



Alberta Oat Growers Commission Annual General Meeting – Agenda*

**Times and agenda topics subject to change.*

Monday, January 24, 2022
6:00 pm to 8:45 pm

Location

The Edmonton Westin
10135 100th Street
Edmonton, AB T5J 0N7
Devonian Room

- 6:00 pm **Complimentary Drink plus a Light Meal**
- 6:30 pm **Welcome from the Alberta Oat Growers Commission** – Brad Boettger, Chair from Tofield, AB
- 6:35 pm **AOGC Business Meeting** including Director Acclamations and AOGC Bylaws** – Brad Boettger, Chair
- 7:00 pm ***Stoked Oats: How We Got Here, What We Do, How Technology is Driving Sales and Why We Chose Oats*** – Simon Donato, President, Stoked Oats
- 7:30 pm ***AAFC Oat Varieties: What's New, on its Way, and Good for Alberta Producers (including information from the Lacombe Testing Centre)*** – Kirby Nilsen, Oat Breeder, AAFC, Brandon MB
- 8:00 pm ***Oat Market Outlook*** – Shayne Murphy, Senior Grain Merchandiser, Parrish & Heimbecker Limited
- 8:45 pm **Adjourn**

For those that stay through the end of the meeting, AOGC will provide another complimentary drink ticket.

Free Admission (there is no charge for this event).

***Please note: a 30-day notice for resolutions is required at the AOGC Annual General Meeting.*

In order to keep our attendees healthy and safe the Oat Growers Commissions/Associations are required to follow the rules and regulations set out by the provincial government, local health authorities and the AGM venue or facility. We have missed the connection and learning opportunities that events like this bring to the agriculture community and we are very much looking forward to getting together again safely!

Please check local regulations and call the AGM venue if you have any questions on admittance requirements prior to arrival to ensure you can attend these great events in-person!

Prairie Oat Growers Association (POGA) Projects as of October 2021

Research and Development - Breeding

POGA, through the Manitoba Oat Growers Association (MOGA), the Saskatchewan Oat Development Commission (SaskOats) and the Alberta Oat Growers Commission (AOGC), provides funding to:

- Agriculture and Agri-Food Canada (AAFC) Brandon Research Centre in Brandon, MB through the Prairie Oat Breeding Consortium (POBC). This project is co-funded with industry partners and the Canadian Agricultural Partnership (CAP) – AgriScience Program. Breeder: Kirby Nilsen
- Crop Development Centre in Saskatoon (CDC). Breeder: Aaron Beattie
- Oat Advantage, Saskatoon. Breeder: Jim Dyck
- Organic Oat Breeding. Breeder: Kirby Nilsen

Research and Development - General

Alberta Variety Trials led by Gateway Research Organization will test 11 approved milling varieties to investigate the impact of the variety and growing conditions on the yield and beta-glucan in both Westlock, AB and Fahler, AB. The goal is to determine if a variety with higher beta-glucan can outperform Morgan oats in Alberta to meet oat millers' demands for higher beta-glucan. This project is co-funded with Grain Millers Canada.

Saskatchewan Variety Performance Trials led by the Government of Saskatchewan, looks to assess various oat varieties and their suitability to various Saskatchewan regions. In 2016, SaskOats committed \$12,000 per year for three years to post-registration variety performance trials by the Saskatchewan Variety Performance Group. In 2018, the commitment was extended to 2020 to add lodging resistance and height testing to the trials. In addition, Avonlea, SK was added as the 12th location to this important research.

Breeding, Genomics and Agronomy Research to Improve Oat Yield and Quality led by Dr. Weikai Yan and Nick Tinker, AAFC Ottawa is partially funded by the AAFC CAP AgriScience Program – Cluster Component and will be complete in 2023. There are five objectives that POGA is helping to fund:

- 1) identifying optimal agronomic practices to achieve high and stable grain yield and quality;
- 2) enhancing current oat breeding procedures in both the Ottawa and Brandon programs with genomic selection;
- 3) improving the ability to deploy appropriate rust resistance genes through a survey of Pc gene profiles in existing cultivars, and Pc gene effectiveness in western and eastern Canada;
- 4) enhancing genetic diversity in North American oat breeding programs through a joint testing and genotyping network that promotes germplasm exchange and provides information about adaptation; and
- 5) developing a multi-faceted approach to data and knowledge management that enhances all objectives of this project and benefits world-wide pre-competitive oat research.

