

Brandon Breeding Program: A Cornerstone of Prairie Oat Variety Development

Dr. Kirby Nilsen Hosts POGA President Jenneth Johanson

In Dr. Nilsen's world of cultivar development, generations are identified as F#. The 'F' stands for the Latin 'filia' (daughter). F1 is the first generation of a cross between two stable plants with different genetics (a hybrid). Dr. Nilsen explains the next generations: "Oat is a self-pollinated crop which means we need to advance from the F1 hybrid over many generations to create a genetically stable line. Along the way we take every opportunity to apply selection and eliminate the bad genetics beginning at the F2. Disease resistance is a big focus for us at the early breeding stages."

Dr. Kirby Nilsen is the Prairie Oat Breeding Consortium (POBC) Program Lead and Research Scientist at Agriculture and Agri-Food Canada (AAFC) Brandon Research and Development Centre. To learn more about what was happening during the 2021 growing season, POGA President Jenneth Johanson arranged a tour with Nilsen to view the yield plots and early generation disease nursery (F2-F4 generations) for disease resistance levels.

Johanson states, "The objective of the POBC is to develop new oat cultivars suited to production in western Canada

that meet the requirements of end-use markets identified by POGA and the milling industry. AAFC Brandon has two sites where they monitor and eliminate material based on their disease resistance. These are typically done at the early stages of the breeding process."

Dr. Nilsen's program initially inoculates for smut, crown rust and stem rust. Once a line has survived several rounds of selection over multiple years, it is advanced into the next phase in multi-location yield testing across western Canada (including the Western Cooperative Oat Registration Trial). Testing for other diseases and traits are done at these next levels as well.

"In this year's disease nursery they had exceptional results (under irrigation three times a week), especially for stem rust. They have ~50 crosses and ~50,000 individual, single-seed hills at both sites and will keep the ones that show strong resistance and eliminate the rest," Johanson explains.

"It was great to see the work that Dr. Nilsen is doing and he is definitely excited about some of his results this

year," shares Johanson. *(POGA note: varietal pictures were supplied by Jenneth Johanson, but we leave Dr. Kirby to explain a little about each variety.)*

We reached out to Dr. Nilsen to share a bit more about what has been happening with his program. As all producers know, the past summer posed extreme drought and heat stress. He explains, "Although it has been a challenging year, we're taking the opportunity to observe how our breeding material tolerated these extreme conditions."



2021 Brandon Yield Plots. Photo Credit: Jeff Griffith and Kirby Nilsen

... continued Branding Breeding Program

Dr. Nilsen continues, "Under these conditions, disease establishment in our inoculated nurseries can also be a real challenge. However, with frequent irrigation, the disease that really established itself this year was stem rust. When it occurs, this disease is truly devastating to oats."

"A check variety used in the nursery called Stainless, developed by Dr. Jennifer Mitchell-Fetch, has some very good qualities and proved itself this year as being extremely stem rust resistant. Although it never really took off as a milling oat variety, it has good resistance to stem rust so we are using it to cross with other elite varieties to, hopefully, bring in that resistance. Stainless was such a standout variety; I'm very interested in it now that I've seen how effective that resistance held up and want to see if we can incorporate that trait into a variety that meets all the other requirements needed by producers, millers and consumers," says Nilsen.

Two varieties widely grown in Western Canada proved to be susceptible to stem rust this year: AC Morgan and Camden. A



AAFC Brandon Test Plots: Stainless; showing excellent stem rust resistance (photo credit-Jenneth Johanson)



AAFC Brandon Test Plots: AC Morgan; very susceptible to stem rust (photo credit-Jenneth Johanson)

third, Summit, displayed an intermediate reaction to stem rust.

The AAFC Brandon program operates a main yield testing site located just outside of Brandon. This year, those plots were under severe drought and heat stress as they are not irrigated at all. Nilsen explains, "We are able to see which lines die off earlier than they would under optimal conditions and which lines can maintain growth to maturity."



AAFC Brandon Test Plots: Camden; lacking in stem rust resistance (photo credit-Jenneth Johanson)

Conditions varied across the Western Canada testing sites and this will be taken into account when evaluating the lines. While no one actually wants to see a growing season like the Prairies just experienced, at the very least it provides researchers with the opportunity to really zero in on how the test lines respond when adverse growing conditions occur and plants are under severe stresses.

Plants that show varying levels of climate resiliency can be selected to move up to the next generation of cultivar development. "By the time a line becomes eligible for registration, it can typically be at about the F10-F11 generation," says Nilsen.

Johanson states, "It is clear that a lot of effort and time goes into developing a good variety, and Dr. Nilsen and his team play a vital role in bringing new oat lines to Canadian producers that ultimately benefit the entire oat industry."

The POBC is funded by the following partners: Austgrains, Emerson Milling Inc., FP Genetics, General Mills, Grain Millers Canada, Prairie Oat Growers Association (POGA), Richardson Pioneer, and SeCan.

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Project Re-examines the ‘Ins and Outs’[◆]

Crop Nutrient Uptake and Removal

Producers follow specific guidelines for their nutrient management plans in order to determine how much is required throughout a given variety’s growing season to produce the forecasted yield for that crop (nutrient uptake). They also use this to ascertain, based on the actual yield, how much nutrient was exported from the field in the harvested grain (nutrient removal) and how much was left behind.

Calculators and charts are available for producers to determine application amounts. However, factors such as increasing yields of new crop varieties and regional growing conditions mean that the long-established and accepted numbers based on old varieties/yields are very likely out of date and cannot be applied equally across all regions.

Not all the nutrients can be accounted for in the ‘harvestable’ portion of each plant type and it differs between crop type and variety. Most crops have ‘residue’—some of which is left on the field (e.g., straw, roots, etc., which is good practice for sustainable agriculture) and would release some quantity of nutrient back to the soil. When considering all this, it’s evident that accounting for nutrients needed for a new crop, and how much leaves the field versus what’s left behind, is no small feat.

