General introduction and overview

FAO workshop: Training on the development of good identification and milk recording systems

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November 12th, 2013
Agenda

1. History
2. International organisations
3. Organisations in Estonia
4. Estonian Animal Recording Centre
5. Estonian system
   a) Financial scheme
   b) Legislation
   c) Identification
   d) Scheme of milk recording
History

1883 first dairy performance recordings in USA
1903 recording of dairy cattle in Estonia (in manor farms)
1909 first milk recording organisation established by the Vändra Farmers’ Society
1969 beginning of computerised data processing
1971 milk laboratory established (fat and protein)
1993 Estonian Animal Recording Centre established
History

1995 member of ICAR and Interbull
1998 first data on Estonian Holstein breed from Interbull, online service (ARC-farm)
1999 accreditation of the laboratory
2003 online service (farm-ARC)
2006 ICAR Special Stamp (2009/2013 ICAR Certificate of Quality)
2008 PDA/handheld computers
2010 Pathoproof service/Mastitis 12
International organisation ICAR

International Committee for Animal Recording
Approximately 100 members
Developing international guidelines for livestock industry
Registration authority of ISO for electronic identification devices

Office in Rome, Italy
www.icar.org
Fields ICAR is working

Activities:
- Identification
- Performance recording
- Genetic evaluation

Species:
- Dairy and beef cattle
- Sheep
- Goats
- Buffalo
- Alpaca
ICAR and different groups

Sub-Committees:
- Interbull, Animal Identification, Milk Analyses, Recording Devices

Working Groups:
- Animal Fibre, Animal Data Exchange, Artificial Insemination & Relevant Technology, Interbeef, Conformation Recording, Dairy Cattle Milk Recording, Developing Countries, Genetic Analyses, Functional Traits, Performance recording of dairy sheep, Parentage Recording

Task Force: Breed Associations
Organisations in Estonia

Ministry of Agriculture
Veterinary and Food Board (VFB)
Estonian Animal Recording Centre (ARC)
Estonian Agricultural Registers and Information Board (ARIB)

Breeding organisations

Animal Breeders’ Association of Estonia
Estonian Native Cattle Breed Society
Animal recording organisations

Estonian Animal Recording Centre - dairy cattle
Animal Breeders’ Association of Estonia - beef cattle
Estonian Pig Breeding Association - pigs
Estonian Horse Breeders’ Society - horses
Estonian Sport horse Breeders’ Society - horses
Estonian Trotting Association - horses
Estonian Sheep Breeders’ Association - sheep
Estonian Poultry Society - quails
Animal recording organisations

Estonian Animal Recording Centre - dairy cattle
Animal Breeders’ Association of Estonia - beef cattle
Estonian Pig Breeding Association - pigs
Estonian Horse Breeders’ Society - horses
Estonian Sport Horse Breeders’ Society - horses
Estonian Trotting Association - horses
Estonian Sheep Breeders’ Association - sheep
Estonian Poultry Society - quails
Estonian Animal Recording Centre

• State agency operating in the area of administration of the Ministry of agriculture
• 44 employees
• 5 departments (admin., Milk lab, IT data processing, field service)
• Office in Tartu, Milk laboratory in Tartu and offices in all counties
Services

• Performance recording for dairy cattle
• Performance recording for beef cattle and pigs
• Selling ear tags (including EID)
• Quality tests for dairy industries
• Herdbook data (for dairy cattle, beef cattle, pigs, sheep, horses)
• Genetic evaluation for dairy cattle, beef cattle, pigs and sheep
• Performance recording database (sheep)
Software for customers

Internet software for:
- dairy farmers
- beef farmers
- sheep farmers
- horse breeders

PC software for:
- pig farmers: breeding and fattening

PDA software for:
- dairy farmers
- linear scoring
Milk recording 2012

- 89,616 cows, 8,059 kg milk, 326 kg (4.04%) fat, 273 kg (3.39%) protein
- 93% of cows
- ~113 cows/herd
- B4 (standard, AM/PM, alternative)
- ~700 technicians
- ~300 collecting points
- ~0.9 mil. samples/year
- MR is paid by farmers; supported by breeding organisations and the state
For milk recording we have ...