Coordinated monitoring of field crop insect pests in the Prairie Ecosystem led by Dr. Meghan Vankosky, AAFC Saskatoon. The Prairie Pest Monitoring Network is a collaborative project and participants include federal and provincial entomologists, university scientists, agronomists, industry, and producers. Participants monitor insect pests annually across Manitoba, Saskatchewan, Alberta and the BC Peace Region. Data is released on a weekly basis when insect pests pose the greatest threat to crop yield. Annual data is collected and compiled into distribution maps, and in some cases, forecast maps for the subsequent season. These tools provide up-to-date, relevant information that can be used by agronomists, industry representatives, and farmers to make decisions regarding insect pest management. This project is co-funded with WGRF and will be completed in 2023.

Development of markers linked to oat crown rust resistance to help breed improved oat varieties for Canadian oat producers led by Dr. Aaron Beattie at the CDC. The largest on-going threat to oat production in Canada is the fungal pathogen which causes oat crown rust. Crown rust can weaken straw causing plants to lodge. In Canada, yield losses from oat crown rust averaged 5.1% from 2001 to 2005. While cultural control methods, such as crop rotation and early seeding, and fungicide application can reduce crown rust severity, incorporating genetic resistance is an important component to an integrated management strategy.

In order to effectively and efficiently implement these approaches, it is necessary to genetically map the location of both seedling and APR genes within the oat genome and develop gene markers. The CDC oat breeding program is currently using markers linked to these genes in order to incorporate and select for crown rust resistance. This project is co-funded with the Saskatchewan Agriculture Development Fund (ADF) and will be completed in 2023.

Economic Value of Diversified Cropping Systems led by Elwin Smith, University of Lethbridge. While some short rotations are currently profitable, the lack of diversification in a cropping system can be detrimental to crop yield and profitability. This study will look at determining the net return and the variability of net return, associated with cropping systems of different rotation length and diversity of crops. This project will be completed in 2022.

Revising the crop nutrient uptake and removal guidelines for Western Canada led by Dr. Fran Walley, University of SK. The goal is to develop new estimates for crop nutrient uptake and removal. The current information regarding crop nutrient uptake and removal does not reflect current crop yields, and the grain and straw nutrient concentration estimates are not adequately reflective of current varieties. Also, there is no consistent data regarding micronutrient uptake/removal. This two-year project is co-funded by ADF and will be completed in 2022.

Tuning the Oat Genome with CRISPR-based systems led by Jaswinder Singh with McGill University. 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. While the project will not create a CRISPR oat, it will lay the foundation for a new genome editing method in oat. The major objective is to integrate CRISPR-based genome editing approaches with oat breeding for the possible development of future generation of oat varieties.

Other objectives are to ensure the agility of the oat research community to respond to new opportunities, and possibly to integrate CRISPR-based genome editing approaches in the future, if desired. This technology may allow breeding for the development of oat varieties that address new challenges in food security and environmental stress. This project is co-funded with AAFC AgriScience Program and will be completed in 2022.

Understanding the Impact of Particle Size on Physicochemical Properties and Nutritional Benefits of Pulse and Oat Flours led by Dr. Yongfeng Ai at the University of Saskatchewan. 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 the nutritional benefits of pulses and cereals focused on postprandial (post lunch and the evening meal) glycemia & insulinemia. This project is co-funded with ADF ending in 2023.

Beyond Beta Glucan, demonstrating the health benefits of oat protein led by Dr. Sijo Joseph. The objective of this project is to provide scientific evidence of the specific health attributes of oat protein in reducing abnormal levels of cholesterol and glucose, and thereby generate preliminary data for an oat protein health claim petition. Ultimately, the Canadian oat industry could capitalize on new opportunities for marketing efforts with new evidence promoting the health benefits of adding oats in a diet. It will enable the Canadian oat industry to meet consumer expectations in search of value-added oat products both at home and worldwide. This project is co-funded with the CAP AgriScience program and will be completed in 2022.