POGA has committed funds to a project by Principal Investigator Dr. Fran Walley, University of Saskatchewan Department of Soil Science: *Revising the crop nutrient uptake and removal guidelines for Western Canada*. Working with Dr. Walley are collaborators Dr. Rich Farrell, University of Saskatchewan Department of Soil Science, Mr. John Heard, Manitoba Agriculture Food and Rural Initiatives, and Lyle Cowell, Manager, Agronomic Services at Nutrien. The two-year project ends December 31, 2022.

Walley states, “This project aims to develop new estimates for crop nutrient uptake and removal to address: 1) an emerging concern that the current values available can vary widely and do not reflect current crop yields, and 2) that grain and straw nutrient concentration estimates do not reflect current varieties. Additionally, with some soil testing labs no longer providing fertilizer recommendations to accompany their agricultural soil testing results, the need for nutrient uptake and removal information is greater than ever.”

The team already has collected over 1,400 grain samples representing 14 crops from across Manitoba, Saskatchewan and Alberta to analyze nutrient uptake in commercially grown field crops. Additionally, they will collect and compare the new data with existing data from

various sources regarding uptake and removal values, and also take into account the varying objectives from past research projects. They will verify and standardize old data, collect new variety data, and increase the range of nutrients being measured.

“In the past, the uptake and removal guidelines largely were limited to macronutrients (N, P2O5, K2O, S) but increasingly farmers are questioning micronutrient requirements. The expanded suite of nutrients that we plan to include in the revised guidelines will help farmers anticipate and determine the need to include micronutrients (Cu, Zn, B) in their fertilizer strategies,” says Walley.

Tangible project deliverables to producers will be:

- revised nutrient uptake and removal guidelines for 14 annual crops and updated values for forage dry matter production (alfalfa, clover, forage grass, barley silage, and corn silage), and
- a user-friendly, on-line and mobile nutrient calculator app.

The project is funded by Western Grains Research Foundation (WGRF); Alberta Wheat Commission; Prairie Oat Growers Association (POGA); Saskatchewan Canola Development Commission; Saskatchewan Flax Development Commission; and Saskatchewan Wheat Development Commission.

Your MOGA/POGA Board at Work

☒ MOGA Provides Input on the Future of Agriculture in Manitoba.

Jenneth Johanson, MOGA director, participated in a recent government virtual session: *Engaging Manitobans on our Agri-Food Industry*, led by Manitoba Agriculture and Resource Development to encourage activities to promote Manitoba farms and food, and to further build public trust. Click on this link for [survey results](https://engagemb.ca/engaging-manitobans-agri-food-industry) (at the webpage [engagemb.ca/engaging-manitobans-agri-food-industry]; click on ‘What We Heard Report’ to open a pdf of the report).

Developing Oat Varieties in Canada's Mega-Environments

Redefining 'Location' for Varieties and Agronomy

Everyone knows Canada is a large country and growing conditions, including soil and other factors, vary significantly from east to west and north to south. Producers, and other Oat Scoop readers, are also aware of oat's reputation as a healthy food source (primarily, but not exclusively, due to beta-glucan (β -glucan) and other soluble fibers). Currently, the oat industry is focussing on variety development that addresses improvements to grain yield, groat, β -glucan, groat oil content, protein content, test and kernel weight, and disease resistance.

POGA understands the importance of on-going varietal development and research to learn more about all factors that affect production, processing and health-related issues. That is why oat growers are supporting the 2018-2023 *Breeding, genomics and agronomy research to improve oat yield and quality* project, which is led by Dr. Weikai Yan, Agriculture and Agri-Food Canada (AAFC) Research Scientist. The work is part of a large oat project by the Canadian Field Crop Research Alliance (CFCRA)—AAFC. Dr. Kirby Nilsen (Prairie Oat Breeding Consortium (POBC) lead and AAFC's Brandon Research and Development Centre Research Scientist/Oat Breeder) is collaborating in this project and represents the prairie regions.

First, a bit about mega-environments (ME): in 2020, Yan and colleagues (J. Mitchell-Fetch, A. Beattie, K. Nilsen, D. Pageau, B. DeHaan, M. Hayes, N. Mountain, A. Cummiskey and D. MacEachern) published a research article in *Crop Science* entitled, *Oat mega-environments in Canada*. The researchers determined that it was best to 'group' growing regions into larger areas than long-recognized growing zones/regions. They established that latitude appears to be the main factor differentiating the growing regions and that oat variety development would benefit from first testing across MEs and then testing selected lines in an ME they are likely adapted to. For this project, breeding lines are first tested in breeding facilities throughout various MEs (Ottawa, Brandon, Morden [for diseases only], Saskatoon, and Lacombe).

The research team is also using genomic selection (GS) to select promising, new cultivars, which is based on genetic markers that cover the whole genetic makeup. This is compared with visual selection (the conventional method for cultivar development). GS is conducted by Drs. Nick Tinker and Wubishet Bekele based at AAFC's Ottawa Research and Development Center, who work with the AAFC oat breeders.

Dr. Nilsen shares, "We are growing a test called ENCORE, which is a pre-registration test. Each breeder will submit the most promising lines from the advanced stages of their programs and we will see how well they do across

multiple environments in eastern and western Canada. The best performing lines are then advanced into the registration tests in different MEs (for western Canada, this is the Western Cooperative Oat Registration Trial)."

Nilsen continues, "This is a good example of how public breeding programs collaborate to develop new and improved varieties for producers and the industry for all regions of Canada. We are looking at things like agronomic performance (yield and yield stability), grain quality, and disease resistance."

ENCORE was formed by three public oat breeding programs led by Drs. Weikai Yan, Aaron Beattie, and Kirby Nilsen, respectively. The CFCRA oat project also has a nation-wide agronomic component coordinated by Dr. Baoluo Ma based in Ottawa.

Project objectives focus on:

- developing new oat cultivars with improved yield and quality;
- developing an oat-production guide (cultivar and region-specific production guide on nitrogen rate, method, and planting density if results warrant);
- quantifying the efficiency of genomic selection (GS) versus visual selection, and development of a genotype and phenotype GS data base for use in future oat breeding within Ottawa and Brandon oat breeding programs;
- conducting surveys for different races of crown rust pathogen virulence and host resistance genes; and
- conducting joint oat testing across Canada.

