NAIT STANDARD
ANIMAL IDENTIFICATION DEVICES

DEV-STD-3.3

31st July 2025

CONTENTS

COMMENCEMENT

This standard comes into force on the 31st of July 2025

ISSUING AUTHORITY

This standard is issued by National Animal Identification and Tracing (NAIT) Limited, a subsidiary company of OSPRI New Zealand Limited, and regulatory authority under the National Animal Identification and Tracing Act

Sam McIvorChief Executive
OSPRI New Zealand Limited

Contact for further information
OSPRI New Zealand Limited
PO Box 3412
Wellington 6140
Email: info@OSPRI.co.nz

1. INTRODUCTION

PURPOSE

1.1. This standard establishes:
- the physical and performance requirements for animal identification devices approved for use in the National Animal Identification and Tracing (NAIT) scheme
- the obligations that apply to any person or organisation licenced to manufacture or distribute approved NAIT devices under the scheme.

APPLICATION

1.2. This standard applies to any person or organisation manufacturing, selling or preparing for sale identification devices for cattle and deer for use under the NAIT scheme.
1.3. While the standard relates primarily to radio frequency identification devices (RFID), it acknowledges the potential for alternative technologies to be used in NAIT devices.

THE NAIT SCHEME

1.4. The NAIT scheme is the mandatory system used to identify and trace livestock in New Zealand. The scheme requires all cattle and deer to be identified with an approved permanent NAIT device within 180 days of their birth or before they are moved between properties, whichever occurs first.
1.5. The NAIT organisation is the organisation designated to implement the NAIT scheme under the National Animal Identification and Tracing Act 2012 (the NAIT Act).

ABOUT THIS STANDARD

1.6. This standard is made under section 14(2) of the NAIT Act.
1.7. It is effective from its date of notification in the New Zealand Gazette.
1.8. It replaces the NAIT Animal Identification Devices Standard (25 July 2019).
1.9. This standard may be updated from time to time by the NAIT organisation.
1.10. This standard may be supported by guidelines or other documents providing more detail about its application. These documents will be available from the NAIT organisation or its website.

2. REQUIREMENTS FOR NAIT DEVICES

2.1. The requirements in this standard apply to permanent RFID for cattle and deer that are approved for use, under the NAIT Act, as part of an approved NAIT identification system.
2.2. Unless otherwise stated, the same requirements apply to the NAIT devices used for cattle and for deer.

APPROVAL OF NAIT DEVICES

2.3. The NAIT organisation may give approval for a device once it is satisfied that the requirements in this standard and any associated guidelines have been met.
2.4. Only approved NAIT devices that meet the requirements in this standard can be sold as official identification devices under the NAIT scheme.
2.5. The NAIT organisation may suspend or revoke the approved status of a NAIT device if it fails to meet any of the conditions in this standard.

2.6. The NAIT organisation may reinstate the NAIT device's approved status, if it is subsequently shown that the conditions in this standard will now be met.

CERTIFICATION OF NAIT DEVICES

2.7. All NAIT devices must be certified by the International Committee on Animal Recording (ICAR). RFID devices must be certified as conforming with NZS/ISO standards 11784 and 11785.

FORM OF NAIT DEVICES

2.8. A NAIT device must be in the form of an ear tag as one piece or two, interlocking pieces with a male and female portion.

2.9. Ear tags must have smooth, rounded corners and no sharp edges or protrusions, particularly on the shaft of the piercing pin.

2.10. The male portion of two piece NAIT devices must be in the form of a button type tag. Alternative designs will be considered on a case-by-case basis.

2.11. All NAIT devices must incorporate a transponder. The transponder may be either a half-duplex or full-duplex transponder. For two piece NAIT devices the transponder must be incorporated into the female portion.

