



AIN/RF ISO Tag Manufacturer Application for Bison and Cattle

Cover Sheet

Primary Information

Name of Company: _____
Contact Person Name: _____
Address: _____
City, State, ZIP: _____
Nonproducer Participant
Number: _____
Phone: _____
Fax: _____
Email of Contact Person: _____
Company Web site (url): _____

Information Technology Contact Person

IT Contact is your designated person that the NAIS IT Team will contact regarding information system issues.

Name of IT Contact: _____
Phone # of IT Contact: _____
Email for IT Contact: _____

Manufacturing Plant Information if different from above

Company Name: _____
Contact Name: _____
Address: _____
City, Province: _____
Country: _____
Phone: _____
Fax: _____
Email: _____

AIN/RF ISO Tag Manufacturer Application for Bison and Cattle

Complete a separate application for each product type.

I. Prequalification: ICAR Information

An ICAR Manufacture code and ICAR Product Code are required for the submission to be considered a valid application.

- A. Manufacturer Number: _____
- B. ICAR Product Code: _____

II. What is the company's role regarding the tag being applied for?

- A. ___ Manufacturing and Imprinting
- B. ___ Imprinting only
- C. Do you plan to be an AIN Tag Manager? Yes/No _____

III. Manufacturer Product Labels

- A. Manufacturer Product Name: _____
- B. Manufacturer Product Code Number: _____

IV. Tag Visual Performance Requirements and Description

Please provide written explanation describing how the device meets each characteristic (see Appendix, Table 1 for the specifications).

A. One Time Use - Tamper evident locking mechanism

Explain how the tag is constructed and designed for one-time use (tamper evident). Be sure to clearly explain how the tag cannot be removed from one animal and reapplied to another animal without evidence that this action has occurred.

- B. Unalterable printing
- C. Readability (No explanation necessary, see VI for submitting samples.)
- D. Tag loss rates
- E. Expected tag life
- F. Tag toxicity and animal injury
- G. Tag deterioration
- H. Tag plasticity
- I. Tag Coupling/tensile strength
- J. Tag abrasion resistance

V. RFID Requirements for ISO 11784 and 11785 Compliant Devices

- A. ISO Compliant (previously listed)
- B. Electronic Read Rates and Ranges
 - 1. Laboratory

The applicant must provide information provided by an independent 3rd party documenting the device meets or exceeds the requirements of the laboratory test as described in Appendix A, Table 1. A minimum of 25 tags is required for this evaluation. Be sure that the test is fully documented and include the contact person of the 3rd party that conducted the test.

2. Field Environment

The applicant must provide information provided by an independent 3rd party documenting that the device meets or exceeds the field environment test as described in Appendix A, Table 1. A minimum of 300 observations using at least 100 RFID tags is required. Be sure that the test is fully documented and include the contact person of the 3rd party that conducted the test.

Note: The read range evaluation criteria is established to authorize AIN/RF Tags as "USDA Approval Pending" for the voluntary phase of NAIS. Criteria for "USDA Approved" will require significantly more tags in the evaluation

- C. Expected tag life
- D. Transponder Security
- E. Transponder failure rates

VI. Printing Criteria - Visual Readability

Provide 25 samples of the applied for tag, with imprinting as defined in Appendix A, Table 1.

VII. Manufacturer's Production Capacity

- A. Bi-weekly production capacity for applied for tag: _____
- B. Anticipated inventory requirements for this tag: _____

VIII. Technology

- A. HDX or FDX: _____
- B. Activation Frequency: _____

IX. Tag Description

AIN/RF Tags are two-piece tags, commonly referred to as the male and female tag. For describing the characteristics of the tag, the component that encases the transponder (or has it adhered to it) is referred to as "tag piece A" and the tag component without the transponder is referred to as "tag piece B." Tag piece A, is attached to the inside the animal's ear and the tag piece B is on the outside of the animal's ear.

A. Tag Piece A:

Weight: _____
 Shape: Strip Button (round) Panel ("flap tag")
 Size: Length (if square or rectangle): _____ mm and Width: _____ mm

Diameter (if round): _____ mm

Height: _____ mm (i.e., top of locking mechanism to flat side of the tag)

Weight: _____ grams

Primary materials used to manufacture the tag: _____

B. Tag Piece B:

Weight: _____

Shape: Strip Button (round) Panel ("flap tag)

Size: Length: _____ cm Width: _____ cm

Primary materials used to manufacture the tag: _____

C. Stem

Length: _____ cm

Newton value at which the stem breaks: _____

X. Other Species

What other species do you recommend this tag for?

