## 2025 Oat Day at the Ottawa Research and Development Centre (ORDC), Agriculture and Agri-Food Canada (AAFC), Ottawa.

On July 15th, 2025, AAFC's eastern Canadian oat breeder Weikai Yan and I, along with other oat team members, hosted Oat Day on the Central Experimental Farm in Ottawa. This year, we were pleased to be joined by Kirby Nilsen (AAFC's western Canadian oat breeder) and his technician Kali Stewart. They travelled from Brandon, Manitoba, to be with us. Geneviève Telmosse, crop management specialist at Quebec RDC, AAFC, in Normandin, also travelled some distance to be with us. People from many different stakeholder groups and AAFC programs were present, with representatives from the Bauta Family Initiative on Canadian Seed Security and Anderson Farms being new to the tour this year. Two journalists also attended.

## The plot tour included:

- 1. Early generation visual selection Hill nursery
- 2. Visual selection plot nursery
- 3. Seed plots
- 4. Yield trials comprehensive selection
- 5. Breeder Seed plot of OA1689-11 (proposed name: AAC Dwyer)



ORDC Director RDT Jay Parsons delivered the opening remarks



Weikai described his early generation selection protocols in front of 13,000 hill plots



Touring the Observation plot nursery





Kali won the race to find the first crown rust! And Yuanhong Chen educated people about it.



Over into the seed plots



Checking out the yield plots



Austin Bruch showed people how to tell naked and covered oats apart



Breeder seed plot of the new variety 'AAC Dwyer'

The weather was extremely hot and there was wildfire smoke in the air, so everyone was quite happy to get back inside for an early lunch. This year's main course featured <u>Mom's Meatloaf</u>, <u>Garden-Style Turkey Meatloaf</u>, <u>Oatmeal Veggie Loaf</u> (all made using oats), and various side dishes. Dessert included <u>Grandma's Oatmeal Pie</u>, oat "ice cream" from <u>Oat & Mill</u>, and other oat-based frozen treats from <u>SNÖ</u>, which also makes gluten-free cones.

During lunch, there was a slideshow tribute to <u>George Fedak</u>, who passed away in June. The ORDC variety <u>'AAC Fedak'</u> was named after him.

(story continues below...)



Lunch is served!



All settled in for an afternoon of talks and discussion

The afternoon featured talks and discussions about various aspects of oat research being done in Canada:

- Phil Bailey/Jeff Reid, SeCan "Oats in Eastern Canada from the growers' viewpoint"
- Weikai Yan, ORDC "Performance of Current Oat Cultivars in Ontario and Quebec"
- Kirby Nilsen, Brandon RDC "Western Oat Breeding and AAFC's National Program"
- Nick Tinker (HRA), ORDC "The oat pan genome and global diversity. What does it mean for oat improvement?"
- Charlene Wight, ORDC "Oats in the context of agrobiodiversity"
- Mehtab Singh, McGill U (PhD student with Jaswinder Singh) "Oat joins the CRISPR club: A breakthrough for oat breeders"
- Cecily Costain, ORDC (PhD student with Wen Chen) "Improving drought stress tolerance in field crops through phenotyping and metagenomics"

Austin Bruch, an independent agronomist from southern Ontario, also had a table with examples of varieties of oats that had made it through the southern Ontario winter. He spoke briefly about the results of some of his experiments.







Jeff and Phil from SeCan, which represents seed growers and processors, spoke about public *vs*. private breeding and what the growers want in their oats. Weikai and Kirby both described their breeding programs and various lines that looked promising. Weikai's breeding scheme can be found <u>here</u>, and Kirby's <u>here</u>.





Wubishet (Wubi) Bekele was not available to speak about the most recent genomics work, so Nick (now retired from AAFC) stepped in. The work described included AAFC's contribution to the creation of a pan-genome for oats (the PanOat project).



We were pleased to welcome Mehtab back to ORDC, after his internship with us earlier in the year. He described his success in using CRISPR technology in oats.

I discussed the work being done as part of the European **CROPDIVA** project and spoke on the history of using oat wild relatives in Canada, and Cecily gave us an update concerning her work on microorganisms in the oat rhizosphere.



The efforts of the Communications Team from AAFC's Public Affairs Branch resulted in quite a bit of interest from the media this year. One of the resulting stories can be found here.

Please write to me or the authors if you would like to know more about the presentations. If you would like to attend Oat Day next year, please get in touch with me or Weikai. Everyone is always welcome!

-Charlene Wight (with additional photos from Asuka Itaya and Weikai Yan), 2025.