2.12. The transponder shall operate at 134.2 KHz radio frequency.

2.13. Each transponder must be encoded with a unique number that cannot be modified (write once read many).

2.14. The unique number must include as its prefix the three-character manufacturer code issued for the device by ICAR.

COLOUR OF NAIT DEVICES

2.15. In NAIT devices for cattle:

- For two piece NAIT devices
  - the female portion housing the transponder must be white
  - the centre of the female portion, not housing the transponder, may be any colour other than orange
  - the male portion must be white
- For one piece NAIT devices
  - any non-metallic parts must be white

2.16. In NAIT devices for deer:

- For two piece NAIT devices
  - the female portion must be orange
  - the centre of the female portion, not housing the transponder, may be any colour other than white
  - the male portion may be any colour other than white
- For one piece NAIT devices
  - any non-metallic parts must be orange

INFORMATION TO BE INCLUDED ON NAIT DEVICES

2.17. The NAIT logo and the words 'Do Not Remove' must be printed on:

- the male portion of two piece NAIT devices
- the rear part of one piece NAIT devices that sits against the postauricular region

2.18. The NAIT logo and the visual identification code for the device, as set out in table 1 must be printed on:

- the female portion of two piece NAIT devices
- the front part of one piece NAIT devices that houses the transponder

2.19. An official animal identification scheme approved under the Biosecurity Act 1993 or the NAIT Act can substitute its own logo for the NAIT logo, with the written permission of the NAIT organisation on:

- the female portion of two piece NAIT devices
- the front part of one piece NAIT devices that houses the transponder

2.20. The female part of two piece NAIT devices and the front part of one piece NAIT devices that houses the transponder must not be marked with any other information (for example, the farm name or other management information).

2.21. Table 1 sets out the acceptable formats for the visual identification code to be printed on the NAIT device. There are different formats for the code, depending on the information that needs to be included and the circumstances in which the device is issued. No other formats may be used or information included.

Table 1: Formats for visual identification codes on NAIT devices

Type of device	Components and format for visual identification codes	Example	Situation where used
• Birth tag • Duplicate birth tag	NAIT number-Year-Sequence number	12345678-15-283	Birth tags are used for new-born animals and animals that have not previously been tagged.
	NAIT number-Sequence number	12345678-283	Duplicate birth tags are used where: • the original NAIT device applied to an animal has been lost or is damaged • the same visual identification code is required on the device. The device must be flagged as a duplicate in the NAIT identification system
	Participant code-Year-Sequence number	ABCD-15-5510	
Replacement tag	RFID number- NAIT number	900-012345678912-12345678	Used where the original NAIT device applied to an animal has been lost or is damaged.
	RFID number- Participant code	900-012345678912-ABCD	

Notes to table:

a) The components of the visual identification code should be separated by a hyphen.
b) The NAIT number is the 2-6 or 8-digit number allocated by the NAIT organisation to a registered PICA as their NAIT location identifier. The number cannot be used at any other location.
c) The sequence number is the unique identification number issued for each device.
d) The participant code is the four or five letter code used by livestock genetics and artificial breeding companies to identify each of their clients.
e) The RFID number is the unique number encoded in the transponder of each device. The first three digits of this number are the manufacturer code issued by ICAR.
f) Where the year is included in the code, only the last two digits of the year that the code was issued are included. For example, 2018 would be included as 18.

DURABILITY OF NAIT DEVICES

2.22. Under New Zealand conditions, there should be no physical deterioration (other than colour fade) of NAIT devices, as a result of ultraviolet radiation, rain, heat, cold or other environmental factors, for at least 10 years.

2.23. Printing on NAIT devices shall remain readable for the lifetime of the animal.

READABILITY OF NAIT DEVICES

2.24. In the absence of electromagnetic interference, 99.9% of NAIT devices must be machine readable:
- without duplication or omission
- under all New Zealand field conditions
- in animals moving freely at a rate of up to 2 metres per second in single file past a reading point with a portal width of 0.8 metres.

2.25. Following application, the transponder contained within the female portion of NAIT devices shall be machine readable, under New Zealand field conditions, for the life of the animal.

