



Best Practices for RFID Ear Tag Application

At the heart of Alberta's cattle traceability system is the ability to trace individual animals through the use of radio frequency identification (RFID) ear tags approved by the Canadian Cattle Identification Agency (CCIA), which is an industry-led organization that manages animal identification.

Supporting this initiative is a federal requirement that has been in place since 2002, for all cattle raised in Canada to be tagged with a CCIA-approved ear tag prior to leaving their farm of origin.

RFID tags enable industry to read each animal's unique ear tag number electronically. For the system to work, it is critical that animals are tagged appropriately to reduce tag loss and to ensure the tags can be electronically scanned in an efficient manner.

The CCIA RFID Ear Tag

As shown in the picture below, all CCIA-approved RFID ear tags intended for use on cattle are yellow in colour and carry the registered CCIA trademark – a $\frac{3}{4}$ maple leaf and "CA" letters. A unique, 15-digit identification number is stamped and electronically pre-programmed onto each tag.

When a beef producer purchases RFID tags, the numbers associated with each package of ear tags are assigned to that individual's CCIA account. Those tags are only to be used for cattle within the care and control of that CCIA account holder. This ensures all cattle can be traced back to their farm of origin, should the need arise.

Why is tag retention and readability important?

Best practices that optimize tag retention and position ear tags so they can easily be read electronically are important for the following reasons:

- Reducing the number of animals that require re-tagging keeps costs down and information current.
- Correct tag placement supports efficient electronic tag reading or scanning as animals move by panel readers set up along alleyways or chutes in operations like auction markets and feedlots. This can also be achieved by using handheld readers in chutes and squeezes.

Correct placement of RFID tags in animals' ears generally allows both panel and handheld readers to scan RFID tags efficiently. For example, an RFID tag attached to the very top edge of an animal's ear often causes the animal's ear to droop and the tag to lie sideways. When this happens, panel readers may not read the tag, resulting in the additional work of splitting the animal off so its tag can be read manually. This takes extra time and effort, and may impose additional stress and shrink on the animal.

The information linked to an animal's unique CCIA-approved RFID ear tag number is only valuable if the tag stays on the animal throughout its lifespan. This information has great value in the event of an emergency, as well as for customer assurance. Properly tagged animals are the hub of Alberta's traceability system.



Best Practices

Ensure proper tag placement

The picture below shows the ideal spot for tag placement. Place the tag within the first quarter of the animal's ear, between the two ribs.

Also, be sure to securely close the tag in one smooth squeeze of the tag applicator, as wrestling with the animal and repeatedly squeezing the tag applicator may damage the electronic components within the RFID ear tag.

Use compatible tag components

There are many CCIA-approved RFID ear tags on the market, and each tag may have slight variations in how the pieces or components are configured.

If you use more than one brand of RFID ear tag, or if you use management ear tags in addition to RFID tags for on-farm record keeping purposes, take care not to mix and match tagging components. In particular, when using RFID tags, make sure the "back" or "male" portion of the tag comes from the

