



Dr. S. Shea Miller retires from Agriculture and Agri-Food Canada

Shea Miller retired from AAFC on April 17th, 2019. The following is condensed from one of the speeches made at her retirement party:

“Shea did her BSc in Microbiology at the University of Guelph. After her BSc, Shea took a job as a lab technician at the National Research Council in Ottawa for almost 3 years. During that time, she attended a seminar by Gary Fulcher (then working at Agriculture Canada) on fluorescence microscopy of cereals, and fell in love with microscopy.

Under Gary’s supervision, Shea did an MSc and a PhD in Biochemistry at the University of Ottawa. The MSc was on acyl hydrolases in oats (*Avena sativa*), with Illimar Altosaar as the co-supervisor, and the PhD was on oat β -glucans, looking at biochemistry, structure, and genetic variation, with Thor Arnason as the co-supervisor.

After her PhD, Shea started work as a term research scientist with what was then AAFC’s Centre for Food and Animal Research (CFAR) on the Central Experimental Farm (CEF) in Ottawa. During her work there, Shea and her research assistant Denise Chabot did a great deal of slicing and staining for microscopy studies. They investigated wheat, barley, and oats, of course. There were also odd projects with things like microwaved mint leaves or mozzarella cheese that challenged their creative minds. The sink in their lab was a testament to their hard work, being forever stained with the many dyes that they used!

CFAR disappeared during a restructuring of the department, and Shea was transferred to ECORC (the Eastern Cereal and Oilseed Research Centre, now ORDC), still on the CEF. Once a part of that centre, Shea was introduced to the “*Fusarium* club”. First, Lana Reid asked her to look at the *Fusarium* infection process in corn (along with the chemistry of wax composition in different genotypes). Linda Harris then contributed to that collaboration by bringing a strain of *Fusarium* transformed with Green Fluorescent Protein to the centre, which greatly facilitated Shea’s studies of the infection process!

The work on corn was followed by studies on the infection processes in wheat and barley, and Shea has been working on mechanisms of resistance to *Fusarium* ever since. During her career, though, Shea also maintained her love affair with oats, doing some nice work with the Quaker Oats Company and the oat group at this research centre, looking at milling quality, groat hairiness, and diversity in diploid, tetraploid and hexaploid *Avena* species. She also continues to serve as a member of the editorial board of the Oat Newsletter.

Still, Shea was not always faithful to her two main scientific loves, oats and *Fusarium*. There was a foray into seed coat development in soybeans with Brian Miki and Doug Johnson (which is not over yet), and a study on microencapsulation of probiotics and essential oils....



During her career, Shea worked with five research assistants: Denise, Sue Winter, Nadia McGoldrick, Eva Watson, and Mehri Hadi Nezhad. She took exceptional care of her staff, supporting them when they were going through difficult personal situations and consistently encouraging their professional growth. Shea is also always ready to help friends, which she has in large number.

Happy retirement, Shea! Bonne retraite!

-Thérèse Ouellet.”



Shea, in blue, surrounded by friends and colleagues.



Some interesting stories were told...



The rebuttal....



Shea received a scarf printed with some of the beautiful images she produced during her career.