directors and the Executive Director have also been active advocates to the oat milling and processing side of the industry by attending and speaking at the North American Millers Association’s (NAMA) annual conference each year for the past ten years. Our strong industry support is demonstrated by our invitation to these meetings to provide a “producer perspective.” Oats continues to be the only commodity group represented at this event. POGA also works with NAMA on the joint “Crown Rust Marker Project,” a project in conjunction with the US Department of Agriculture (USDA), which is working to identify molecular markers for oat crown rust resistance.

Research Projects

AOGC, through POGA, supported Dr. Lingyun Chen’s, “Optimizing protein quality of Alberta oats and food application development,” at the University of Alberta. The research looked to analyze oat protein quality for both functionality and nutritive values as impacted by variety and agronomy practices. Initial results show that fertility levels significantly impact the protein content in oats. This project was co-funded by the Alberta Crop Industry Development Fund (ACIDF) and was completed in 2018/2019.

AOGC, through POGA, also funds, “Product Development from Gluten-Free Oat Fractions,” at the University of Alberta under Dr. Chen. Most fractionation methods extract one or two ingredients only, making the other non-desired fractions less usable. This project is working to develop a cost-effective process to allow for the extraction and utilization of all oat ingredient fractions. The hope is that if oats are easily fractionated in a cost-effective way, companies can generate more revenue and producers will benefit through increased demand and prices. This project was co-funded with ACIDF.

AOGC, through POGA, funds the Alberta Variety Trial led by Gateway Research Organization. This trial tests 11 approved milling varieties to investigate the impact of the variety and growing conditions on the yield and beta-glucan in both Westlock and Fahler, AB. The goal of this trial is to determine if a variety with higher beta-glucan can outperform Morgan oats in AB to meet the oat miller’s demand for higher beta-glucan, as well as to compare older varieties that still perform well, and are grown in many acres, with new varieties for use by growers across Western Canada.

AOGC, and all prairie oat growers, benefit from SaskOats’ multi-year commitment with the Crop Development Centre (CDC) in Saskatoon for \$75,000 annually, with

the funds being targeted to plant breeding at the University of Saskatchewan. This funding was refocused on only plant breeding starting in mid-2019 due to the elimination of funding to the CDC by PepsiCo Quaker and the strong need to maintain this vital breeding program. AOGC is grateful that the Agriculture Development Fund (ADF), Western Grains Research Foundation (WGRF) and other industry partners are also providing support for this very important program.

AOGC, through POGA, continues to fund and administer an oat breeding collaboration project with the industry and the Government of Canada under the AgriInnovation program. This project, called the Prairie Oat Breeding Consortium (POBC) is designed to fund the Western AAFC oat breeding program aimed at developing food and milling quality cultivars adapted to the western provinces. Previously, POGA agreed to fund 25% of the costs of this program in collaboration with a group of eight oat industry stakeholders. The Manitoba Oat Growers Association pays the full cost of the POBC membership. In addition, POGA, along with 5 other industry partners have agreed to fund a post doc student under Dr. Jennifer Mitchell Fetch at AAFC Brandon as part of a knowledge transfer plan. This person was hired in the spring of 2017 and the funding is in place for two years however, AAFC did extend this position until spring of 2020. The funding for the POBC expired on March 31, 2018 and POGA, once again, applied and was approved, for further funding. All breeding programs in Canada under the AgriInnovation Program (AIP) were reduced to a maximum of 50% funding. While this is large reduction in funding, Ag Canada did agree to maintain 50% of the original budget request therefore allowing this project to continue. The POBC members, including POGA, will now contribute 37.5% of the total project budget from 2018-2023.

AOGC, through POGA, contributes to Dr. Aaron Beattie's project, "Breeding for Resistance to Leaf Blotch Pathogens in SK Oats," at the University of Saskatchewan. This research looks to understand leaf blotch pathogens, understand the genetics of resistance in oats to leaf blotch, and identify and develop molecular markers for leaf blotch resistance in oat breeding. This project is co-funded with ADF.

