

# Ontario dairy farmers abroad

Wendy Holm, P.Ag.  
Rural Voice

## SUSTAINABLE DAIRY CIRCLES IN CUBA

Picture this: 30 hectares of rotational pastures fanning out like rays of the sun from a central milking parlour. Atop the parlour, solar panels to charge the electric fence that creates the micro-pastures. In the inner circle separating the parlour and the pastures is shade and water for 50 dairy cows.

In the lower quadrant of the circle, the electric fence is replaced by 1.5-metre high hedges of legumes nestled under a tent of page wire, creating a 5 star dining room for fresh cows in their first 130 days of lactation. Sitting atop a gentle rise to the west is a simple greenhouse structure with open sides containing large blue vats of aquatic plants. Behind is a concrete holding tank, in front two large, clay-lined lagoons. Sewage from nearby urban residents is pumped into the holding tank where it is aerated and mechanically broken down before being filtered thru the battery of aquatic plants at a rate of seven to 10 litres per second. After processing, the nutrient-rich effluent is stored in the lagoons until needed to gravity irrigate the dairy circle's highly productive grasses and legumes.

The site of the project is the peri-urban agriculture zone surrounding the city of Bayamo, in Cuba's drought-prone province of Granma. The date is May 17, 2010 – three years from project start.

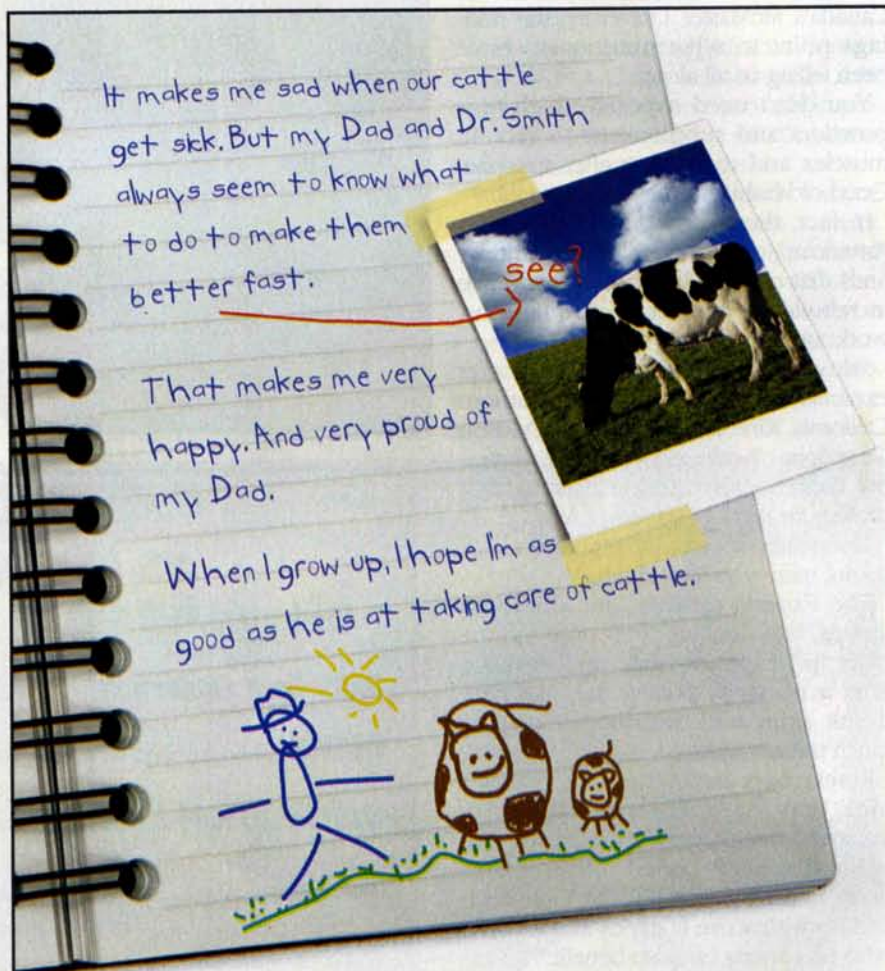
By extracting and processing raw sewage before it enters the river, this project will also reduce pollution, improve water quality, create urban green space along what is now an open sewage canal, and reduce Bayamo's ecological footprint.

Affectionately dubbed "shit to milk" by the Canadian members of the project team, the Bayamo model is the peri-urban counterpart to our soon-to-be-completed rural pilot.


Supported by the Canadian International Development Agency and Vancouver-based NGO Sustainable Cities, the objective is to create an environmentally sustainable model that will allow Cuba to become self sufficient in dairy production. Prior to the collapse of the former Soviet Union, Cuba produced all the milk needed by its population. Today, Cuba imports more than \$70 million a year in milk powder and dairy equivalents to meet the nutritional needs of her people. Cuba is also reliant on imports of corn gluten from the U.S. — a by-product of the ethanol industry — to supplement the diet of their dairy cows.

The success of the project is unquestionably its farmer-to-farmer roots; without the

initial leadership of Canadian dairy farmer volunteers Bruce Beattie (Alberta), Lorne Hansen (B.C.) and Jim Millson (Ontario) and the active ongoing involvement of Jim, his wife Gladys, daughter Morgan and soon-to-be son-in-law/rural electrician Darryl Donneral, this work could never have been contemplated. Farmers, by their nature, are builders of capacity. This international project of cooperation is a fine demonstration of how a few dedicated people can, indeed, make a difference. As a Canadian Agrologist, it is a truly beautiful experience to have the opportunity to lead this work.



The next time your cattle get sick,  
ask **your** veterinarian about Nuflor.

 Schering-Plough

**Nuflor**  
FLORFENICOL  
It just makes sense.

