



Jõudluskontrolli Keskus
Estonian Animal Recording Centre



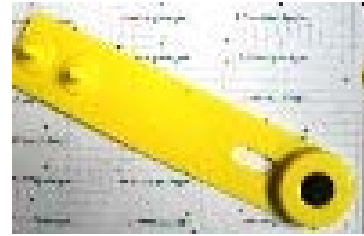
Testing of animal identification devices

Animal identification and recording systems for traceability and livestock development in countries of Latin America and the Caribbean.

Kaivo Ilves

6 December 2011, Santiago, Chile

Animal Identification Devices



Organisations involved

ICAR – International Committee for Animal Recording (>80 members in 51 countries)



ISO – International Organisation for Standardisation (162 countries)



Role of ICAR

Developing guidelines and standards

Testing and approving identification devices:

Conventional tags

Electronic devices (transponders and trancivers)

Registration Authority of ISO

Publishing the information: www.icar.org



The aim of ICAR

Provide tests and approve ID-devices to benefit users (animal keepers, service providers and authorities)

Save costs for developing local standards

Save costs for testing products (authority/manufacturer)

Network for expertise



Regulations

ICAR Guidelines Section 10 ‘Testing and approval of devices used in animal identification’.

Section 10.7 ‘Performance evaluation and approval of official permanent identification devices.’

ISO 11784 Radiofrequency identification of animals – Code structure

ISO 11785 Radiofrequency identification of animals – Technical concept

Regulations

ISO 24631 Radiofrequency identification of animals:

ISO 24631-1 Evaluation of conformance of RFID transponders with ISO 11784 and ISO 11785 (including granting and use of a manufacturer code)

ISO 24631-3 Evaluation of performance of RFID transponders conforming with ISO 11784 and ISO 11785

Regulations

ISO 24631 Radiofrequency identification of animals:

ISO 24631-2 Evaluation of conformance of RFID transceivers with ISO 11784 and ISO 11785

ISO 24631-4 Evaluation of performance of RFID transceivers conforming with ISO 11784 and ISO 11785

Tests required

Conventional tags:

- Preliminary test
- Laboratory test
- Field test (voluntary)

Electronic devices:

- Conformance test
- Performance test

Test organisations

Coordinated by ICAR

ICAR approved test organisations:

- RYK - preliminary test
- CETIM - laboratory test
- DLG - laboratory test,
conformance and performance test
- IMA Wageningen - conformance and
performance test
- JRC - conformance test

Test of conventional tags

Preliminary test:

- Ease of application (the plier and the tag)
- Machine readability (the reader and the tag)
- Locking mechanism (the pull test, reusability)

Test of conventional tags

Laboratory test:

- Composition of the tag
- Performance of the 'aged' tag
- Readability
- Locking mechanism

Test of conventional tags

What do we test?

- Ease of application
- Efficiency of animal recognition
- Durability, quality
- Animal welfare

Test of electronic identification

Conformance test (incl. granting the manufacturer code):