APPLICATION OF NAIT DEVICES

2.26. It must be possible to apply NAIT devices on animals aged from 1 day or older.

2.27. The application failure rate for NAIT devices shall not exceed 0.001% (1 in 1000 attempts). Any attempt to apply a device that does not result in the device being applied effectively is considered a failure, provided the manufacturer's instructions are followed.

2.28. NAIT devices must not be susceptible to damage when applied under normal conditions and in accordance with the manufacturer's instructions.

LOSS OF NAIT DEVICES

2.29. The physical loss of NAIT devices from animals on typical New Zealand properties and under normal field conditions shall not exceed:
- 1% within 6 months of the device's application
- 2% cumulative loss rate over a 3 year period

2.30. The NAIT organisation will monitor device loss rates.

2.31. NAIT devices must be designed to prevent unauthorised removal and reuse, and be tamper-evident.

LIMITATIONS ON NAIT DEVICES

2.32. NAIT devices must not:
- contain any recycled components
- contain harmful substances such as cadmium (Cd), lead (Pb), mercury (Hg) and chromium (Cr)
- be capable of causing chemical contamination of meat or edible offal, or damage to the hide
- adversely affect the health and wellbeing of an animal, during or after their application.

2.33. Manufacturers of NAIT devices must specify on the accompanying instructions whether any precautions need to be taken when the device is applied to prevent potential harm or hazards.

3. MODIFICATION OF NAIT DEVICES

3.1. The NAIT organisation must approve any proposed modification to an approved NAIT device, before the device is offered for sale or use.

3.2. Applications for modifications to approved NAIT devices must be made in writing, and contain details of the proposed modification and the reasons for it.

3.3. The NAIT organisation will assess applications for modifications and decide whether the device can maintain its approved status or whether further field trials are required for quality assurance purposes.

4. REPLACEMENT DEVICES

4.1. The original NAIT device applied to an animal can only be replaced where:

- the original device has been lost out of the animal's ear
- the original device is no longer able to be electronically read
- the PICA or PICA delegate wants to replace the original device with an alternative device technology, and has already attained the NAIT organisation's approval to remove the original device
- the original device needs to be removed for animal welfare purposes.

4.2. A NAIT device cannot be removed without the PICA first seeking the approval of the NAIT organisation. The PICA or PICA delegate is responsible for seeking approval. The licensee is responsible for ensuring approval has been given, before issuing a replacement device.

4.3. Where a device or devices have been lost in transit, or the wrong type of device has been ordered and the customer wishes to replace these with an alternative type of device using the same visual identification code, the licensee must destroy the original devices (where available) and ensure they have been removed from the NAIT information system, before they upload information about the replacement devices and dispatch them.

5. NEW TECHNOLOGIES AND ALTERNATIVE DEVICES

5.1. The NAIT organisation recognises and supports developments in animal identification and tracing technologies.

5.2. Manufacturers and distributors of alternative animal identification devices and solutions that do not come within the scope of this standard, including non-RFID devices, can still seek approval for these devices and solutions from the NAIT organisation.

5.3. The NAIT organisation will evaluate proposals for alternative devices against guidelines it will establish for this purpose.

5.4. All costs associated with seeking approval for alternative devices and solutions, and the NAIT organisation's evaluation of them, will be borne by the party seeking approval.

6. REQUIREMENTS FOR LICENSED DISTRIBUTERS AND MANUFACTURERS OF NAIT DEVICES

6.1. Only a licensee approved by the NAIT organisation can distribute an approved NAIT device. NAIT devices may only be supplied in accordance with the NAIT Licensing Agreement.

GENERAL REQUIREMENTS FOR LICENSEES

6.2. The licensee must only sell NAIT devices to a PICA or PICA delegate for the location at which the PICA is in charge of animals.

6.3. The licensee must ensure that all NAIT devices that it markets, manufactures and distributes are identical to the one submitted, tested in field trials and approved by the NAIT organisation. This excludes any internal coding or visual information that, by necessity, varies from individual device to individual device.

