

## Role of each partner

**Alberta Research Council Inc. (ARC)** managed the project on behalf of Precarn Incorporated and supplied its expertise in sensor technology.

**Ovistech Corporation** adapted its real-time software from its human pandemic surveillance system, EpiTrack™ Sentinel, for the FARM project, and designed the remote command and control system, the production system and overall network.

**Harding Instrument Co. Ltd.** provided manufacturing and engineering support. A privately-owned Canadian corporation operating as Harding Instruments, Harding designs and manufactures advanced technology microprocessor-based electronic products and systems.

**Xanantec Technologies Inc.** designed and engineered the wireless sensor system. Xanantec is a privately-owned engineering design and development company, specializing in the development of advanced low power wireless medical sensor systems.

**University of Alberta** was subcontracted to do complex analysis of the data and create algorithms that isolate which cows are sick so the system can send a warning to the user.

**Precarn Incorporated**, through Industry Canada, provided financial support.

## Project highlights

- The idea for the FARM project came when ARC read about Ovistech's EpiTrack™ Sentinel technology, and met with Lloyd Osler to discuss adapting that technology for the cattle industry.
- The FARM project team came together the summer of 2004. The project cost is \$554,000, shared by the participants under the Precarn program.
- With the field trial ending June 2006, the project team is now looking for financial and strategic partners to refine the technology and prepare for mass manufacturing and distribution.

## Technology highlights

- The team sought the advice of several cattle producers and a leading feedlot veterinarian to help define the parameters for the technology.
- Traditional cattle health monitoring involves human observation. This technology tracks key health and production indicators of an entire herd, and alerts the producer when an animal shows signs of becoming sick.
- The web-based system allows the user to check cattle health and production information, and interact with the system anytime, anywhere – even from a handheld device.
- The sensors are designed for two-way communication, therefore each device can be controlled remotely.
- Data collection and tracking is not restricted to one farm – data can be collected, shared and correlated across farms, regions and even nationwide.
- With very small margins in the cattle industry, key drivers are to ensure the technology is affordable, easy to use and efficient.
- The technology uses low cost software and hardware for affordability.

## Cattle industry facts and statistics

- In 2005, there were 15.1 million beef and dairy cattle in Canada.
- Alberta is the largest beef producing province in Canada.
- Alberta is the third largest dairy producing province in Canada.
- In 2004, Alberta's dairy industry contributed \$1.3 billion to the provincial economy.
- Alberta dairy exports were valued at \$5.3 million in 2004.
- 59 per cent of Alberta farms have beef cattle
- The total value of Alberta beef shipments to the U.S. in 2004 was \$1.2 billion.