AOGC, through POGA, also contributes to AAFC's "Organic Oat Breeding" Program, led by Mitchell Fetch. The goal is to develop milling quality oat cultivars suitable for organic production in western Canada, and potentially across Canada. Organic oat markets continue to grow, and producers require improved cultivars to respond to their specific production system. POGA has committed funding for 5 years. This project is also co-funded by the industry and the Government of Canada's Agri-Innovation Program (AIP).

AOGC, through POGA, also provides financial support to Oat Advantage, a private oat breeding program in Saskatoon, for further oat breeding in Western Canada. The original funding supported four main goals 1) Improved oat line quality selection for low hull content 2) Improved oat line selection for variation of groat surface borne trichomes (hairs) 3) Improved seed purity in early generation harvest and 4) Steady flow of breeding material through winter nursery utilization. Progress was made on all project objectives, including realizing better assurance of oat lines with plump groats and an ability to focus on oat lines that portion growing season resources into meaningful yield; determining, and being able to act on, the variability in oat groat trichome content, which can lead to new oat varieties with improved properties for grain handlers; and harvesting small oat bundles with nearly 100% seed purity. The original contract ended in 2017, and POGA has agreed to another 3-year contract to continue this important breeding work.

One strong recommendation from the 2015, "Future of Oat Forum," was to improve the Oat Grower Manual and have more extension studies. As such, POGA contracted Jim Dyck of Oat Advantage to update on the online grower manual in 2017. The Saskatchewan Industry Organization Development Fund (IODF) co-funded this project and the updated version can be found on POGA's website. POGA is committed to keeping this information current and, therefore, has contracted another update to this manual in 2020 by Dr. Linda Hall, previously of the University of Alberta.

AOGC, through POGA, funds a project with Bill May at the Indian Head Agriculture Research Farm. The project, funded by ADF along with other Saskatchewan commissions, is "Crop Sequencing of Large Acreage Crops and Special Crops." The objective of this project is to determine the effects of a preceding crop using several large area plots and several special crops. The crops in this rotation will include Wheat, Oats, Canola, Pea, Canary Seed, Hemp, Quinoa, and Coriander. Moisture and residual N at beginning of second year, plant density, volunteers during growing season of second year (counts and biomass), grain yield and grain quality will all be assessed.

AOGC, through POGA, contributes to the "*Canadian Agronomist.ca*." This website intends to fill the gap between researchers, agronomists and, to some extent, producers by implementing electronic technology/knowledge transfer utilizing email newsletters and posting of Research Summaries.

AOGC, through POGA, joined the farm safety campaign with a sponsorship in "Be Grain Safe." This project has developed mobile units which function both as grain entrapment units for demonstrations, as well as being rescue training units for emergency personnel. The awareness efforts are being directed towards producers, to remind them of proper safety protocols and to emergency personnel to be able to effectively handle grain entrapment situations; hopefully saving lives on the farm in Alberta and all of Canada.

AOGC, through POGA, is participating in the "Coordinated Monitoring of Field Crop Insect Pests in the Prairie Ecosystem," led by Dr. Meghan Vankosky, AAFC Saskatoon. This monitoring network is a collaborative project, monitoring insect pests across the Prairie Provinces and the BC Peace Region. Data is released weekly when insects pose the greatest threat to crop yield. This project is co-funded with WGRF and other commissions.

AOGC, through POGA, is supporting "Selecting Crop Sequences and Developing a Risk Model to Mitigate FHB in Western Canadian Cereal Production" led by Paul Bullock at the University of Manitoba. The oat related objective of this study is to determine the optimum crop sequence to mitigate fusarium head blight in cereals. This project is co-funded with WGRF and other commissions.

AOGC, through POGA, is helping fund "Breeding, Genomics and Agronomy Research to Improve Oat Yield and Quality", led by Dr. Weikai Yan and Nick Tinker, AAFC. There are 3 objectives in this study of interest to oat growers including identifying optimal agronomic practices to achieve high and stable grain yield and quality; enhancing oat breeding procedures with genomic selection; and improving the ability to deploy rust resistance genes in existing cultivars. This project is part of the Oat Cluster partially funded by the Government of Canada's AIP Program.

