

Graduate Spotlight: Janna Moats

Got milk?

The farm-to-fork connection that is changing the face of dairy

BRITTANY STEVENS

Growing up on a mixed farm outside of Regina, Sask., inspired a passion for agriculture in Janna Moats at an early age.

The first in her immediate family to obtain an agriculture degree at the University of Saskatchewan, Moats' interest in animal nutrition was sparked by her experience working on a variety of dairy farms. Seeing the direct connection between what animals eat and the human benefit, she knew she wanted to learn more.

After completing her undergraduate degree (BSA) in animal science in 2012, Moats accepted a research position with the feed manufacturing company O&T Farms in Regina.

In this role, Moats provided technical support to customers and helped co-ordinate research initiatives. Inspired to use her skills to build on her own passions and interests, she returned to the U of S in 2013 to pursue graduate studies in ruminant nutrition.

Moats' research is a collaboration between the College of Agriculture and Bioresources and O&T Farms, with additional funding from SaskMilk and the National Research Council. Under the supervision of David Christensen and Timothy Mutsvangwa in the Department of Animal and Poultry Science, Moats examines how the nutritional value of milk is affected when dairy cows are fed a supplemented flaxseed diet.

Canada is the world's largest producer of flaxseed, producing nearly 40 per cent of the global yield. Flaxseed contains high levels of omega-3 fatty acids, which are known to benefit both animal and human health.

Using Holsteins from the U of S herd, Moats compares benefits of feeding cows a control diet and those fed diets supplemented with unprocessed or extruded flaxseed products.

Having seen an increase in omega-3 fatty acid content in milk when cows were fed the extruded diet, Moats is encouraged by the initial results and is hopeful the final outcome will lead to development of value-added dairy products in Saskatchewan.

"I truly believe our province has the potential to become a leader in the omega-3 dairy product production," said Moats. "Implementing extruded flaxseed into the diets of dairy cattle could benefit all levels of the supply chain by creating new markets and increasing the availability of essential nutrients for consumers."

Last July, Moats presented her research at the American Dairy Science Association's joint annual meeting in Orlando, Fla. Her presentation earned her first place in the three-minute thesis competition and second place in the graduate student research poster competition. The opportunity granted her invaluable exposure and helped showcase Saskatchewan's agricultural presence on an international scale.

"Having our research receive that kind of international recognition was such an exciting and humbling experience," she said.

Moats is the recipient of many awards and scholarships. Notably, she received the Saskatchewan Innovation and Opportunities Scholarship, awarded to graduate students whose research topics are thought to enhance the province's agriculture industry.

Building on the relevance of the farm-to-fork mentality, Moats hopes to apply her knowledge to developing innovative animal feed programs to improve animal performance as well as the nutritional value of food products for consumers.

"The impact animal nutrition can have on the quality of the food we produce has always been an area of interest for me," she said. "Combine this with the importance of consumer nutrition, and it's easy to see that this research opportunity was a natural fit." ■