Based on the interim results of the study, Dr. Yan shares: "From what we have learned regarding Canada's MEs, our testing strategy should be adjusted to 1) testing nationally in the preliminary test to understand the specific adaptation of breeding lines, and 2) to test advanced lines in their specially adapted mega-environments." Data collected in the study is being shared with all the participating breeding programs across the country.

Yan also states, "Because GS prediction for yield and β -glucan is generally successful, but high-yielding lines tend to be poor in agronomic and grain quality, it is necessary to modify the way that we do GS by incorporating other key breeding objectives or by combining visual selection for other traits. The latter approach should be cheaper and can combine the merits of both breeders' visual selection and genomic selection."

This project was funded in part by the Government of Canada under the Canadian Agricultural Partnership's AgriScience Program, a federal, provincial, territorial initiative. Funding was also provided by many industry partners.

Update on AOGC Regulatory Review

In the June Oat Scoop, producers were informed about the mandatory regulatory review of the Alberta Oat Growers Commission's (AOGC) regulations. As part of the process, input was requested from eligible producers on proposed amendments to the Alberta Oat Growers Commission Plan Regulation and a five-year expiry extension date to the Alberta Oat Growers Commission Regulation. In addition to the mandatory regulatory review, producers were requested to provide feedback on the conceptual approval to adopt bylaws. Based on feedback, the AOGC board is moving forward with bylaws and the proposed amendments.

Updates will be posted at poga.ca later this fall.

The proposed regulations and bylaws will be brought forward for final approval at the AOGC annual general meeting scheduled for Monday, January 24, 2022. Please check the website for updated information as it becomes available.

Please direct your questions to:
smathieson@poga.ca or (306)530-8545.

Students Really Are the Best Teachers: ♦

Oats Are Healthy and Very Delicious!

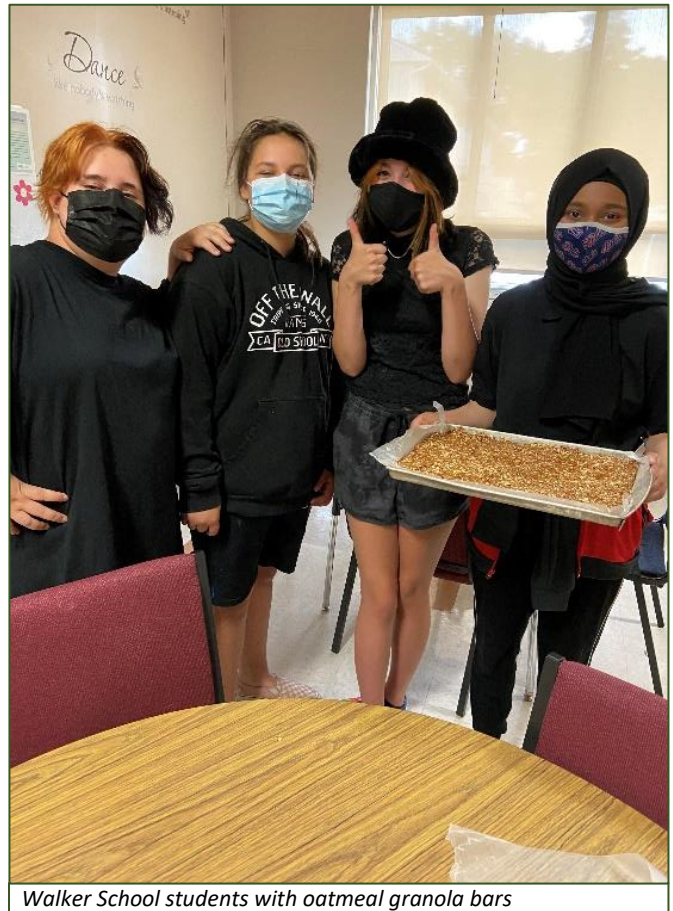
Over the last several years, and in collaboration with Ag in the Classroom (AITC), SaskOats has provided bursaries to Saskatchewan schools to support in-school nutrition programs. Here are the results from the 2021 Nutrition Support Bursary.

First, some undeniable proof of program success straight from an expert. A Grade 5 Student from Clavet Composite School declares: "This is so cool that they give us good things to eat and we get these recipe cards to try out! I am going to try them with my family this weekend."

The Ag in the Classroom team shared the bursary opportunity on their website and also arranged for school divisions to distribute bursary applications to schools with identified need for additional nutrition programs.

Thirty applications were received and eleven rural and urban schools, broadly representing school divisions across Saskatchewan, were selected.

The schools do a great job to promote oats as a healthy food choice for families and the activities happen over a one-week period. At all participating schools, students received recipe cards for Oat Crumble Muffins and Granola Bars to take home.



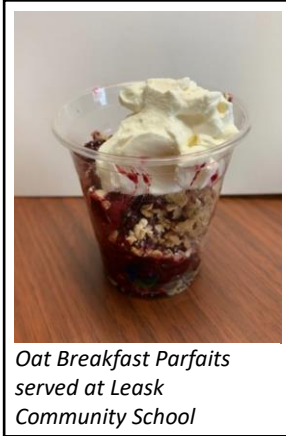
Walker School students with oatmeal granola bars

Activities varied from school to school:

1. King George Elementary School, Saskatoon: 98 students, 30 staff; weekly oat breakfasts, family packages of rolled oats to accompany the recipe cards and oatmeal-raisin ice cream sandwiches for the school-wide play day.
2. Cando Community School, Cando: 60 students, 5 staff; take-home packages of ingredients to make muffins featured in the recipe cards, and muffins and haystacks at school.
3. Dr. Brass Community School, Yorkton: 200 students, 10 staff; purchase of packaged oat-based snacks and fruit for classroom snack boxes.
4. St. Mary's School, Yorkton: 140 students, 22 staff; purchase of cereal and granola for the school breakfast program, and oat packages (instant oatmeal, granola bars, oatmeal cookies, and recipe cards) sent home with students.
5. Walker School, Regina: 240 students, 25 staff; purchase oatmeal cookies for a school-wide lunch day and ingredients to prepare the recipe-card granola bars.