AOGC, through POGA, supports the "Development of Markers Linked to Oat Crown Rust Resistance to Help Breed Improved Oat Varieties for the Canadian Oat

Producers,” led by Dr. Aaron Beattie. To maintain our country’s position as a leader in quality oat production, it is important to develop varieties with strong disease resistance and marker development in diseases like crown rust are key components of that. This project is co-funded with ADF.

AOGC, through POGA, is involved in the project “Understanding the Impact of Particle Size on Physicochemical Properties and Nutritional Benefits of Pulse and Oat Flours,” led by Dr. Yongfeng Ai. This project will investigate the effects of milling/processing of pulse and cereal flours on their physicochemical functionality in foods, as well as determine the impact of milling on nutritional benefits of pulses and cereals with a focus on postprandial glycemia and insulinemia. This project is co-funded with ADF.

AOGC, through POGA, contracted McGill University to conduct a two-year research project “Tuning the Oat Genome with CRISPR-based systems,” led by Dr. Jaswinder Singh. Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) is a genome-editing technology that can be used to zero in on and modify stretches of genetic code and alter gene function to achieve favorable, or prevent unwanted, traits. POGA is taking a slow approach to this technology and hopes to identify possible ways it could benefit oat research in the future. Additional research would be required if a decision were made to attempt to create an oat using CRISPR technology. This project is partially funded by the Government of Canada’s AgriScience Program.

Research – Product Development

AOGC, through POGA, is funding a product development project being completed at the University of Alberta by Dr. Chen, “Development of an Oat Based Beverage.” This collaborative industry project will focus on developing two oat protein-based beverages. The initial oat-based beverage will be a ready to drink oat protein enriched product. The second will be a nutritious oat-based beverage that possesses the necessary sensory and nutritional properties to improve the quality of life of patients who are undergoing radiation therapy. This project has been extended to 2020 to allow for a change to the research which includes an on-line survey to determine the desired food product form to deliver oats and their nutrients to cancer patients.

An extension of the development of an oat-based beverage is the “Development of an Oat Coffee Additive (Coffee Creamer).” Approximately 65% of global consumers drink at least one cup of coffee per day, and 37 billion cups of coffee with non-dairy creamers are consumed annually. Consumer demands for nutrition, convenience and plant proteins/fibres is generating a new market opportunity within the coffee creamer market. Through this research, Dr. Chen hopes to develop a nutritious, functional oat-based coffee additive that combines protein, beta glucan and a probiotic into a functional and competitive lactose free coffee additive. This developed product will be the first of its kind on the market, and could generate a new market opportunity for, and consumer awareness of, oats. Both of Dr. Chen’s projects are co-funded with ACIDF, and this project ended in 2019.

Research – Feed

A key recommendation from POGA’s study of world oat markets highlighted the need to investigate the potential to recapture the USA oat feed market. AOGC, through POGA, is part of a five-year project at the University of Saskatchewan to “Develop New Strategies to Efficiently Utilize Oat Grains in High Production Dairy Cows to Maximum Economic Return and Benefit to Prairie Oat Growers.” This project aims to identify the best oat variety or type of oat grain with the highest Feed Milk Value (FMV) for dairy cattle, to improve the FMV of oats through processing, and to find the maximum or optimum level of oats in high production lactation dairy cow diets thus, ideally, promoting more oats in dairy rations. The project is co-funded by the Natural Sciences and Engineering Research Council of Canada’s (NSERC) Collaborative Research and Development (CRD) grant.

Note: Researcher reports allowed to be published are available at www.poga.ca under “Research Results.”

Market Development Projects

AOGC, through POGA, received funding through AgriMarketing starting in the 2015-2016 year to advance the Canadian Oat Market in Mexico. Since the project began in 2015, Canada has seen the largest three oat export years to Mexico in history. In June 2019, POGA representatives met with the largest oat miller in Mexico, comprising of about 80% of the market, as well as with Mexican government officials to continue this mission. The Facebook and oat recipe campaigns have also been a huge success, reaching tens of thousands of Mexicans daily. The original funding through AgriMarketing and the contract with Emerging Ag ended in March 2018. Due to the project’s success, POGA has secured an additional 3 years of AgriMarketing funding beginning in April 2018, as well as continues to contract Emerging Ag to further this successful project.

