

Cattle RFID opportunities & challenges

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Animal radiofrequency identification (RFID)

- Development of the RFID technology started in the '80 ties
- Mainly used for identification of dairy cows:
 - process control
 - concentrate dispensing
 - milk measurement
 - farm management
- Use for national identification schemes since late '90 ties
several countries have livestock RFID schemes in place:
 - cattle in Australia, Canada and Denmark;
 - sheep and goat in most EU countries and Australia.
- Schemes have positive impact on:
 - farm management
 - process control
 - exchange of information along the (food) chain

Introduction of cattle RFID in EU

- European Union study (April 2009):
 - introduction electronic identification (EID) official method to identify bovines
- Conclusion:
 - preferred option: voluntary introduction of EID in the bovine sector
 - basis harmonized standards
 - individual MS should have possibility to opt for compulsory regime
- EU Countries that have started with EID for bovines:
 - Denmark: electronic ear tagging of cattle mandatory June 2010
 - France: voluntary electronic ear tagging has been introduced (2008)

Future plans cattle RFID in the EU

- DGSanco announced on SIMA (Paris) 2011:
 - working on proposal allowing use of RFID in national cattle id schemes
- EU cattle will get / has:
 - one visual tag
 - one additional (RFID or visual) tag
- Opportunity:
 - especially for countries with a low degree of process automation RFID can speed up:
 - application of farm automation systems
- Challenge in countries with high degree of process automation implement regulations that guarantee both:
 - food safety requirements
 - requirements in relation to process automation
 - modification farm automation (e.g. use ear tags instead of neck belt RFID)

Introduction (voluntary) cattle RFID systems

- In voluntary system farmers might be faced with a mixed population
 - RFID tagged animals
 - only visually tagged animals
 - what to do if such a farmer wants to use RFID in his farm management?
 - will it be allowed to retag the animals?
 - Council Directive 92/102/EEC on the identification and registration of animals (Art. 5b)
 - no mark may be removed or replaced
 - without the permission of the competent authority
- In mandatory system several RFID methods might be allowed
 - how to manage if farm automation is based upon a certain RFID type (e.g. ear tag)
 - farmer is buying animals that are identified with a different type of RFID device?
- In a situation where only ear tag RFID is allowed
 - performance of tags can be insufficient to use with farm automation equipment

Aspects related to EU Cattle RFID (I)

■ RFID tags that might be allowed:

- ear tag transponder
- bolus transponder
- injectable transponder
- leg tag transponder



■ Opportunity:

- discussions on the animal friendliness of visual ear tags (Netherlands)
- RFID tags are considered as an more animal friendly alternative
- bolus and leg tag transponders might be a further improvement

■ Problem

- bolus cannot be applied within 4 days after birth (applicable ~4 weeks after birth)
- in Netherlands database recording within 3 working days after birth
- two step approach:
 1. application of visual ear tag transponder
 2. at an age of e.g. one month application of bolus
- risk of confusing numbers (visual number bolus number do not match)



Aspects related to EU Cattle RFID (II)

- In the Netherlands only 2 interventions allowed for identifying an animal
 - a provision to freeze mark as third intervention
 - application of a bolus is not an intervention
 - use of bolus would allow to continue freeze marking within the legal framework
- Neck belt transponders are used for farm automation:
 - concentrate dispensing
 - milk recording
 - robotic milking
 - cow routing
- Neck belt transponders cannot simply be replaced by RFID tags:
 - ear tag transponders in most cases most appropriate replacement
 - in most cases the farm automation equipment must be adapted
 - performance of RFID tags must be sufficient, competent authority should allow
 - replacement of tags and/or
 - use of additional RFID tags (e.g. bolus RFID & ear tags based farm automation)
 - guidelines/regulations required on numbering of replacement/additional tags

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Thank you for your attention!

Questions?

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