6.4. The licensee must check that the transponder in the NAIT device can be reliably read, before it is dispatched to the purchaser.

6.5. Despite clause 6.2, when acting pursuant to clause 5 of Schedule 2 of the NAIT Act, a NAIT Officer or NAIT Authorised Person may obtain NAIT devices.

DEVICE RECORDS

6.6. The licensee must maintain an accurate record of customer orders and the NAIT devices it dispatches, including:

- the participant code or NAIT number to be printed on the device
- the visual identification code ordered
- the date the order was received
- the NAIT number from the NAIT location ordering the NAIT devices
- the device product code of both the female portion and male portion ordered
- all information required to reserve devices in the NAIT system, as set out in the 'Tag Reservation Interface Specification' or 'CSV Specification'
- all information required to upload device details to the NAIT system, as set out in the 'Tag Upload Interface Specification' or 'CSV specification'.

6.7. The NAIT organisation may update the specifications mentioned in paragraph 6.6 from time to time, and must advise licensees of these updates when it does.

REPORTING ON DEVICE SALES

6.8. The licensee must report every month to the NAIT organisation about the number of devices it has sold and pay the associated levy.

REPORTING ON ISSUES WITH DEVICES

6.9. PICAs are to report any device issues, including but not limited to, issues relating to the quality, retention, durability, readability, performance and reliability of devices to the NAIT organisation. The NAIT organisation will notify the licensee of the issue and of the reporting PICA's contact details.

6.10. The licensee must contact the PICA within 72 hours of being notified of a device retention issue and take all reasonable steps to resolve the issue.

6.11. The licensee must report back to the NAIT organisation in writing within 30 days of being notified of an issue, including what the issue was and how it was resolved.

6.12. The licensee must notify the NAIT organisation in writing of any device that it has recalled or replaced due to defects. This notification is be made no later than 5 business days after the licensee is made aware of the defect.

6.13. The NAIT organisation will report annually on:

- the overall number of issues or complaints it has received during that year relating to a NAIT device
- how this number compares to previous years
- any trends emerging in relation to device issues and complaints.

6.14. The NAIT organisation will notify licensees about any issues it detects in device data uploaded to the NAIT information system. Licensees must respond to and resolve these issues within the timeframes shown in Table 2.

Table 2. Timeframes for responding to data upload issues

Issue category	Subcategory	Target response time	Target resolution time
Printing	Incorrect participant code	<=48 hours	<=120 hours
Printing	Incorrect NAIT number	<=48 hours	<=120 hours
Printing	Incorrect year	<=48 hours	<=120 hours
Upload	Not uploaded	<=24 hours	<=48 hours
Upload	Partial failure	<=24 hours	<=48 hours
Upload	Incorrect species	<=24 hours	<=48 hours
Upload	Incorrect Visual ID	<=24 hours	<=48 hours
Not found	Not found in NAIT	<=24 hours	<=48 hours
Not found	Non-compliant ICAR code	<=24 hours	<=120 hours

6.15. Where the licensee cannot resolve a data upload issue in a timely manner, it must notify the NAIT organisation of this as soon as practical.

DATA STORAGE ACCESS AND USE

6.16. The licensee must keep its records about the NAIT devices it dispatches, as detailed in paragraph 6.6, in a secure database for at least 10 years.

6.17. The licensee will ensure that the integrity and security of the database is maintained at all times.

6.18. The licensee will provide the NAIT organisation with data kept in the database as requested, and in particular for the purpose of reconciling the data in the licensee's database with data held by the NAIT organisation.

6.19. The licensee will provide the NAIT organisation with full access to its database for audit purposes.

PEFORMANCE MANAGEMENT

6.20. The NAIT organisation will monitor the licensee's compliance with the requirements in this standard, policies and guidelines it will establish for this purpose.

6.21. The NAIT organisation may suspend or revoke the licensee's licenced status if it fails to comply with this standard or meet any performance requirements set out in associated policies and or guidelines released by the NAIT organisation.

