



*Information produced by CCIA
October 2021; updated January 2022*

*For permission to use content:
info@canadaid.ca*

CCIA's Tag Story

Many people rely on tags as part of their daily business but are unaware of the detailed research, testing and systems required of tags in Canada.

The first iteration of the national identification (ID) program was initiated by the Canadian Cattle Identification Agency (CCIA) in 1998 for cattle and bison. This included the creation of a national information database, the Canadian Livestock Tracking System, CLTS, managed by CCIA. The program was voluntary and relied on machine-readable visual ear tags which were printed with a unique barcode.

Introduction of RFID Tag Technology

In 2003, a technological advancement was adopted that would change the identification program in Canada. Radiofrequency identification (RFID) tags were introduced, allowing for more accurate readability without the requirement of line of sight. Tags could be covered in dirt or hair and were still readable with 100% accuracy.

Tag Testing and Tag Approval

CCIA instituted a testing program to ensure that any tag entering the system met the global standard for animal identification and that tags met a minimum level of performance. The Technical Advisory Committee (TAC) worked with industry and following the International Standards Organization (ISO) to create basic requirements for RFID tags and readers.

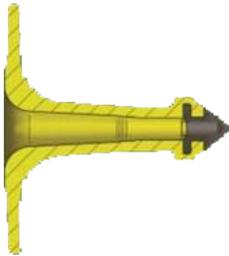
A testing standards document was developed. A local engineering laboratory was contracted to help develop procedures and apparatus to test tags for CCIA. It was determined that a more comprehensive, national testing program was required that included transparent and internationally accepted testing procedures and a testing laboratory with international credentials that would be respected by government, industry and manufacturers.

The tag approval process is transparent and thorough. All tags used in the National program must be tested and then approved by the Minister of Agriculture and are required to meet a strict conformance and performance criteria. All testing is based upon a technical document targeted toward conformance and performance of tags, known as the National Testing Framework. The document was created by the National Identification and Methodology Advisory Committee (NIDMAC), a joint government/ industry advisory group, and outlines in detail the technical requirements necessary for successful submission, testing and approval of tags for use in Canada.

The Framework details the laboratory test parameters and the field-testing criteria necessary for approval. The field test is at least a one-year retention test on live animals, the results need to meet the Framework Standard with 99% retention of all tags on test over one year, with a 95% confidence level. All tags are required to be certified by the International Committee on Animal Recording (ICAR) and tested by CCIA in an ICAR approved testing facility. Currently, there is only one lab that meets criteria to test indicators against the Framework standards, and that lab is in Germany.

Improved Tag Retention – Allflex, Destron and Shearwell

Over the years, CCIA has heard concerns about lost tags, missing backs and poor tag retention. CCIA works directly with manufacturers to improve tag retention. This has resulted in enhancements and modifications to some of the current tags on the market.



Allflex, as part of their commitment to continual improvement has made specific advancements to the stud component of their tags with new design and manufacturing methodology. This is in direct response to tag retention issues reported by producers.

Destron has an upgraded and improved version of the Destron eTag, the new Destron DMR RFID tag includes a fully molded outer tag housing for better durability and water resistance. Instead of a metal ring, the DMR has a solid plastic molded bobbin to insure retention, plus improved locking mechanism for greater retention and longevity.



Tags have undergone improvements since the program began or at least to provide more options for producers. The Shearwell RFID Beef Loop tag is a one-piece, wrap-around beef tag, the first of its kind which has been frequently requested by producers for years. The microchip is over molded in a plastic insert so readability and read range of the transponder are never compromised. The tags placed in the top of the ear and with no edges to catch on twine or fencing, improves their retention. This is an additional option

when it comes to official, approved tags. The button style remains available as well for those who prefer it.



*Information produced for CCIA
October 2021; updated January 2022*

Improved Data Integrity through a Single Source Tag Distribution System

In 2010, CCIA in conjunction with a large consulting firm did an analysis of the tag/animal data and determined changes were required to how tag data was collected to improve the data integrity of system. As a result, the supply chain was optimized by moving to a single distributor. CCIA simplified the system to be manufacturer-distributor-producer, which lowered the overall cost of tags across the country and provided better selection of approved tags to all producers. The result of this has been a direct to producer and CCIA Approved Dealer webstore that can be accessed at: <https://tags.canadaid.ca> or toll free CCIA Client Support at **1.877.909.2333**.

Moving Forward with Ultra-High Frequency (UHF)

As a responsible administrator, CCIA is technology neutral and is open to any and all technology solutions that can benefit the system at a lower cost. The whole purpose of an identification system is to easily identify animals for disease traceback while offering a convenient system for users. As such, over the last few years there has been a growing interest in Ultra High Frequency (UHF) technology-based tags and equipment as a management tool for livestock producers, which is highly supported by the feedlot and packer sectors.

Recent work by industry has uncovered opportunities and challenges for implementing the technology in Canada. Industry has indicated that there are benefits to be captured using the technology beyond the capabilities of the current Low Frequency technology tags. Even ahead of international standardization of numbering schemes, which is required for national adoption of the technology in Canada, introduction and testing of the technology is being seen as beneficial. CCIA is receptive to industry's wishes but require changes and additions to current systems to allow the new technology to achieve its greatest benefit for all stakeholders.

Because of this interest, CCIA partnered with industry and have completed a project which reviewed all the relevant literature available on the subject and its application to the livestock industry, which was supported and funded by Agriculture and Agri-food Canada and Canadian Cattleman's Association. Visit <https://www.canadaid.ca/traceability/research/> to learn more.

CCIA is also exploring ways to rapidly introduce UHF management tags into the existing system in a cost-efficient manner that supplies benefits of the technology to on-farm data collection and supports traceability. Traceability integrity is enhanced and data capture is simplified by pairing a UHF tag number with a CCIA tag number and storing the cross reference in the CLTS.