Worldwide readability

Correct data structure and data telegram

Performance test

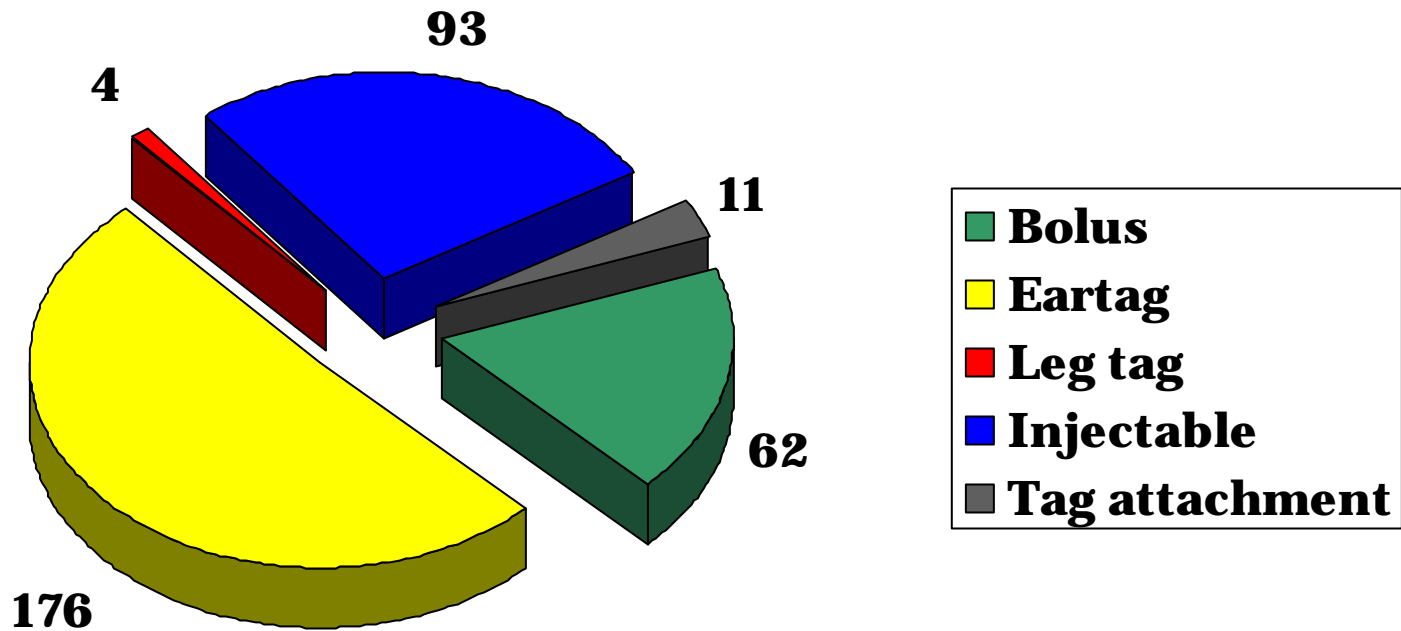
Conformance test

Full test – new manufacturer, new product.

Limited test – registered manufacturer is changing a product (glass transponder in a bolus).

Listing update – registered manufacturer is using approved product without modification.

Conformance tested products



Performance test

Transponder minimum activating field strength

Transponders activated by low field strength can be activated from a bigger distance

Transponder dipole moment

Test indicates the functioning of the transponder under different field strength conditions.

Bit length stability (FDX-B) / Frequency stability (HDX)

The stable signal is important in less optimal reading conditions.

Approvals ...

Published on ICAR homepage.

Granting the manufacturer/product code:

Shared manufacturer code '900' and 'range of codes'.

Unshared manufacturer code from '901' to '998'.

Country code transponders (national authority!).

Manufacturers have test reports!

Welcome to the ICAR web site

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- Recording Devices »
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- Milk Analysis »
- Sub-Committee
- Manufacturers' Codes
- Manufacturer addresses
- Code of conduct
- Application for testing
- Synchronising transceivers
- Non-Synchronising transceivers
- Permanent Plastic Eartags

- International Committee for Animal Recording
- Comité International pour le Contrôle des Performances en Élevage
- Internationales Komitee für Leistungsprüfungen in der Tierproduktion
- 國際畜政聯盟

ICAR
 Via G. Tomassetti 3, 00161 Rome, Italy
 Tel: +39-06-44202639; Fax: +39-0644266798
 E-mail: icar@icar.org

Highlights

- IDF/ICAR Counting System for Somatic Cell
- PDF Pre and Photos of the ICAR Meeting held in (ance), 22-24 June 2011, are available
- Application based parentage testing" (line: 10 September 2011) - [Page](#)
- [ICAR News](#)
- [ANIMAL ICAR RECORDING GUIDELINES](#) (Version 2011), approved at Riga Session in June 2010

Meetings

- Next ICAR Meeting:
 - 5-7 December 2011. Santiago, Chile - Workshop on "Animal identification and recording systems for traceability and livestock development in countries of Latin America and the Caribbean"
 - 38th ICAR Session. Cork, Ireland (28 May-1 June 2012)
- IMPORTANT DATES**
- Submit Abstract and Title by 31st December 2011
 - Notification of paper acceptance on or before 25th January 2012
 - Submission of written paper – 1st Draft by 27th April and final version for on-line publication by 25th May, 2012

The on-line databases on:




- ["The yearly cow milk enquiry"](#) and
- ["The yearly sheep milk enquiry"](#)

are now available.