... continued AITC: Students—Teachers

6. St. John Community School, Prince Albert: 33 students, 5 staff; purchase ingredients to prepare the recipe card muffins and granola bars, oat meatballs and haystacks; students were offered breakfast, lunch and a snack item all containing oats.
7. St. Mary School, Regina: 470 students, 24 staff; purchase granola bars for the school-wide snack program.
8. Riverside Public School, Prince Albert. 250 students, 65 staff; provide an oatmeal breakfast and oatmeal-chocolate chip cookies for the school.
9. Leask Community School, Leask: 130 students, 20 staff; purchase ingredients to make oatmeal-raisin cookies, apple crisp, berry crisp, yogurt parfaits, and recipe-card granola bars and oatmeal muffins.
10. WP Bate Community School, Saskatoon: 240 students, 11 staff; purchase oats to be utilized in recipes for the nutrition program including granola bars, muffins, and baked oatmeal; recipe cards and an attached bag of oats was sent home for every family.
11. Clavet Composite School, Clavet: 603 students, 32 staff; purchase packaged oat-based snacks and breakfast cereal.



A teacher from King George School shares: "Being able to provide our families with the ingredients needed to learn how to make these healthy snacks rather than sending premade snacks home is a valuable learning experience. It also helps promote family time, time management, budgeting, literacy, etc. This has allowed our families to learn together and gain some added independence."

Regarding the ag-focused resource material AITC presents to students, a WP Bate Community School teacher explains: "The students were very excited to learn about Saskatchewan agriculture. Many students have not had the opportunity to leave the city and see any aspect of agriculture. The resources and videos were very engaging for the students and they were able to learn a lot. It was an added bonus for the students to receive oats and a recipe to try at home."

One recipient reported, "The grade 6/7 cooking class experimented with using rolled oats in various recipes, including meatballs. Students were surprised that oats could be included in both sweet and savory dishes."

SaskOats director Alan Butuk shares, "SaskOats has been providing bursaries for this AITC program for some time now. With each year, we are pleased to see teachers and students finding new and versatile ways to incorporate oats into meals—for their health impact and great taste. We believe that children influence healthy diets at home and these enthusiastic students are proving just that."

Government Funding May Be Available For Your Farm

Canada/Alberta Driving-Back-to-Work Grant:

As part of the Alberta Recovery Plan, unemployed Albertans can receive ~90% of the costs associated with driver training and testing to become a Class 1 driver (Mandatory Entry Level Training-MELT). Training and testing must be completed by March 31, 2022 and applications will be accepted until all funding has been awarded.

For information and to apply, visit www.alberta.ca/driving-back-to-work-grant-program.aspx

Canada/Saskatchewan Job Grant:

This grant is an employer-driven program to provide businesses with up to \$10,000 to help train employees for available jobs.

For information and to apply, visit <https://www.saskatchewan.ca/business/hire-train-and-manage-employees/apply-for-the-canada-saskatchewan-job-grant>

Canada/Manitoba:

Manitoba jobs grants—applications closed.

Ousting Crown Rust from the Throne

Year 2 Progress Report

Considering the damage it does, crown rust is far from being a king and certainly doesn't deserve to rule the oat fields. The disease causes yield loss and is the leading threat to oat production in Canada and around the world.

The Oat Scoop introduced Dr. Aaron Beattie's project, *Development of markers linked to oat crown rust resistance to help breed improved oat varieties for Saskatchewan producers*, in the 2019 November Oat Scoop. An article on the Year One report was also published in the 2020 November issue and readers can obtain both on poga.ca to catch up on the initial details.

The team has completed year two and report good progress made to date.

Here is a reader's guide to wrap your heads around some concepts and terminology you will encounter:

- Gene mapping locates the position of a gene on a chromosome;
- Quantitative Trait Loci (QTL) mapping is a method used to identify regions of the oat genome (genes) that control, in this case, resistance to crown rust;
- genotyping identifies an organism's unique set of genes;
- phenotyping identifies an organism's observable characteristics, which can be influenced by genotype and/or the environment; and
- *Pc##s* are specific crown rust resistance genes being studied in the project for the purposes of oat varietal development

Resistant genes may defend a plant from a pathogen at the seedling stage but not be effective at the adult stage and vice versa. Nearly 100 crown rust resistant genes (mainly seedling resistance genes) in oats have been identified and reported. However, the crown rust pathogen is quick to develop new races that are able to overcome this resistance in seedlings. Beattie states, "As such, gene pyramiding (*combining multiple genes within the same variety*) and use of adult plant resistance (APR) are considered viable methods to deal with this issue."

Project objectives are to:

1. evaluate crown rust reaction in oat populations (in growth chambers and field nurseries) created from two parents, one parent carrying a specific resistance gene and the other not (in such populations, some of the lines will inherit the resistance gene and other lines will not);
2. perform QTL mapping of crown rust resistance, and
3. convert the markers identified in Objective 2 to high-throughput markers for use in oat breeding programs

to produce varieties with improved crown rust resistance at a faster pace.

Beattie reports, "Phenotyping of populations segregating for *Pc46*, *Pc62*, *Pc67* and one adult-plant resistance gene were accomplished, and QTL mapping was completed for *Pc40*, *Pc46* and *Pc62*. A new population for mapping of *Pc67* was created, a population to be used to map *Pc101* has been advanced to the F4 generation, and one adult plant resistance mapping population has been planted for a third year of phenotyping in 2021."

"The *Pc67* gene does not appear to be an effective resistance gene based on the inability to identify an avirulent (*not virulent or pathogenic*) crown rust isolate (*pure crown rust, separated from all other organisms*). Thus, the gene may not be of value to oat breeders. Understanding which resistance genes are effective is important information for oat breeders as it will allow them to focus on incorporating only those genes which will help protect the crop from infection," shares Beattie.

Results from this project have the potential to affect growers due to greater yield per acre and lower cost of production (reduce/eliminate fungicide use), and affect millers due to increased gains by maintaining grain plumpness and test weight.

The project is supported by Western Grains Research Foundation (WGRF), the Prairie Oat Growers Association (POGA) and the Agriculture Development Fund (ADF) of Saskatchewan under the Canadian Agricultural Partnership, a federal, provincial, territorial initiative.