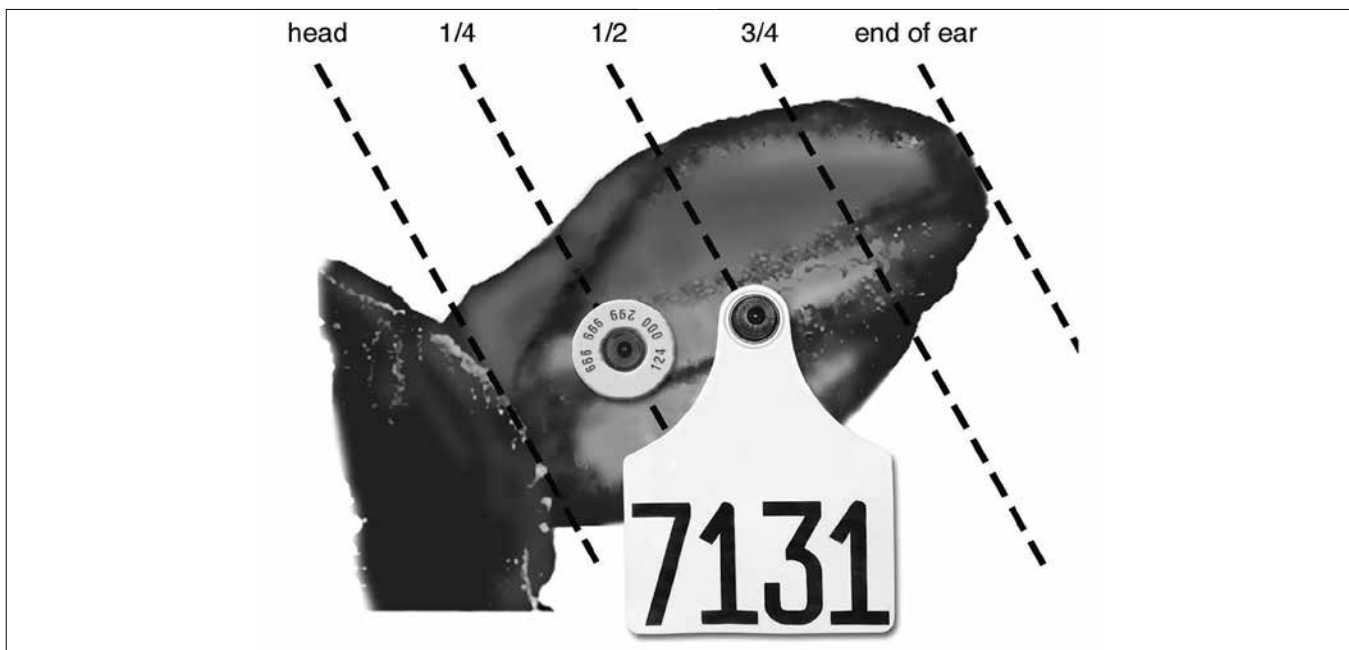
same package of tags as the "front," RFID button portion. If you mix and match these components, the tag will likely come loose and fall out.

Best Practice: Always follow the manufacturer's instructions and avoid mixing tag components.

Use the right tag applicator

Each tag manufacturer may use slightly different technology for the fastening mechanism on their tags. In addition, tag applicators may differ from manufacturer to manufacturer in terms of pin configuration and insertion force. Even newer versions of tags offered by the same manufacturer may fit into the same tag applicator differently, resulting in an improper button seal.

To improve tag retention, use the appropriate tag applicator that corresponds with each specific brand of tags and follow the manufacturer's instructions that accompany each package of RFID ear tags. This may include making minor adjustments to the tag applicator when using newer versions of a particular brand of tags.



Related best management practices

- Cut twines off bales when feeding cattle, as loose twines hanging out from bale feeders can literally cut tags off when animals pull their heads back from the feeder.
- Utilize appropriate parasite/lice herd health treatments to prevent cattle from excessively scratching against fence lines and feeders.
- Before you tag each animal, record its RFID tag number in your on-farm records, along with the animal's management ear tag number. That way, if the animal loses its RFID tag and needs to be re-tagged, you can use its management tag to cross-reference its original RFID tag with its replacement. This ensures that the birth date linked to the animal's original RFID tag is brought forward to its new tag.

Re-tagging cattle that have lost their RFID tag

Cattle that lose their RFID tags must be re-tagged. Ideally, on-farm records can be used to cross-reference an animal's original RFID tag to its new tag. If this is possible, enter this information into the CCIA database known as the Canadian Livestock Tracking System (CLTS), using the "cross-referencing" function. Please note that cattle

re-tagged before leaving their farm of origin may be age verified without cross-referencing, by simply reporting a birth date for the new RFID tag number.

Remember that cattle can only be age verified at their farm of origin. If an animal is re-tagged after it has left its farm of origin, and if the person re-tagging the animal cannot cross reference to the animal's original ear tag number, no birth date can be assigned to that animal.

In situations when tag placement makes electronic reading difficult, or if a RFID tag is no longer functional, the animal should be placed in a squeeze so the RFID ear tag number can be read manually. If an approved RFID tag is not functioning, another tag should be applied to the animal and cross-referenced in the CLTS to the original number. Do not remove the original, defective approved CCIA RFID tag.

Where to go for assistance?

For general inquiries regarding the use of CCIA-approved RFID tags, or to submit tag related complaints, please contact your local CCIA Mobile Field Representative (MFR) available at auction markets on sale days or accessible through local AF Field Offices and the Ag-Info Centre at 310-FARM (3276).

CCIA: 1-877-909-2333 or **www.canadaid.com**
Alberta Agriculture and Forestry
310-FARM (3276) or **www.agriculture.alberta.ca**

RV17/16