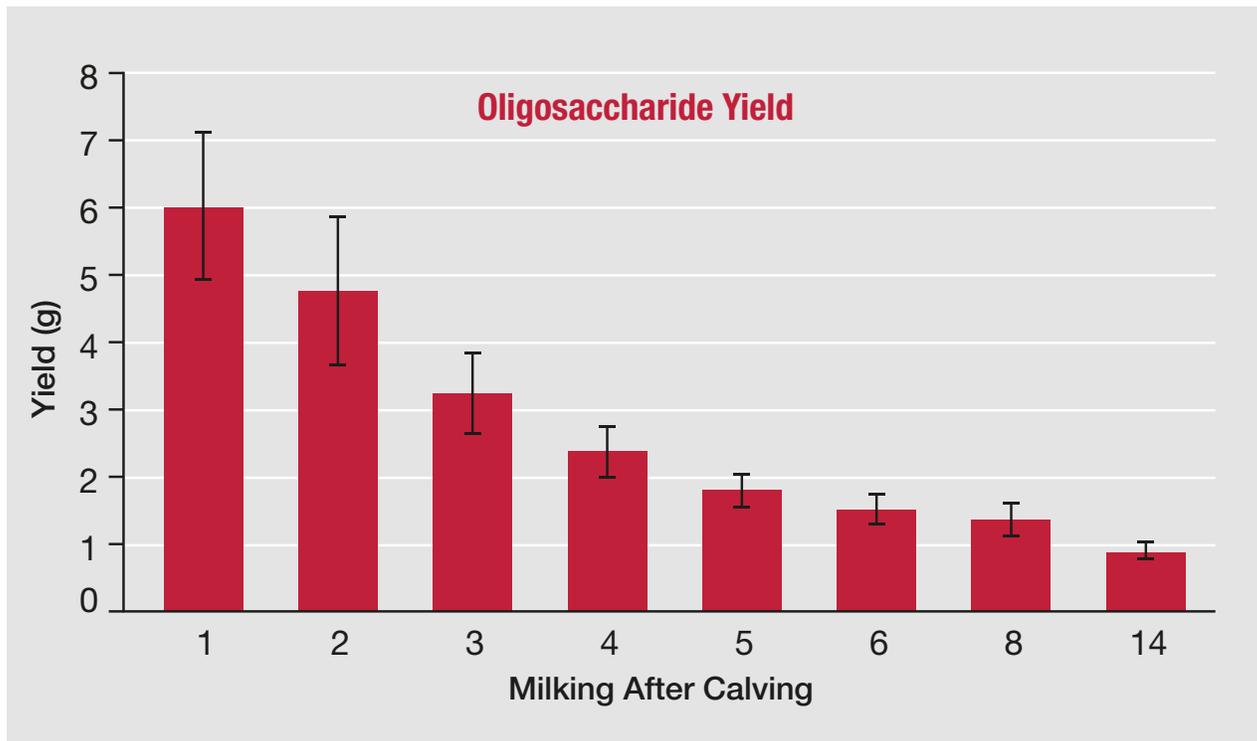


# Identifying opportunities to improve calf health with transition milk

Prebiotics in transition milk could promote a healthier gut microbiome in calves



By Dianne Priamo and Kathryn Kroeze

**A** new University of Guelph study suggests that dairy farmers feed newborn calves milk from their mother for several days after colostrum feeding to help ensure health and prevent disease.

Dr. Michael Steele, a professor in the Department of Animal Biosciences in the Ontario Agricultural College, and graduate student Amanda Fischer-Tlustos looked at oligosaccharides — carbohydrates that act as prebiotics to stimulate healthy bacteria — in transition milk of cows on a commercial dairy farm.

They looked at cows that had given birth once, primiparous, or

multiple times, multiparous.

It's known that prebiotics can help support growth of certain gut bacteria, but researchers don't know their precise function in calves.

"There's a lot of these oligosaccharides present not only in the colostrum but also in subsequent milkings," says Steele. "If transition milk is not fed, these prebiotics aren't being delivered to the calf."

Like other mammals, cows produce colostrum, the first milk that is rich in nutrients and antibodies, immediately after giving birth. On most farms, after this first meal, calves are switched to a milk or milk replacer diet. Following colostrum with transition milk could improve calf health, says Steele.

Digestive sickness stemming

from imbalances in gut bacteria occur in about half of calves worldwide. Delivering prebiotics could promote a healthier gut microbiome in the first week of life and lower calves' susceptibility to disease.

Steele plans to learn what role prebiotics play in the calf gut and how they might improve calf health.

"We're going to do a series of further experiments to learn more about these oligosaccharides," he says. "It's possible that they could significantly improve newborn calf welfare."

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For more information, contact Dr. Michael Steele, Department of Animal Biosciences, at [mastelee@uoguelph.ca](mailto:mastelee@uoguelph.ca).

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