Visit this Prairie-Focused Website... ♦

To Track Good and Bad Insects

The Western Grains Research Foundation (WGRF) is a farmer-funded and farmer-directed non-profit organization investing in agricultural research that benefits western Canadian producers. It leads the Integrated Crop Agronomy Cluster (ICAC) and POGA committed funds to the 2018-2023 project: *Coordinated monitoring of field crop insect pests in the Prairie Ecosystem*, led by Dr. Meghan Vankosky.

The project was introduced to Oat Scoop readers in the 2021 March issue (page 3); POGA encourages readers to access the article for a full understanding of the project and program.

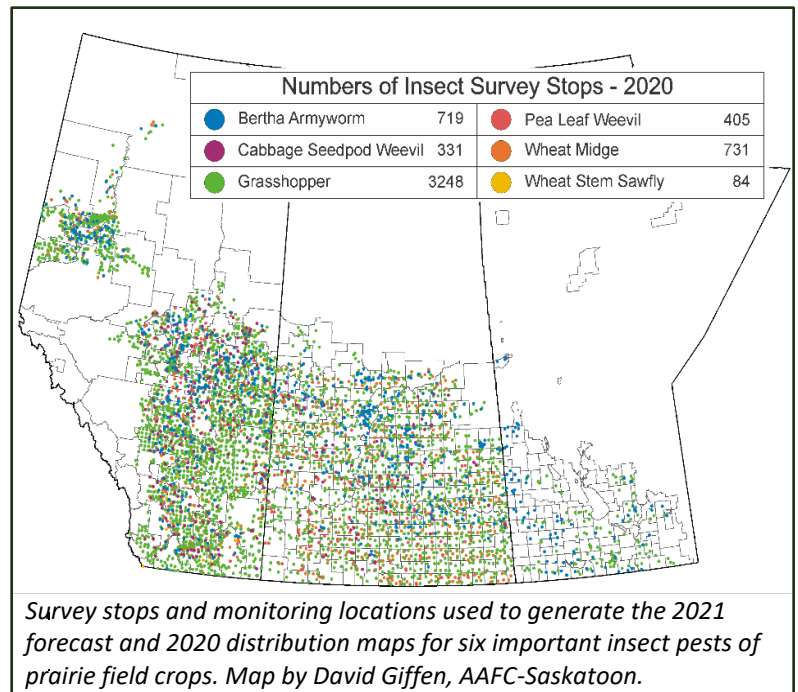
In their Year 3 (2020-21) report to POGA, the team provides updates:

- Annual surveys of seven key pests were completed in 2020 (from 5,518 locations across the three Prairie Provinces).
- Prairie Pest Monitoring Network (PPMN) was awarded a 2021 International IPM (*Integrated Pest Management*) Award of Recognition (at the 10th International IPM Symposium).

Your SaskOats/POGA Board at Work

☑ **SaskOats Provides Feedback on Oats as a Feed Source.** Wade Hainstock, SaskOats director, participated in a meeting with the Canadian Feed Research Centre (CFRC) to provide information and encourage research on the utilization of oats as a feed source. Wade states, "It's important to continue promoting oats to develop and commercialize new and better high-value feeds that ultimately benefit producer returns."

The CFRC is a national feeds research centre established to research, develop and commercialize animal feeds.



- PPMN worked with WGRF to build a website that provides weekly prairie insect information and much more. Check it out and sign up for the weekly updates at prairiepest.ca.
- Weekly updates from April through August were published on the PPMN Blog (and new website). As well, *Insect of the Week* features were published and factsheets are being developed for future postings.
- The team continues to develop model validation and monitoring protocols.
- PPMN engages in on-going outreach activities to highlight the role of natural enemies and make recommendations to conserve natural enemies of field crop pests (i.e., beneficial insects). To learn more about beneficial insects and order your free field guide visit fieldheroes.ca.

Readers can learn more by going to poga.ca/research-results/2021-research.

This project is funded in part by the Government of Canada under the Canadian Agricultural Partnership's AgriScience Program, a federal, provincial, territorial initiative, and Western Grains Research Foundation (WGRF). Industry funders include: Alberta Wheat Commission, Manitoba Canola Growers Association, Manitoba Crop Alliance, Manitoba Pulse and Soybean Growers, Prairie Oat Growers Association (POGA), Saskatchewan Canola Development Commission, Saskatchewan Pulse Growers, and Saskatchewan Wheat Development Commission.

SaskOats-supported 2021 Breakfast from the Farm

Check out the links for CTV
coverage & other info

<https://regina.ctvnews.ca/sask-students-experience-breakfast-from-the-farm-1.5455509> and [FarmFood360.ca](https://www.farmfood360.ca)

Your AOGC/POGA Board at Work

☑ AOGC Tours Alberta Variety Trials.

Nick Jonk, AOGC director, participated in a tour of Gateway Research Organization's Alberta Variety Trial site at Westlock. The trials are testing 11 approved milling varieties to investigate the impact of the variety and growing location on yield and beta-glucan levels. Trials are also being done in the Peace Region. Nick states, "The trials are definitely a good demonstration of how different varieties perform based on location and help producers determine which varieties to grow." The 2020 research results can be found at poga.ca under Projects and Research and the 2021 results will be available later this year. POGA and Grain Millers Canada fund this project.

☑ AOGC Participates in Agricultural Policy Framework. Brad Boettger, AOGC Chair, participated in a meeting with The Honourable Devin Dreeshen, Alberta Minister of Agriculture and Forestry, to bring forward AOGC and POGA priorities for the next National Policy Framework (NPF), which is government funding for agriculture.

Your POGA Staff at Work

☑ POGA Executive Director Advances Oat Producer Interests. Shawna Mathieson participated in several meetings over the summer.

