

# Participatory Plant Breeding

## Spring 2020 Newsletter

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Greetings from The Bauta Family Initiative Team! This newsletter will provide updates on various aspects of our PPB programming as we head into seeding season. We hope all of you and your extended farm families are feeling healthy and safe despite the Covid-19 pandemic. This is shaping up to be a season like none other and we appreciate your efforts to continue selection work on your farms. Of course, if this pandemic has affected your ability to participate in the program, or if you have questions or concerns, [please contact your Regional Coordinator \(RC\)](#).

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### Staff Update

Many of you will know from her email update last fall that Michelle Carkner is no longer coordinating this program. She is now in a PhD program with Dr. Martin Entz at the University of Manitoba to conduct research about adaptations to organic growing conditions in the farmer populations. Since September, Martin has been processing populations and doing the coordination work, with help from his lab team. The plan is to hire a new coordinator to manage the common garden sites and seed increases and distribution. Please communicate either with [your RC](#) (for broader questions about the program) or directly with Martin (for seed increases).

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### 2020 Potato Update

AAFC in Fredericton—the site of our common garden for PPB potato materials—has been shut down due to Covid-19. They do not anticipate planting a common garden plot for evaluation this year, expecting it will be possible in 2021. AAFC is investigating the possibility of increasing small amounts of the tubers sent in by farmers last year. This may be possible in a greenhouse facility that would allow them to provide a basic back-up of the tubers, though not enough material to do a full replicated trial in 2021. The work you do on your farm this year to preserve the selections you have been working on is very important. If you have selections you would like to submit for evaluation in 2021, please make sure to plant enough this year that you will be able to send about 90 seed pieces next year for a full replicated trial. We are currently investigating options to preserve your selections through a tissue culture process, and will keep you posted on this.



*Potatoes being grown in to make new crosses, for newly funded PPB potato project in collaboration with the Consortium de Recherche sur la Pomme de Terre du Québec (CRPTQ).*

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## 2020 Wheat and Oat Update

The University of Manitoba has been shut down due to Covid-19. Martin and his team recovered cleaned seed from campus before the shut down, and sent it to farmers. If you were expecting seed from Martin and did not receive it, please [contact your RC](#). No new crosses were or will be sent out this year. Martin made the decision to prioritize sending out the cleaned seed of farmer selections, as well as the bulked-up seed service, rather than new crosses. We hope that there will be an opportunity to send out new crosses for 2021. Common garden sites for wheat and oat evaluation will go ahead in 2020. So far, sites have been confirmed on the prairies and in Quebec, and new protocols have been put in place to ensure the safety of staff and farmers in the context of Covid-19. See the attached update (end of this document) from Martin for more details of the wheat and oat research activities in 2020.

On April 3rd, 2020, there was a PPB Farm Club meeting held via Zoom, hosted by Prairie Regional Coordinator, Iris Vaisman. This was the second time we held a Farm Club meeting over Zoom (a user-friendly webinar platform that allows for a little more interaction, which you can join online or by phone). During the meeting, Martin (1) provided big picture program updates, including some exciting future directions for the program; (2) reviewed some data from the common garden sites located in Western Canada, showing some very promising results from farmer-selected lines; and (3) answered farmer questions.

We also heard from PPB farmers Alison Squires (PPB wheat, Saskatchewan) and Jim Grieshaber-Otto (PPB wheat, British Columbia), who talked about their farms, the ups and the downs of their experience with the PPB program, and where they see things going in the future. There were lots of great questions and discussions, and we hope you can join us for the next one. We hope that these Farm Clubs serve as good opportunities for PPB farmers to receive updates about the program, but also share and learn from each others' successes and challenges. An email will be sent out to the group with the details for the next meeting.

The call was recorded and can be [accessed here](#), along with the power point presentations. If you have any trouble accessing this file, please email [shughes@weseedchange.org](mailto:shughes@weseedchange.org).



*LEFT: Plot where farmer-selected Ladoga Wheat is being bulked up for the farmer-breeder. RIGHT: The Carman (MB) common garden site.*

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## PPB Composite Crosses

Those of you who attended the PPB Farm Club meeting heard about an exciting next step in the PPB wheat and oat work. Now that many farmer selections have been sufficiently advanced and some evaluation data collected, Martin plans to make composite crosses from the farmer selections to create highly diverse, "climate smart" populations available for distribution to farmers who are interested in doing further experimentation and selection. The composites would be created by combining, for example, seed from the F3-F5 generations of 3- 4 farmers' populations. This work begins this year at Carman, where Martin is bulking up the populations he plans to use in the composites. More information on this will be available later in the year.

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## New graduate student conducting PPB research!



Meet Iain Storosko, who is doing his M.Sc. in geography at Carleton University in Ottawa. Your RC may put you in touch with Iain later this spring. He is interested in conducting interviews with PPB farmers to explore how they find value in participatory models for crop breeding and which areas of a farmers' business this work benefits the most. Specifically, the research will investigate the methods deployed by farmers to select for desired crop traits; what selection methods prove the most effective and under what conditions; and how developing selected seed varieties on your farm contributes towards sustainable land-use and beneficial business practices in organic farming. Iain has received a scholarship from MITACS to support his study program. The Bauta Initiative has received funding from the Organic Farming Research Foundation to support Iain's field research.

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## New Policy Analyst for The Bauta Initiative

Many farmers involved in the program, who have now completed several years of selection, have naturally been wondering what they can do with their material. As the University of Manitoba team has advised, you are welcome to continue to use your seed on-farm, but you are not allowed to sell your PPB material as seed unless it has gone through the variety registration process. This is a complex process and to help us provide clear and accurate guidance on what to do with farmer-bred material, we have hired a Policy Analyst for The Bauta Initiative.



Christopher Kelly-Bisson is a PhD candidate at the University of Ottawa in Political Science, specializing in political economy, agroecology, and food systems, and he has several years of organic vegetable farming experience. He will be working on a guide that will help us understand all of the commercialization options for farmer-bred PPB material and we hope to have it ready for you this summer. We will also be seeking farmer guidance on developing a policy position to the federal government that would make it easier for farmers to formally register material that they have developed on their own farm. Please feel free to direct any policy questions you have regarding your material to Christopher at [ckellybisson@weseedchange.org](mailto:ckellybisson@weseedchange.org).

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### Stay Tuned...

Data was collected on dozens of populations of wheat, oat, and potato, from six common garden sites in 2019, located in the Prairies and Atlantic Canada. The wheat and oat data is from fully replicated trials. For the potatoes there was not sufficient material for a replicated trial, so the data is more descriptive than quantitative. All data is being reviewed and synthesized currently and will be shared as soon as possible. We will include highlights of this work, and links to full reports in the next PPB Newsletter.