

2006 Canadian Information Productivity Awards



Merit-Trax Technologies Trax-IT® traceability implementation for Atlantic Beef Products received the Gold Award for Excellence in Innovation at the 2006 Canadian Information Productivity Awards.

Atlantic Beef Products Inc.

Full Traceability System

Where's the Beef? Advanced system Tracks Meat Products From Cattle Farm to Retail Store

Background

Atlantic Beef Products Inc. (ABPI) is a three-year-old company formed to meet the needs of Maritime beef producers for a local beef processing facility. Its roots go back to 1997, when a group of people from the industry - cattlemen's associations, beef producers, the grocery industry and provincial agriculture representatives - first got together to form the Maritime Beef Development & Marketing Group to improve the image of Maritime beef. They subsequently launched the "Atlantic Tender Beef Classic" brand in 2000.

With the Atlantic Beef Producers Co-operative Ltd. as its largest investor and majority shareholder, and Co-op Atlantic and the PEI government as minority shareholders, ABPI was created in January 2003. Construction of the new facility in Albany, PEI, began in December of that year and operations commenced in 2004. One hundred employees now generate an annual revenue of \$25 million.

Challenge

The processing of beef - from live cattle to packaged meat cuts - has historically been accompanied by the manual collection of a large amount of data and the handling of a correspondingly large amount of paperwork, both of which are time consuming and labour intensive.

Inspectors on the processing floor who are inspecting and grading the beef typically carry a clipboard and make notes on paper regarding quality and weight. It can take up to three weeks to process all this paper before cheques can be issued to the beef producers; and with administrative staff having to interpret all these notes and manually enter the data into inventory and accounting systems, there is risk of error.

Food quality and safety, including the traceability of the meat in the event of a product recall, are also important aspects of beef processing. Even though every animal entering a processing plant in Canada must bear a Canadian Cattle Identification Agency ear tag identifying its herd of origin, it becomes difficult to track an individual animal once it has been butchered into many different cuts of beef and packaged into boxes destined for different customers such as restaurants, meat shops or wholesalers. Being able to provide food safety guarantees to support its premium Atlantic Tender Beef Classic brand makes traceability an especially important consideration for ABPI.

Solution

In conjunction with implementing its new meat processing line in October 2005, ABPI implemented a sophisticated enterprise information management system that integrates plant and warehouse management and provides 100-per-cent traceability of individual cuts of meat, from the time that animals are received at the plant until the products are delivered to the customer.

The new system is based on a radio frequency (RF) wireless network, RF identification tags and handheld scanners used to capture real-time data from the kill floor, cutting room and warehouse. As each individual animal moves through the facility, identification moves with it - from ear tag to RFID label used to track the trolley hooks

on the kill floor and in the cutting room, to barcode labels on each individual shrink-wrapped package or box of final meat cuts being stored in the warehouse for shipment to customers.

Special software manages and integrates, in real time, the data flowing between the RFID readers, barcode scanners, weigh scales, label printers, cutting room processing system, wireless inspection terminals on the plant floor, and mobile handheld devices in the plant and warehouse. A complete set of data on every animal is stored in a database and used to automate many of the plant's business and logistical processes, including animal reception, plant floor inspection, grading, producer payment, cooler inventory, supplies inventory and shrinkage management.

Results

By collecting animal data electronically, the new system provides significant improvements in process efficiency and eliminates potential errors previously associated with data recording and reproduction. For example, grading records and producer invoices can be produced electronically within minutes of the grading being finished, instead of days or even weeks. The administration of all the paperwork produced electronically is now performed by only one person, instead of many.

By enabling the plant to adhere to strict beef-production quality and safety standards, including international regulations, the new system opens the door to international markets. It also supports a new co-operative business model for meat processing plants in which the producer and the retailer together own and operate the brand value chain. In an industry dominated by a few major processors, this enables small Canadian producers to share in the economic benefits derived from the quality of the product they produce.

Full traceability also provides information that can be shared with each producer as to which type of animal sells better and which cuts sell faster. This enables producers to modify their procedures in order to improve the quality of their products and enhance their revenue.

Innovative Use of Technology

Atlantic Beef Products believes that its system is the first successful implementation of RF and RFID to automate the capture and integration of supply-chain and food-safety data for a slaughterhouse/meat packing plant in North America, for the purpose of providing full traceability from an animal to each individual cut of meat. It is a feasible method to provide producers with information on which type of animal sells better and which cuts sell faster.

The system employs an innovative data-management system with an RF wireless network to provide data collection and data integration in real time, using wireless handheld and touch-screen terminals. The system, which communicates bi-directionally with various plant floor readers, scanners, scales, printers, terminals and handheld devices, receives the data and contains the business rules used to send the data to these devices in real time.

This method eliminates the need for manual data collection for such tasks as animal weighing, grading and payment, inspection of animals and meat on the plant floor, and producer payment, and automates other processes such as the printing of producer invoices and barcode labels applied to the boxes of meat.

A 2006 CIPA Winner!

For its exceptional application of information technology to solve real-world business problems, Atlantic Beef Products has been awarded a 2006 CIPA Gold Award of Excellence, For Profit category