1. Canada Grains Council discussion on maximum residue limits (MRL) and Cereals Canada meeting on MRL guidance.
2. Discussions with Saskatchewan government officials on value-added and trade opportunities for oat producers, in addition to a meeting on POGA international priorities and strategies with government representatives from Japan and China.
3. A national engagement session on the NPF led by Agriculture and Agri-Food Canada, and in an NPF survey for the Government of Manitoba.
4. Input for the next national agriculture policy framework at a meeting with The Honourable Dave Marit, Saskatchewan Minister of Agriculture.
5. Discussions around research and research funding with the officials from the Agriculture Development Fund (ADF), Alberta Results Driven Agriculture Research (RDAR), and the Western Grains Research Foundation (WGRF).
6. Led two sessions with Western Canadian researchers as part of AIMday (Academic Industry Meeting) run by the University of Manitoba. The two questions that POGA posed were approved for pre-study funding from AIMday and POGA is awaiting receipt of full applications from interested researchers. The two questions discussed were:
 - a) How does oat dietary fiber induce changes in gut microbiota function and what kind of health benefits can we see from this alteration?
 - b) What are the health benefits of bioactive compounds found in oats and how can we effectively retain them in oat processing to generate healthy food or other products like cosmetics?

POGA Campaigns Around the World

Renewed Projects Are Off to a Good Start

A new round of funding for marketing campaigns was received and project terms started April 1, 2021. POGA received funding as requested to continue marketing campaigns in Mexico and Japan. A portion of the total amount needed for the Canadian campaign was also approved and POGA has applied to the *Ag Action Manitoba Program for Industry Organizations* for the remainder (which is funded by the governments of Canada and Manitoba). POGA is waiting to hear results of this funding request.

Mexico—Avena Canadiense

The current marketing campaign term runs from April 1/21 - March 31/23 and has already garnered some very good numbers. Circulation (Facebook followers) is at 91% of the targeted key point indicator (KPI) for the two-year project (which was set at 375K) so POGA is well positioned to attain this goal. Traffic tends to slow down during the summer months but August saw increasing numbers again and this is expected to continue into the fall and winter seasons.

The 2021 Avena Canadiense Recipe Contest was launched in May and received over 140 recipe submissions (the highest number of submissions to date). This year, for the first time, the contest featured five distinct categories, including traditional Mexican cuisine, vegetarian, gluten-free, creative recipes and youth. The announcement of winners took place on Canada Day eve in a virtual, awards ceremony, which was streamed on social media.

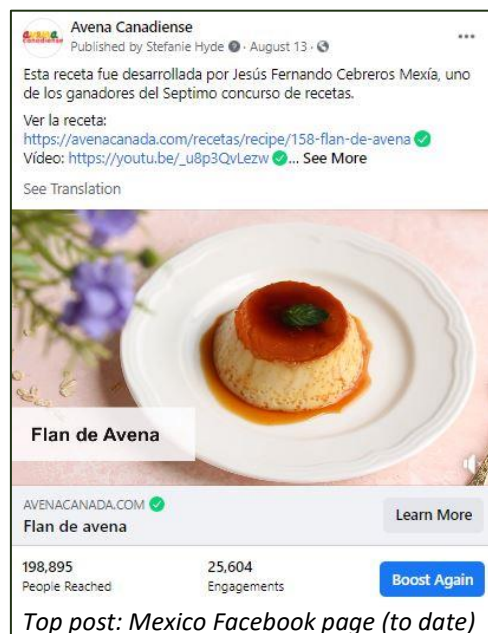
The recipes were judged by a panel consisting of a member of the POGA team, the Mexican Diabetes Federation (la Federación Mexicana de Diabetes), and the Canadian Embassy in Mexico. The panel selected the winning recipes for their presentation, nutritional value and creativity.

The ceremony was opened by H.E. Graeme C. Clark, Canadian Ambassador to Mexico, for the second consecutive year. In addition to noting the similar values that Mexicans and Canadians share in terms of nutrition, he expressed his enthusiasm at the quality and innovation of the recipes proposed and how impressed he was by the way the winners integrated Canadian oats in recipes inspired by traditional Mexican cuisine. POGA President Jenneth Johanson shared: "We are pleased with the excitement the new youth category has generated. Canadian and Mexican youth both have a passion for food and we want our countries to continue sharing new ways to collaborate for generations to come."



Throughout August, the Recipe Contest Live Ceremony peaked with just under 17K video views (an increase from 3.7K video views for the 2020 contest), and a total reach of >166K was achieved (compared to 17K in 2020). This growth is outstanding and is encouraging for future events!

Regular blogger content continues to achieve good response. The first winning recipe from the 2021 contest was published in August: Flan de Avena. This video reached >198K people and extremely positive feedback was received, highlighting how delicious the recipe was when made with oats.



Cross-posting recipe videos across platforms (from the website to the YouTube channel) is now being done once a month to increase traffic on both media locations. The relatively new YouTube channel continues to grow, with >1.6K followers and >5.9K impressions. This can also drive users from one platform over to the other and potentially increase followers for both.

Throughout the years, the Mexico marketing project has produced very good results for Canadian oat exports. However, as most people already know, Canadian oat

... continued **POGA Marketing Campaigns**

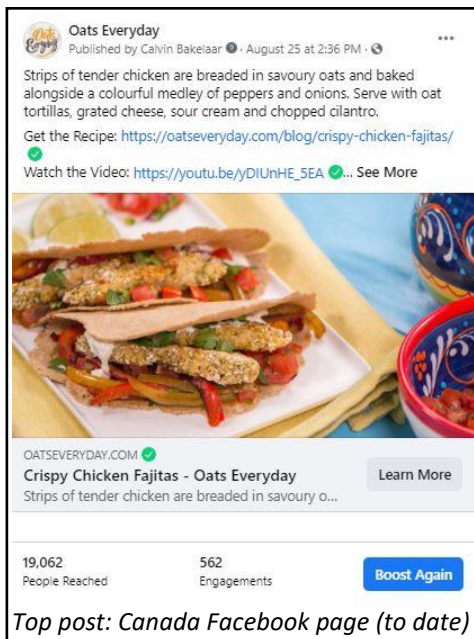
production dropped significantly in 2021 due to growing conditions. With the reduced Canadian oats available, producers are seeing higher prices. However, this has resulted in Canadian market share loss in Mexico, with Australia filling that demand. POGA will closely watch the situation and is hopeful that the 2022 crop will be much larger and Canada's market share to Mexico will rebound.

Canada—Oats Everyday

As of August, the total Facebook followers for the Canadian campaign was just under 50K. Total website and social media views were just under 1.9M, compared to just under 800K at the start of the campaign in 2020.