Collecting the Carbon Data Needed for Climate-Smart Agriculture in Saskatchewan led by Dr. Kate Congreves at the University of Saskatchewan. There is no direct annual data on net carbon footprints of Saskatchewan cropping systems. This project will address this gap by providing spatially and temporally integrated data on greenhouse gas (GHG; N₂O and CO₂) emissions at the field scale level. This information will be used to determine net ecosystem exchange and the net carbon footprint of the cropping system. This project is co-funded with ADF and will be completed in 2025.

Intercropping Pea with Canola or Oat: impact on nitrogen, disease and economics led by Dr. Liu Kui with AAFC. Intercropping pea with oat or canola enhances biodiversity and likely increases resource (e.g. nitrogen, water, and phosphorus) use efficiency. The improved quality and quantity of straw from the intercrops likely affect straw decomposition, soil carbon and N dynamics, and soil health. In this study, the effects of intercropping on soil particulate organic matter carbon and N will be determined. This study will be conducted at three sites in Saskatchewan. This project is co-funded with ADF and will be completed in 2024.

Stimulating Germination in Wild Oats and Volunteer Cereals led by Dr. Shaun Sharpe with AAFC. The study objective is to characterize the dose response, interaction, and optimal mix of potassium nitrate and pyroligneous acid (liquid smoke) to determine the suitability of pre-seeding or post-harvest germination stimulation of wild oat, volunteer barley, oats, and wheat. By allowing early germination, producers can eliminate wild oats before the planted crop emerges increasing yield and quality of the crop. Wild oats are a strong competitor and can cause significant yield loss when emerging with cereals. This project is co-funded with ADF and will be completed in 2022.

Improved Integrated Disease Management for Oats in Saskatchewan is led by the Northeast Agriculture Research Foundation (NARF). This project aims to understand the effectiveness of fungicide application timing on different seeding rates and varieties, as well as look at genetic resistance to control foliar diseases in oats. Objectives include: understand the interaction between varietal resistance and fungicide application; determine the impact of seeding rate and subsequent plant populations on optimal application timing; and determine integrated disease management strategies for oats. The project is co-funded by ADF and ends in late 2021.

Are oats responding to higher levels of macronutrients? led by Mike Hall at the East Central Research Foundation (ECRF). The objective of this project is to demonstrate the response of a modern oat varieties to the historically recommended rate of 60 lb N/ac against the more recently suggested recommendation of 90 lb N/ac and to determine the relative importance of adding phosphorus (P), potassium (K) and sulphur (S) for these different nitrogen (N) recommendations in eastern Saskatchewan. The influence of treatment on oat yield, lodging and test weight will be determined. This project is funded by the ADOPT program and will be completed in 2022.

Which oat varieties “hold it together”, when the going gets tough? led by Mike Hall at ECRF. Many oat millers will no longer accept oats treated with pre-harvest glyphosate. Losing this harvest management tool forces many producers to leave oats standing in the field longer, creating a greater risk of poorer grain quality and higher harvest loss. The objective of this project is to help producers select milling oat varieties that are more likely to maintain yield and grain quality when harvested late. Lodging, shatter loss, grain quality and yield between six commonly grown milling oats will be compared between ideal and late harvest timings. This project is funded by the ADOPT program and will be completed in 2022.

Continuing studies on intercropping for increasing yield and quality of grain and forage crops, and improving soil quality led by Dr. Myriam Fernandez, AAFC. This project will look at the relationship between various intercrop dynamics to see where benefits can occur. Intercrop species use soil available nutrients and soil moisture, and at given times inter- and intra-competition are expected. Specifically, the project will look to determine if intercrops with crops or a living mulch can reduce weeds compared to single crops, and will look at various seeding ratios to evaluate impact on each crop. It will aim to identify if there is a nitrogen benefit from legumes in the intercrop to its companion crop, as well as look to determine the biomass and grain yield/quality due to the intercrop dynamics. It will also look at the disease pressures, and evaluate if intercrops have less disease than monocrops, as well as develop crop growth and nutrient models for intercrop versus monocrop scenarios. This project is funded with WGRF and will end in 2025.