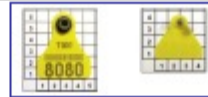


Approvals

ICAR approved "Permanent plastic eartags" for cattle





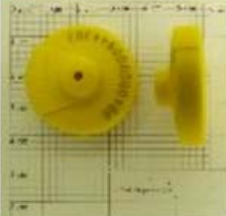
Internal identification number	Manufacturer	Commercial name	Species	Machine readable	Date of approval (dd/mm/yyyy)	Picture (Click to enlarge)	Notes
T001	Allflex	Ultra Senior	Cattle	Yes	09/11/2011		In compliance with ICAR requirements for field test in Germany
T003	Daploma	SnapTag ST 4	Cattle	Yes	09/11/2011		In compliance with ICAR requirements for field test in Germany
T004	Caisley	Flexoplus	Cattle	Yes	09/11/2011		In compliance with ICAR requirements for field test in Germany

ICAR approved "Permanent plastic eartags" for Small ruminants

Internal identification number	Manufacturer	Commercial name	Species	Machine readable	Date of approval (dd/mm/yyyy)	Picture (Click to enlarge)	Notes
T010	Allflex	Ultra sheep 17	Sheep	Yes	23/11/2011		Same family as Allflex Ultra Senior (cod. T001)

Look into description or usage
 N°
 Manufacturer
 Product code
 Technology
 Type of test
 Between approval date and 25/11/2011
 Between Performance tested and 25/11/2011

Advanced search:
 Manufacturer
 Technology
 Product code
 Type

N°	Manufacturer	Manufacturer code	Product code	Technology	Type	Description	Type of test*	Approval date	Performance tested	Range of ID-Codes	Photo
4	Allflex	982	982045	FDX-B	Ear tag	Diameter 29.9 mm, height 14.3 mm, length 104.1 mm, weight 17.82 g, yellow/black	B	12/07/2010			
18	Caisley	969	969005	FDX-B	Tag	Yellow and red, plastic, 30.1 mm in diameter, 15 mm in height, and 9.24 g in weight	B	01/02/2010			
5	Datamars	964	964008	HDX	Tag	Plastic eartag, yellow 25.2 mm in diameter 14.8 mm in length 5.5 grams in weight	A	01/09/2007			
73	Gepe-Geimuplast GmbH	900 (shared code)	900030	FDX-B	Tag	Plastic, yellow. cylindrical 29.5 mm in diameter 13.7 mm in height 3.9 grams in weight	A	01/11/2007	10/11/2009	900 / 056.000.000.000 - 056.000.999.999	
2	Nedap	984	984007	FDX-B	Ear tag	Diameter 32.2 mm, height 14.1 mm, weight 5.58 g, yellow colour	A	21/03/2011	21/03/2011		

Test for recording devices

Laboratory test

Influence of:

- flow rate
- vacuum
- air bleed
- tilting the device

Effect of the milk recording device on:

- teat end vacuum
- free fatty acids

Evaluation of:

- method for calibration test
- cleaning properties of the milk recording device

Field test

Performance of the milk recording device in a farm



Approvals ...

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Approved milkmeters for cattle

List of the approved milkmeters

Meter	Manufacturer	Brand name Company/country	Control unit	Species	Picture (Click to enlarge)	Notes
Memolac 2	Nedap NV The Netherlands	Nedap Velos	MPC2	Cattle		
Memolac 2	Nedap NV The Netherlands	Sureline Greenoak Equipment Ltd UK	MPC2	Cattle		
Memolac 2	Nedap NV The Netherlands	Stimoflow IV Manovac S.L.	MPC2	Cattle		
Memolac 2	Nedap NV The Netherlands	MM8 System Happel Deutschland	MPC2	Cattle		
Memolac 2	Nedap NV The Netherlands	Unilac SAC	MPC2	Cattle		

Info Box 1

What's new

- ICAR approved "Permanent plastic eartags"
- Bourgen-Bresse presentations, posters and photos
- Glossary by "Beef Working Group"
- [NEW ICAR Guidelines](#) (v. 2011)
- [Strategic plan](#), May 2009

Info Box 2

try cow milk enquiry Online

The on-line databases on:

- "The yearly cow milk enquiry" and
- "The yearly



Conclusion

Guidelines and approvals are internationally accepted.

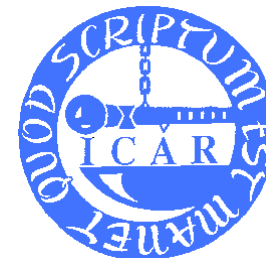
Guidelines and approvals are available.

Approvals are device specific.

Cooperation between ICAR and national authorities is essential.



Contacts



ICAR Secretariat:

Elena Couto (elena@icar.org)

Juhani Maki-Hokkonen (jussi@icar.org)

Recording devices:

Martin Burke (mburke@icbf.com)

Identification devices:

Kaivo Ilves (kaivo.ilves@jkkkeskus.ee)

www.icar.org

Thank you for your
attention!

www.jkkeskus.ee



Jõudluskontrolli Keskus

Estonian Animal Recording Centre

Kreutzwaldi 48A
Tartu 50094, Estonia

Tel (+372) 738 7700

