

# Canadian Cattle Identification Agency



## CCIA Tag Standards and Specifications

The Canadian Cattle Identification Agency has implemented national standards for the approval of bar coded and RFID tags into the Canadian Cattle Identification Program. Electronic bar code scanners and RFID readers can be used to efficiently collect tag numbers while maintaining the integrity of the information for submission to the National database.

### Bar Coded Tags



- The bar codes on approved tags must be one of two symbologies; Code 128 or Interleaved 2 of 5. All bar code symbologies have been designed for specific performance characteristics. Code 128 and Interleaved 2 of 5 are compact symbologies that demonstrate superior performance when applied to limited space such as a dangle tag.
- Each bar code must be encoded with one of three prefix character sets to identify the country of origin;
  - 124, 0124, or CAN = Country Code
- The bar coded tags used for Beef, Bison, and Sheep encode a nine digit animal identification number assigned by CCIA to the manufacturer. This nine digit number will follow one of the above mentioned prefix character sets. The animal identification number assigned for Dairy cattle may consist of 7 or 8 digits, with leading zeros being encoded between the country code and identification number, meeting the nine digit criterion.
- All nine digits (including any lead zeros) of the animal identification number must be printed in the human readable form. The country code must be embedded in the bar code but must not appear in the human readable number.
  - i.e. human readable form is 299999999. The electronic readable form is 124299999999, 0124299999999, or CAN299999999.

- Bar coded tags that were manufactured at the beginning of the CCIA program may also be displayed electronically as 124000299999999. This format is also acceptable.
- Check Digits- Code 128 uses a mandatory single digit at the end of the encoded numbers to verify that all electronic data has been read correctly. The reader will calculate a check digit for verification to the check digit read within the bar code. The check digit will be displayed in numerical form at the end of the identification number, creating a 10<sup>th</sup> digit after the country code.
  - i.e. 1242999999990.
- Electronically collected bar code numbers being submitted to the CCIA database for retirement upon death or export can be accepted in the form that they are read by the readers. Please see *Instructions for building files to submit directly to the CCIA database*.
- All approved CCIA bar coded tags visibly display a printed bar code, a nine digit identification number, and the logo of a three quarter maple leaf and the letters CA.

### **Radio Frequency Identification (RFID) Tags**



- All RFID tag numbers are 15 digits, with the lead 124 country code and the 12 digit unique identification number. This unique identification number will consist of three lead zeros and the nine digit number allocated to tag manufacturers by the CCIA.
  - i.e. 124000299999999.
- The number printed on the tag must be the same number as imbedded in the transponder.
- All electronic reads and tag number submissions to the CCIA database must be in the approved format.
  - Other approved RFID tags, although no longer manufactured, may be white in colour .
- Unless otherwise specified in this document, all approved CCIA RFID tags are yellow in colour, are printed with a 15 digit identification number beginning with the 124 country code, and bear the CCIA logo of a three quarter maple leaf and the letters CA. RFID tags do not have a check digit as in bar code symbologies.