6.22. The NAIT organisation may reinstate the licensee's licence, if it is subsequently shown that the standard will now be complied with or the performance requirements achieved.

INFORMATION FOR USERS OF NAIT DEVICES

6.23. Licensees must provide the following information with all devices and device applicators they sell:

- information on the best-practice application of the device
- information on how to report device retention issues to the NAIT organisation
- information on device replacement procedures

6.24. The information must be provided on the licensee's website, with any device orders and through any engagement activities that the licensee participates in.

SCHEDULE 1: DOCUMENT HISTORY

#	Date of Issued Amendments	Description of amendment
3.0	17/12/2020	Major version published
3.1	19/08/2021	Temporary change to reporting timeframes outlined in 6.9 and table 2 in response to COVID-19 pandemic
3.2	31/05/2024	Amended 2.15 and 2.16 to remove female portion centre colour restrictions. Amended notes to table 1 (d) to allow participant code to be four or five letters.
3.3	Xx/07/2025	Amended 2.8-2.21 to allow for one piece devices. Removed visual ID format participant code – sequence number from Table 1. Amended 2.30 and 2.31.

SCHEDULE 2: DEFINITIONS

Abbreviation or term	Explanation
Animal identification device	An ear tag, apparatus, or other mechanism that: • is attached or applied to, or implanted or located within, an animal; and • contains the animal identifier and other information.
CSV	Short for comma separated values; a simple file format used to store tabular data, such as a spreadsheet or database.
Ear tag	A device attached to the ear of animals to provide a means of identification.
Full-duplex (also referred to as FDX)	A full duplex system allows simultaneous communication in both directions.
Half-duplex (also referred to as HDX)	A half-duplex system provides communication in both directions, but only one direction at a time.
Identification device	See animal identification device.
Identification system	A system approved under section 50(1) of the Biosecurity Act 1993, or section 15 of the NAIT Act 2012.
ICAR	International Committee for Animal Recording. ICAR is a worldwide organisation for standardisation of animal recording and productivity evaluation. Its aim is to promote development and improvement in performance recording and the evaluation of farm livestock activities.
Licensee	A company, business or individual that has been granted a licence by the NAIT organisation to manufacture or distribute NAIT devices.
Manufacturer code	The first three digits of the transponder number as provided by ICAR.
NAIT	National animal identification and tracing.
NAIT Act	National Animal Identification and Tracing Act 2012.
NAIT device	An animal identification device manufactured or supplied in accordance with standards issued.
NAIT location	As defined in section 5 of the NAIT Act. A place where one or more NAIT animals are kept or held, and which has been registered with and issued with a location identifier by the NAIT organisation.
NAIT organisation	The organisation designated under the NAIT Act 2012 to implement and operate the national animal identification and tracing scheme.
NAIT number	The 2-6 or 8 digit number allocated by the NAIT organisation to identify a person in charge of cattle and/or deer. The number relates to the particular property where the animals are held.

NAIT Authorised Person	As defined in section 4 of the NAIT Act 2012.
NAIT Officer	As defined in section 4 of the NAIT Act 2012.
NZS/ISO 11784 and 11785	New Zealand adoptions of international standards relating to the radio-frequency identification of animals.
Participant code	The four or five letter alphabetical code used by livestock genetics and artificial breeding companies to identify their individual clients.
PICA	A natural person in day-to-day charge of a NAIT animal.
PICA delegate	A natural person who is nominated and registered, under sections 26 and 27 of the NAIT ACT, to undertake specified procedures and obligations on behalf of a PICA.
RFID	Radio frequency identification device.
RFID reader	A tool that emits radio waves to RFID ear tags within range. Upon receiving the signal, the RFID ear tag sends back its data to the device. Also known as RFID scanners.
Transponder	Microchip that picks up signals from an RFID reader or scanner and then returns the signal, usually with some additional data (like a unique serial number or other customised information).