**Milk laboratory**: collecting samples (MR), analysing samples (MR: fat, protein, SCC, urea, + QT: freezing point, BC, antibiotics), Mastitis 16

**IT**: developing software, maintaining software and hardware, helpdesk and genetic evaluation

**Data processing**: entering data, correcting errors, customer service

**Field service**: ensuring data quality (trainings, repeat recordings, farm visits), developing new services, advising farmers (mostly MR), selling our products
Services for dairy farmers

Fat %, protein %, SCC, urea
Mastitis 16
Milk recording
Herd management summary
Udder health report
Feeding report
Ketosis report
Internet software
Financial scheme

- Ministry of Agriculture
- ARIB
- ARC
- Breeding organisations
- Farmers
Financial scheme

ARC

Farmers 10%
Dairy

Ministry of Agriculture 7%
Breeding organisation

27% 27%
43% 34%
8% 15%
Regulations

- Farm Animals Breeding Act
- ICAR Guidelines
- All our procedures have to be described and approved by Estonian Veterinary and Food Board
Farm Animals Breeding Act

• Organisation has to be approved by Veterinary and Food Board
• ICAR Guidelines should be followed
• Definition of the technician
• Supervision
• Sanctions
ICAR Guidelines

• Voluntary
• Different options to follow
• Approvals (ID devices, milk meters)

A good handbook for organisations
Our procedures

Data collection and data processing
Publication of information and results
Training program for technicians

Information about laboratory
Animal identification: legislation

• Animal Disease Control Act – Estonian law by Estonian parliament
• Identification and Registration act for livestock – Regulation of the Minister of Agriculture
• EU regulations:

Cattle

Farmer has to be registered
Holding has to be registered
Only farmer can buy ear tags
Farmer can buy as many tags as many female animals are in the herd

Set of two ear tags is the only ID device for cattle in Estonia (no boluses)
HDX technology for EID tags
Requirements

Two ear tags
If one of the tags is EID it has to be in the left ear
Animals must be identified:
   Before leaving the herd
   20 days from birth
Registration within 7 days
Registration of any movement within 7 days
Passport ...
Passport

Printed and sent by Estonian Agricultural Registers and Information Board
Farmer has to write and confirm with signature: name, address, number of the holding and date of the arrival of the animal
All movements and vet. treatments should be recorded
If passport is full or contains mistakes, farmer must inform the Board within 7 days
Ear tags for cattle
Position
Replacement tags

Retagging is allowed only by necessity and animal register has to be informed.

Timeline:

- 2 days – farmer has to inform animal register
- 20 days – Animal Recording Centre has to replace the tag with replacement tag
- 7 days – farmer has to apply the tag to the animal
Imported animals

From EU – no changes, passport will be sent back to the country of origin
Outside EU – after quarantine reidentification within 14 days and informing animal register about both numbers
Outside EU for slaughtering – reidentification is not needed if animal is slaughtered within 20 days
Milk recording scheme

Day 1
- Test day
- Collection of samples
- Laboratory analyses

Day 2
- Data entry
- Data processing and reports
Service speed (working days)
Test day

Owner sampling (other options: recording organisation or combination)
4 week recording interval (from 1 week to 9 weeks by ICAR). Interval 22–37 days

Methods:
- Standard – all milkings in a day
- AM/PM – either morning or evening milking
- 3x milkings – milk from 24h and sample at noon
- Automatic milking systems – milking robots
Cows by recording method

- Standard: 7%
- 3x milking: 7%
- AM/PM: 13%
- Milking robot: 73%
Collection of samples

ARC are collecting samples
Farmers can bring themselves
Farmers can use „door to door“ delivery
Laboratory and data entry

**Laboratory**
- Fat %
- Protein %
- Urea
- Somatic cell count
- Mastitis 16

**Data entry**
- Milk kg
- Calvings
- Dry off
- Movements
- Matings
- Weighings
Data entry and reporting

Farm → Vissuke

Vissuke → Files

Files → By paper

By paper → ARC
Test day information to ARC

![Bar chart showing the test day information divided into electronic and paper categories for different months from JAN06 to JUN13. Each bar is divided into two sections: orange for electronic and green for paper.]
Trainings for farmers

Fact sheets (8 per year)
Newsletters (4 per year)
Annual report (once a year)
Regional annual meetings
   Milk recording and breeding + some other topic
Seminars
   „Benefit of data recording“
   „Udder health 2012“
Prices

Milk 0.33 €

Milk recording:

Animal (calf, cow, bulls) 0.04 €
Sample (F, P, SCC, urea) 0.43–0.46 €
Internet software (per animal) 0.04 €
Welcome to Estonia!

www.jkkeskus.ee

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