Recipes (shared in English and French) include mouth-watering selections such as: Mediterranean Stuffed Mushrooms, Cajun Popcorn Shrimp, and Oatmeal Chocolate Chip Skillet Cookies.

People are busy during summer months, but there's nothing like fall weather to send people searching for delicious meal recipes. The April through August recipes received, on monthly average, 18K reach and 1K engagements.



Japan—

Kanadanootsumugi

This renewed campaign also started in April, 2021. Five months into the two-year project, the number of Facebook followers has already attained 60% of the 3,000 KPI. The total website and social media views are sitting at 76% of the 10M targeted KPI.

Olympic-related posts, such as strength-building oat recipes and celebrating athletes, were shared during the summer and were very well received. A special post included information about the heart health benefits of oats; this most successful post reached >2.5K people and achieved >2.8K engagements.

A final Olympic post was shared in early August, talking about athletes' snacking habits. The post included a recipe for oatmeal and fruit cookies, and reached just under 23K people.

People from each country enjoy different styles of recipes. What types of recipes do Japanese people look for? How does Vegetable Oat Stir Fry, Spinach and Chickpea Pancakes, and Thai-style Oat-Crusted Chicken sound? Delicious and, based on activity statistics, very well received by followers!

However, the Japanese are also adventurous cooks, and a recipe video from Mexican food blogger Karla Hernandez was translated and shared with great success. The Matcha Oatmeal Mug Cake is an easy recipe using matcha powder and oat-flour. Matcha is a finely ground powder of specially grown and processed green tea leaves, traditionally consumed in East Asia. The recipe offers traditional flavours, using modern and fast cooking methods (such as a microwave) to better suit the bustling lives of those in Japan. This post reached >25K people.

These projects are funded by Prairie Oat Growers Association (POGA), and funded in part by the Government of Canada under the Canadian Agricultural Partnership's AgriMarketing Program, a federal, provincial, territorial initiative .

Your SaskOats/POGA Board at Work

☒ **SaskOats Tours Milling Oat Variety Trials.** Wade Hainstock, SaskOats director, participated in the annual tour of the Indian Head Agricultural Research Foundation (IHARF). IHARF is collaborating in a project 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 among six commonly grown milling oats will be compared between ideal and late harvest timings at Yorkton, Indian Head, Melfort, and Redvers. Results will be available in early 2022 and this research is supported by POGA and the Agriculture Demonstration of Practices and Technology (ADOPT) program through the Saskatchewan Ministry of Agriculture.

CREAMY VEGETABLE SOUP



Chase off the winter chill with a satisfying bowl of creamy, low-fat vegetable soup. Oats thicken the soup and add additional fiber.

Oat Type: Rolled Oats

Prep Time: 5 minutes

Cook Time: 20 minutes

Total Time: 25 minutes

Servings: 4

Ingredients

- 1 Tbsp canola oil (15 ml)
- 1 small onion diced
- 1 celery stalk, finely diced
- 1 large carrot diced
- 1 Tbsp butter (15 ml)
- 1 clove garlic
- 1/2 cup rolled oats (125 ml)
- 1 cup vegetable stock (250 ml)
- 1 cup corn fresh or frozen (250 ml)
- 1 cup green beans cut, fresh or frozen (250 ml)
- 4 cups milk low-fat (1000 ml)
- 1/2 tsp thyme dried or a couple sprigs of fresh (2.5 ml)
- 1/2 tsp salt (2.5 ml)
- Black pepper freshly ground, to taste

Instructions

1. Heat the oil in a pot or large saucepan over medium-high heat.
2. Sauté onion, celery and carrot until softened.
3. Add butter, garlic and oats and cook, stirring, for about a minute to toast oats.
4. Add stock and stir until nearly absorbed.
5. Stir in corn, green beans, milk, thyme, salt and pepper.
6. Bring to a simmer and cook, uncovered, for 5 minutes.
7. Remove from heat, taste and adjust seasonings.
8. Let stand for 5 minutes and stir before serving. (Soup will continue to thicken.)

Note: if you used fresh thyme, don't forget to remove the stems before serving!

Producer Consent Form

POGA has received requests from international oat buyers to source oats directly from producers. If you are an oat producer in Alberta, Manitoba or Saskatchewan and are interested in being contacted by these companies for potential direct oat sales, head over to the main page at poga.ca, click on and fill out the [Producer Consent Form](#). Your contact info will be included in a list provided to companies inquiring about direct-from-producer sales.



Alberta Oat Growers Commission

Annual General Meeting – Agenda*

**Times and agenda topics subject to change; check poga.ca for updates*

Monday, January 24, 2022

(The Monday before FarmTech)

6:00 pm to 8:45 pm

Location

The Edmonton Westin
10135 100th Street
Edmonton, AB T5J 0N7
Turner Valley 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 Elections/Aclamations 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.

Please RSVP to info@poga.ca to ensure enough food is ordered.

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

If there is demand, AOGC will offer virtual participation.

Please contact info@poga.ca if you would like to participate virtually.

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

Please send any resolutions to smathieson@poga.ca no later than 5 pm December 23, 2021.

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!

Alberta Oat Growers Commission

Director Nominations Open

Are you interested in becoming a director or do you know someone who is?

Here are just a few of the benefits:

- Identify and direct research to benefit the entire industry.
- Increase industry knowledge.
- Opportunity to meet influential millers, buyers and government officials provincially, nationally and internationally.
- Information sharing with other growers.
- Professional development.
- Reimbursement for all travel and honorarium for time spent on Commission projects and committees.

A registered producer means any producer who has had an Alberta Oat Growers Commission service fee deducted since August 1, 2019.

Deadline for nominations is 5 pm MT, Thursday, December 9, 2021.

