

# Agri-food for thought

A newsletter from the George Morris Centre

CANADA'S INDEPENDENT AGRI-FOOD THINK TANK



## Conversion of water drinkers promotes environmental sustainability

*A simple, low-cost technology creates economic and environmental benefits for hog producers.*



Beth Sparling,  
Research Associate  
Environment



Cher Brethour,  
Sr. Research Associate  
Environment

## Welcome new members

### Policy Circle:

Jeff Brown  
Meridian Credit Union

### Friend:

Joe Chomistek  
Chomistek Consulting

John Wilkin  
Allied Associates LLP,  
Chartered Accountants

### Mark Your Calendar!

Annual General Meeting  
Holiday Inn, Guelph  
September 27, 2006

### Educational Programs

Applications are still being accepted for the 2006-2007 Executive Development Program (EDP)

The first session takes place October 11 - 4, 2006 in Halifax, NS

For registration information please see page 4

Hog producers searching for ways to reduce water consumption, greenhouse gases, and operating costs should look no further than a demonstration farm in Southern Alberta.<sup>1</sup> A recent study conducted on the farm involved the practical and economical replacement of standard water nipple drinkers with ball-bite nipple drinkers in a 3,000 head commercial grower barn operated by Dennis and Maggie McKerracher. Ball-bite nipple drinkers reduce water usage because the pig must have the whole valve in its mouth and then bite down to release water. In contrast, a pig can easily release water from a standard drinker by simply nudging the drinker, thereby wasting water and increasing manure volume (note water dripping from pig's mouth in photo).



Over the course of the one year trial, the ball-bite drinker sections of the barn used 35% less water than the standard drinker sections, as measured by the farm's water monitoring system. Thus, it was evident that ball-bite drinkers saved water. The real question was how much money did they save?

Research conducted by the George Morris Centre compared the demonstration farm's net income with and without the installation of the technology. Financially, replacing standard drinkers with ball-bite drinkers proved to be an excellent return on investment. The initial cost for the purchase of ball-bite drinkers (\$12.60 each) was higher than for standard drinkers (\$6.90 each). However, the decline in water usage on the farm resulted in decreased manure volume (estimated to be 35% lower), decreased manure handling costs, and reductions in electricity costs for pumping water, which more than offset the capital cost of the drinkers. The technology required no change in infrastructure or management techniques. Our research suggested that replacing the standard drinkers with ball-bite drinkers resulted in a payback period of approximately 3.5 months and an increase in annual net income of \$1,584 on a \$463 investment. The analysis was based on an operation with 500 pigs per cycle and 1 nipple drinker for every 15 pigs.

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<sup>1</sup>The demonstration farm project was supported by Alberta Agriculture, Food & Rural Development, Alberta Pork, the Canadian Pork Council, Climate Change Central, and the Greenhouse Gas Mitigation Program.

# Educational Programs

**Executive Development Program (EDP)** - four-module program for agri-food professionals, open to senior managers throughout the supply chain. Participants will develop a strategic business plan for their operation. Includes tours of exemplary operations. Tuition: \$6,500.

Module 1: October 11-14, 2006 - Halifax, NS  
Module 2: November 29 - December 2, 2006 -  
Niagara-on-the-Lake, ON  
Module 3: February 14-17, 2007 - Calgary, AB  
Module 4: May 2-5, 2007 - Vancouver, BC

**Canadian Total Excellence in Agricultural Management (CTEAM) 05-07** - a comprehensive, four-module program, sponsored by Farm Credit Canada. Assists agricultural managers in the development of a complete strategic and operating plan for their business. Tuition: \$5,000 or two annual payments of \$2,500, \$3,000 for second person from same operation.

Module 1: March 7-11, 2006 - Banff, AB  
Module 2: November 28 - December 2, 2006 -  
Niagara-on-the-Lake, ON  
Module 3: January 30 - February 3, 2007 - Halifax, NS  
Module 4: March 20-24, 2007 - Ste. Adèle, QC

**Introduction to Commodity Risk Management Using Futures and Options** - a four-day program on the basic principles of managing price risk for buyers and sellers in the agri-food sector, 2007 - TBA. Tuition: \$1,295.

For further information on membership and educational programs, contact Lynn Punnett at (519) 822-3929 x 204, [lynn@georgemorris.org](mailto:lynn@georgemorris.org) or visit [www.georgemorris.org](http://www.georgemorris.org)

If you no longer wish to receive Agri-food thought, please contact Lynn.

The technology is applicable to all types of swine operations, including all sizes of piglets and sows. Our financial results can easily be extrapolated for grower and finishing operations of different sizes. However, the financial results would vary for farrow-to-finish operations because each individual sow would require a ball-bite drinker.

In addition, there were significant non-financial benefits from the technology, such as reduced water consumption and greenhouse gas emissions from fewer manure applications. There were also barn management benefits from knowledge of water consumption patterns, such as early disease and illness detection as well as identifying water leaks in the system.



Barriers to adoption of ball-bite drinkers appear to be initial cost and lack of familiarity with the technology. These concerns can be alleviated through government and industry communications such as fact sheets, articles in popular producer media, and presentations at producer meetings, as well as through ensuring product

availability and promotion by suppliers. The George Morris Centre analysis provides further evidence, illustrated in this simple example, of the benefits of ball-bite drinkers to the farm business:

*Buy 6 or 8 pigs less in your next batch, invest the \$500 to install ball-bite drinkers for 500 pigs, and more than triple your money in less than a year. It's highly unlikely that the 6 or 8 pigs would triple your money. Moreover, the annual profit on the ball-bite drinkers will carry on for years without further investment - a passive investment that keeps on earning for you.*

Overall, the strength of this technology lies in the fact that it is simple, environmentally friendly, and profitable. ■

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## Our mandate

*To provoke informed dialogue on policies and issues, and to foster excellence in the agri-food sector.*

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