



For more information on RFID systems:

Phone: 519-824-6018 or 1-888-684-7739
Fax: 1-866-909-5360
130 Malcolm Road
Guelph, ON
N1K 1B1

www.cansheep.ca



This project was made possible by funding from Agriculture and Agri-Food Canada (AAFC) through its Canadian Industry Traceability Infrastructure Program (CITIP). AAFC is pleased to participate in this project and is committed to working with its industry partners to increase public awareness of the importance of the agri-food industry to Canada.

RFID systems will have the ability to electronically link animal identification to a location or premise and track all movements of the animal from source farm to consumer more accurately and in a shorter timeframe than a paper system.

Getting started with an RFID system

Q: What are the requirements of an RFID system?

A: The basic components for an RFID system include: RFID tags, an RFID reader and computer with management software. A variety of RFID readers are available from wand or stick readers that read and store numbers only, to handheld computer versions that can read, record and manage data all in one. Computers for most current management software should be a minimum of 4GB of memory and dual core processors are recommended.

Q: Do I need to buy all the equipment for an RFID system?

A: No. The modifications that are being considered for the CSIP, which regulates tagging of sheep, will *only* require a producer to use an official CSIP RFID tag. RFID tag information can be still gathered and stored on paper records, or entered manually into flock management software. The purchase of a reader, computer, software and digital scales are optional and it's up to the producer to decide whether all, some or none of these components are suited to their operation. This will depend on the producer's management style, individual farm plans and goals, and financial resources of the operation. The National RFID Pilot Project, and the Alberta Lamb Traceability Project are investigating the various levels of RFID systems investment and the cost benefits. This research will provide benchmarks to help project potential returns, savings or costs from various RFID system investment levels.

Q: How much investment is required?

A: The investment varies based on the number of components you choose to incorporate into your operation.

- Tags generally cost between \$1.80 and \$2.45 (dependant on tag type)
- Readers cost between \$700 and \$3,000 depending on model and features
- Software can range from \$300 to \$2,500
- Computers generally start around \$600 with cost increasing based on power, function and style (i.e. desktop vs. laptop)

Grants may be available in some regions. For more information, contact your provincial organization.

Learn more about RFID systems

Q: Where can I go for more information?

A: Contact the CSF at 1-888-684-7739 or info@cansheep.ca. Also visit www.cansheep.ca.

Q: Where can I purchase tags?

A: It depends on your location.

- In British Columbia, Alberta, Manitoba, Ontario, Prince Edward Island, Newfoundland and Nova Scotia, contact the Canadian Co-operative Wool Growers – 1-800-567-3693 or online at www.wool.ca.
- In Saskatchewan, contact the Saskatchewan Sheep Development Board – 1-306-933-5200.
- In Quebec, contact Agri-Traçabilité Québec – 1-866-270-4319.

Radio Frequency Identification Management Systems



Frequently Asked Questions



Canadian Sheep Identification Program



Radio Frequency Identification Systems

Q: What is an RFID system?

A: RFID stands for Radio Frequency Identification. A basic RFID system includes electronic RFID tags, an RFID scanner/reader, and a computer with software capable of recording and organizing the information from the reader. Supplementary electronic equipment – weigh scales, sorting and handling equipment – can be added to the basic system.

Q: How does RFID technology work?

A: RFID ear tags are made up of two basic components, an antenna and a microchip. When an RFID reader is passed within range of an RFID tag, the signal from the tag reader

energizes the antenna and the microchip in the tag. This stimulates the tag to send out a return signal carrying the information stored on the microchip. In the case of Canadian Sheep Identification Program (CSIP) approved sheep identification tags, the only information stored on these chips is the 15-digit country code and animal ID number.

Q: What information can I get from an RFID system?

A: A RFID reader that electronically reads and records the animal ID number would be practical for some flocks by reducing human data entry errors and by uploading tag numbers to a software program. Good flock management software allows producers to store and analyze selected data (weight, number of lambs weaned, sex etc.) about individual animals or groups of animals. The ability of software to analyze data is the great advantage of software over paper records, enabling accurate and timely management decisions.

Q: What RFID tags are approved for use?

A: CSIP-approved RFID tags include the Allflex Button RFID tag and the Shearwell Data SET RFID tag.

Q: When should animals be tagged?

A: Results from the Alberta Lamb Traceability Project and the National RFID Pilot Project have shown that tagging lambs at birth provides a complete record on each lamb and the ability to evaluate ewe productivity. Young animals are easier to restrain and tag, and the ear tissue is lighter making application of the tag easier. Environmental conditions also need to be considered before tagging your animals.

Tagging in rain or during wet conditions leads to higher rates of infection as compared to dry conditions.

Benefits of an RFID system

Q: How could an RFID system help on-farm management?

A: RFID systems allow you to collect and manage information for analysis, making them a powerful management tool with the potential to improve sheep production efficiency and productivity. Through RFID technology, producers can quickly identify an animal, its specific performance data and that of its progeny. This allows the producer to evaluate and remove poor performers based on real data rather than perceived performance. Producers using RFID systems can also generate reports to identify profit leaks such as early death losses, poor conception rates or poor weaning rate and realize significant benefits through improved individual animal management. Using RFID technology in combination with a basic handling system can reduce physical stress for both handlers and animals, and reduce labour requirements in animal sorting and handling.

Q: How can I achieve a return on investment?

A: By identifying and removing poor performing animals with the help of an RFID system, a producer can save money on the direct costs of feeding, managing and housing animals that aren't paying their way. Having the capacity to analyze specific individual data gives the producer the opportunity to retain the high performance animals for breeding stock while removing lower-performing and non-performing animals. This could potentially improve the bottom line without increasing the number of animals on the ground.



A substantial savings can be realized by reducing the amount of time needed to sort and handle animals for breeding or lambing groups. Labour requirements can also be significantly reduced by eliminating the need for extra hands when weighing or sorting. In some cases, producers may be able to handle the same number or even more animals with less labour, which should translate to higher returns.

Q: What is the role of RFID technology in traceability?

A: Full-scale national traceability is the tracing and tracking of products and food animals from the point of origin (farm) to the consumer. The federal government has committed to having traceability in place by December 31, 2011 for sheep, cattle, bison, hogs and poultry. Electronic systems will be required to efficiently track or trace sheep or lambs from the farm of origin through to processing and eventually to the end consumer without hindering the speed of commerce.

Continued on back panel