AOGC, through POGA, also contributes to the “Keep it Clean Cereals” Initiative led by Cereals Canada. This program targets Western Canadian producers and aims to provide producers with proper information to get their cereals ready for the export market by highlighting important export standards and expectations. This project is important, especially for topics like glyphosate, not only to remind oat growers of the possible issues of not meeting export standards but also ensuring other countries know the safe messages being delivered and how important it is for Canada. POGA also provided additional support for the creation of Keep It Clean videos to be shared on social media with key messages like proper glyphosate use.

AOGC, through POGA, contracted Emerging Ag to work towards getting raw Canadian oats into China. POGA members have met with government officials on this multiple times, including representatives from CFIA and AAFC. POGA also participated in two missions to China over the past two years with the Honourable Minister of Agriculture, Lawrence MacAulay. If raw Canadian oats were allowed into China this could be a huge market potential for Canadian oat growers since China is the fastest growing oat importer in the world. This could significantly and positively impact the economic viability of Canadian oats. Due to political challenges with China, this project has been put on hold with the funds being redirected to increase exports of Canadian oats to Japan as approved by the funder, AMP. POGA continues to remain committed to work to address the market access issues in China once politically feasible. Beginning in April 2018, this project is being co-funded by the AgriMarketing Program.

AOGC, through POGA, continues to look for new market potentials for Canadian oat exports. POGA has done some work to explore India as an opportunity, however, POGA has been told that, until the requirement for methyl bromide is resolved in pulses it is unlikely to be resolved in other crops like oats. The 3 provincial oat commissions worked with their respective provincial governments to determine tariff and non-tariff barriers for oats into CPTPP countries for further diversifying the Canadian oat export market. This report can be found under "2019 Research" in Research Results at www.poga.ca.

Summary

AOGC has successfully contributed to the profile, representation and profit of Alberta oat growers. Since 2008, oat growers in Western Canada have spent about \$0.18 of every dollar on research and marketing. The great collaboration of industry, government and the oat organizations is displayed by the amount of research and marketing work that is able to continue for our small crop.

AOGC will continue to develop the strategic relationship with POGA and work towards multiplying the producer investments in AOGC with both industry and government partnerships to expand oat profitability and profile both locally and around the world.

Board of Directors and Staff

Brad Boettger, Chairman
49519A Range Road 184
Beaver County, Alberta T0B 4J3

Darwin Trenholm, Vice Chairman
PO Box 268
Newbrook, AB T0A 2P0

Keith Gilchrist
RR1
Pickardville, AB T0G 1W0

Nick Jonk
PO Box 5609
Westlock, AB T7P 2P6

Gordon Pope
Box 272
Ryley, AB T0B 4A0

Bruce Thomi
RR 1
Woking, AB T0H 3V0

Shawna Mathieson, Executive Director
Box 20106, Regina, SK S4P 4J7
Phone: 306-530-8545
Email: smathieson@poga.ca

Cyndee Holdnick, Marketing Coordinator/Admin Assistant
Box 6, Carlowrie, MB, R0A 0G0
Email: choldnick@poga.ca

AOGC 2019-2020 Budget

Revenue

Check-off levy (\$.50/tonne on 340,740 tonne)	\$170,370
Check-off refunds @ 6%	<u>(\$10,222)</u>
	<u>\$160,148</u>

Expenses

Board of Directors	\$4,500
Communications	\$1,500
Levy Administration Fee	\$12,984
Producer Meetings	\$7,600
Proportionate expenses of POGA	\$71,340
Research and Development Grants	\$2,000
General and Administrative (Audit, Legal, Elections, memberships, etc.)	<u>\$2,600</u>
	<u>\$102,524</u>
Excess of revenues over expenses	\$57,624