Sheep/Goats Pigs

Other (Please list) _____

XI. Quality Control Program

Attach your company's quality control plan and any other documentation of your ability to produce the tag consistently according to the specifications. Include procedures that will ensure the uniqueness of the AIN is maintained.

XII. Tag applicators

Provide two applicators used to apply the tag and indicate if the tagger functions with other devices (tag from other manufacturers).

XIII. Other

Please list the National Identification Programs of other countries in which this tag is currently an approved tag.

Table A.			
Country	Date Approved	Country	Date Approved

Appendix A.

Table 1. AIN Tag – Requirements and Description	
Performance Requirements	
A. One-time use	The tag must be designed for one-time use (tamper evident) making it impossible to remove and re-apply the tag without visual evidence of tampering
B. Unalterable	The printing on the tag may not be readily altered.
C. Readability	The national identification number must be easily and reliably readable. The printing and color contrast of the U.S. Shield, lettering, and numbers are to be readable at a distance of 30 inches (0.75 m).
D. Tag loss rates	On average, when applied in a manner approved by the manufacturer, not more than 1% of tags applied will be lost in the year following application or in any year thereafter under normal field conditions over the expected life of the tag.
E. Expected tag life	The minimum time that a tag shall be expected to remain on an animal in a functional state (physically) is for the expected life of the animal.
F. Tag toxicity and animal injury	Tags shall do no harm to animal or affect its health or well-being. Tags will not cause chemical contamination of meat or edible offal or damage the hide.
G. Tag deterioration	There will be no diffusion of colorant from tags. There will be no apparent physical deterioration (other than color) due to detrimental effects to UV light, rain, heat (45C) and cold (-30C) or other environmental influences such as chemicals, mud, urine, and manure for at least 5 years of wear.
H. Tag plasticity	Devices will not split or crack under normal use.
I. Tag coupling/tensile strength	Tag coupling/tensile strength: Evaluation standards conform to ICAR testing standards and at minimum must comply with ISO standards 37 and 527.
J. Tag abrasion resistance	Tag abrasion resistance: Tag shall not exhibit damage or change due to wear and will be subjected to ICAR testing standards and at minimum ISO standard 9352
Description of Printing	
<ul style="list-style-type: none"> • The tag must have the U.S. Shield imprinted. Two-pieces tags must have the U.S. Shield and the AIN with “840” imprinted on both tags. • The tag must bear the entire 15-digit Animal Identification Number (AIN). • The U.S. Shield shall have a minimum width of 0.2 inches (5 mm). • The font for all characters imprinted on the tag will be Arial. • Print size for bovine tags shall be a minimum height of 0.2 inches (5 mm) for numbers and letters. • An indentation of the manufacturer’s unique, copyrighted logo or trademark must be easily observed on the tag. Having such information permanently imprinted on the tag is also acceptable. • Insert a space between each 3rd digit of the AIN imprinted on the AIN Tag, for example, 840 003 123 456 789. 	

Table 2: Bovine and Cattle AIN/RF ISO Tag Standards

The following chart provides the standards for AIN/RF ISO Tags that are in addition to those listed in Table 1.

Table 2. Bovine and Cattle AIN/RF ISO Tag Standards	
A. ISO Compliant	All transponders must be certified by ICAR for conformance with ISO-11784 and 11785.
B. Electronic Read Rates and Ranges	In a laboratory with a neutral electromagnetic environment: 100 percent read rate in best orientation at 24 inches (60 cm) in a stationary test and a moving test of 1 m/sec over a passage length of at least 20 inches (50 cm). In a field test environment: Transponders must be reliably machine read without regard to orientation by a standardized dual HDX/FDX reader, as cattle move by in a single file passage moving at 4 mph (1m/sec) with a read rate of 95 percent.
C. Expected tag life	The minimum time that a tag shall be expected to remain functional (electronically) is for the expected life of the animal.
D. Transponder security	The official number encoded within each transponder must not be able to be altered and must be contained within the tag. Tags will be tamper-evident and impossible to unseal without visible evidence of tampering.
E. Transponder failure rates	The transponder within the tag shall be reliable and machine-readable for the expected lifetime of the animal.