Research and Development – Product Development and Feed

Development of a nutritionally enhanced plant-based milk alternative beverage from Canadian oats and study of its hypoglycemic effects conducted by Dr. Lingyun Chen at the University of Alberta. The rising increasing demand for plant-based milk alternatives is largely driven by rising milk allergies/lactose intolerance and consumers looking for plant-based milk options. Unlike other potential plant-based sources, oats are a good source of both protein and soluble fibre which many consumers’ desire.

Another goal is to further develop oat milk into a functional beverage for management of type 2 diabetes. This project is co-funded with Alberta’s Results Driven Agriculture Research (RDAR) and will be completed in 2023.

Develop New Strategies to Efficiently Utilize Oat Grains in High Production Dairy Cows to Maximize Economic Return and Benefit to Prairie Oat Growers led by Dr. Peiqiang Yu from the University of Saskatchewan. A key recommendation from the POGA study of world oat markets highlighted the need to investigate the potential to recapture the USA oat feed market. This five-year project supports this objective and 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, ideally, promoting more oats in dairy rations. The project is co-funded by the Natural Sciences and Engineering Research Council of Canada (NSERC) Collaborative Research and Development (CRD) grant and will be completed in 2022.

MARKET DEVELOPMENT PROJECTS

China/Japan - In 2017/2018 POGA contracted Emerging Ag Inc. to work towards getting raw Canadian oats into China. POGA members met with government officials to discuss this issue including representatives from the Canadian Food Inspection Agency and AAFC. POGA also participated in two missions to China, pre-COVID, with the Minister of Agriculture and Agri-Food Canada.

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 project co-funder, AAFC's AgriMarketing Program (AMP).

Japan is the 4th largest importer of oats in the world and has a large middle class. Research shows that Japanese consumers are looking for nutritious and healthy food but also products that are convenient to prepare and consume. Food consumption is mainly influenced by the quick aging demographic, the bigger spending power of young people and the busy work-oriented lifestyle. The ongoing re-evaluation of the health functions of cereals, especially whole grains, is expected to encourage oat consumption.

The Japanese marketing project has been a huge success reaching an average of over 1.45 million Japanese consumers each month since the project began. Canadian oat imports continue to grow, and if the current trends continue, Canadian oats into Japan could surpass 100 MT (which would be a 50% increase from 2020). Canada continues to lead in the raw oat export market.

Mexico - POGA received funding through AMP starting in the 2015-2016 year to advance the Canadian oat market in Mexico. Since the project began, Canada has seen the largest four oat export years to Mexico in history. In June 2019, POGA representatives met face-to-face with the largest oat miller in Mexico (representing over 90% of the market), as well as with Mexican government officials to continue this mission. Since that time, due to COVID travel restrictions, communications have successfully continued electronically. The Facebook and oat recipe campaigns have also seen great results, reaching tens of thousands of Mexicans daily. Due to the project's success, POGA secured an additional two years of AMP funding until 2023.

Canada - POGA, for the first time in 2020, received funding to promote oats as a healthy ingredient to Canadian consumers. This was a huge success for POGA to have the ability to expand markets both internationally and domestically. The "Oats Everyday" website and Facebook page, showcasing oat recipes and the benefits of eating oats, reached many Canadian consumers right from the start. In 2021 POGA, once again, received AAFC AgriMarketing funding to promote this healthy, local grain right here in Canada, so the work continues!

Keep It Clean Cereals (KIC) is a program that 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 as it reminds oat growers of the possible issues of not meeting export standards around residue limits, and it informs international and domestic buyers that Canada is taking measures to meet customer expectations. POGA also provided additional funding for the creation of *Keep it Clean* videos with key messages like proper glyphosate use.