For nomination forms and further information contact:

AOGC Administration Office, PO Box 20106, Regina, SK S4P 4J7

Telephone (306)530-8545; Fax (866)286-1681; Email smathieson@poga.ca





SaskOats

Annual General Meeting – Agenda*

**Times and agenda topics subject to change; check poga.ca for updates*

Wednesday, January 12, 2022
9 am to 11:30 am

Location

Praireland Park, Hall E
Saskatoon, SK



- 9:00 am **Meet and Greet** with coffee, tea and muffins
- 9:20 am **Opening remarks from SaskOats Chair** – Chris Rundel from Foam Lake, SK
- 9:30 am **Harvest Foods Canada: Oat Milk and the Emerging Industry** – Matt Degelman, President and David Maurer, CFO/Head of Farm Integration
- 10:00 am **SaskOats Annual Business Meeting**** – Chris Rundel, Chair
- 10:20 am **Oat Market Outlook** – Brennan Turner, Independent Market Analyst
- 11:00 am **Adjourn meeting**
- 11:00 am **Social Hour with Free Saskatchewan Beer**

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

SaskOats plans to offer virtual participation. Please contact info@poga.ca if you would like the link and login details to attend virtually.

**Please note: As per prior years, a 30-day notice for resolutions is required at the SaskOats General Meeting.

Please send any resolutions to smathieson@poga.ca no later than 5 pm December 12, 2021.

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!

Your SaskOats/POGA Board at Work

☒ **SaskOats Represents Producers' Interests.** Wade Hainstock, SaskOats director, recently participated in the virtual annual meeting of the Canadian Field Crop Research Alliance (CFCRA). The group is preparing to develop and manage a new national research Cluster (2023-2028) which will include corn, oat, and soybean. The research will focus on *Farm Productivity and Profitability in a Changing Environment* to help deal with climate change, economic growth and resilience in the agriculture sector.

(CFCRA) is a not-for-profit entity with an interest in advancing the genetic capacity of field crops in Canada. The Alliance is comprised of provincial farm organizations and industry partners, including Atlantic Grains Council; FP Genetics; Grain Farmers of Ontario; Manitoba Crop Alliance; Manitoba Pulse & Soybean Growers; Prairie Oat Growers Association (POGA); Producteurs de grains du Québec; Saskatchewan Pulse Growers; and SeCan Association.



Manitoba Oat Growers Association Annual General Meeting – Agenda*

**Times and agenda topics subject to change; check poga.ca for updates*

Wednesday, February 16, 2022

(As part of The CropConnect Conference)

12:10 pm to 1:10 pm

Location

Victoria Inn Hotel and
Convention Centre
Winnipeg, MB



- 12:10 pm **Lunch is Served**
12:20 pm **Welcome from MOGA Chair** – Doyle Penner from Arnaud, MB
12:25 pm **MOGA Annual Business Meeting**** – Doyle Penner, Chair
12:40 pm **O Foods: The Vision and How This New Facility Will Impact Oat Farmers and the Industry** – Richard de Kievit, O Foods Vice-President
1:10 pm **Adjourn**

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

If there is demand, MOGA will offer virtual participation.
Please contact info@poga.ca if you would like to participate virtually.

****Please note:** A 30-day notice for resolutions is required at the Manitoba Oat Growers Association's Annual General Meeting.

Please send any resolutions to
smathieson@poga.ca no later than 5 pm January 17, 2021.

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!

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**and click on
"Sign up to receive
the Oat Scoop by e-mail"**

**We will then remove your name
from the print mail-out list.**



POGA's 24TH ANNUAL CONFERENCE

Wednesday, December 1, 2021 – Fairmont Springs Hotel, Banff, AB

Please join us **on Tuesday, November 30 at 8:00 p.m.** for a **Meet-and-Greet** in Mt. Stephen Hall at the Fairmont Springs Hotel



Want to participate virtually?
E-mail info@poga.ca to register.

AGENDA*

- 7:45 am **Registration & Free Hot Breakfast**
- 8:25 am **Welcome & Introductions** – Jenneth Johanson, POGA President
- 8:30 am **Oat Market Outlook** – Randy Strychar, President, Oatinformation.com
- 9:30 am **POGA Annual General Meeting** – Jenneth Johanson, POGA President
- 9:50 am **Oatly: How They Became the Leader in Oat Milk, Keeping up with Demand and Where They Are Going Next** – Tomas Wennerholm, Oatly Global Oat Supply Manager
-
- 10:20 am **Networking/Coffee**
- 10:45 am **The Influence Factor: How Fake News Impacts Our Perceptions of Food and Our Choices as Leaders** – Kevin Stewart, Farmer, Olympic Television Producer & Media Entrepreneur
-
- Noon **Lunch – Visit Sponsor Displays**
- 1:15 pm **Assessing North American Crop Weather Trends for 2022** – Drew Lerner, President, World Weather, Inc.
- 2:15 pm **Gene Editing Through CRISPR: Possibilities of Decoding and Tuning of Oat Genes** – Dr. Jaswinder Singh, McGill University
- 2:45 pm **Oat Production Development, What Consumers Want, What's Being Tested, and the New Possibilities and Challenges Ahead** – Dana Gibson & Maynard Kolskog, Certified Research Chef, Northern Alberta Institute of Technology (NAIT), Centre for Culinary Innovation
-
- 3:15 pm **Networking/Coffee**
- 3:45 pm **Stress Defense: Combat Tips to Help You Move from Stress to Success in Your Farm/Business** – Michelle Cederberg, Author, Coach, Health and Productivity Expert
- 5:00 pm **Wrap-up & Adjourn** – Jenneth Johanson, POGA President
-
- 5:45 pm **Social Hour** at the Fairmont Hotel
- 6:30 pm **Dinner & Speaker: "A Look at the World through the Eyes of a Saskatchewan Agricultural Technician"** – Quick Dick McDick, A YouTube Sensation
- 8:00 pm **Program Ends. See You in 2022!**

*Times and agenda topics subject to change. For updates, pre-registration and credit card payments, visit poga.ca.

Daytime seminars, breakfast and lunch: \$20.00 (\$25 at door).

Optional Evening Banquet: \$50.00 (\$60 at door).

Call the Fairmont Banff Springs (403-762-2211) or use the link on poga.ca. **The Room Block ends on Tuesday, November 9, 2021**, so book your room today! Mention "POGA AGM" for \$179 rate (+fees).

Please see <https://www.fairmont.com/banff-springs/> for Covid-19 in-person event entry requirements

The Oat Scoop
P.O. Box 20106
Regina, SK
S4P 4J7