



KNOWLEDGE CENTRE FOR AGRICULTURE
Cattle



CREATION OF A NATIONAL STRUCTURE USING THE INTERNATIONAL ANIMAL ID NETWORK

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PARTNER IN
DLBR[®]
DANISH AGRICULTURAL
ADVISORY SERVICE

HOW THE SYSTEM WORKS IDEALLY

- Standards and guidelines
 - Developed by technical experts in formal organisations
 - Supporting decision making by authorities
- Referenced in local legislation
- Local users and authorities report problems
- Non compliance strongly policeable locally
- Local cases can be reported on ICAR web site

THE INTERNATIONAL ANIMAL ID NETWORK

- This is NOT yet another organisation
- This is the informal cooperation between players
- Formal organisations have clearly specified tasks
- Formal organisations set up standards, guidelines, certification systems etc.
- The network is people working with and using animal ID

DANISH HISTORY

- 1895: Worlds first milk recording society
- 1920: First national identification scheme
 - Ear notch with mother's number, new ID in new farm
- 1956: EDP in milk recording
- 1982: New identification system, Herd and Cattle
 - National unique lifetime ID-numbers (ICAR and ISO compliant)
 - Eartags (first metal tags, since 1991 plastic tags)
- 1995: Farmers organisations ask for complete registration of all cattle in one central database (disease eradication: IBR)

IMPLEMENTATION OF EU LEGISLATION

- June 1997: EU legislation on registration of all cattle
- July 1997: Danish legislation adapted
 - 70% of all cattle already registered in cattle database
 - Numbering systems for herds and for animals adopted by authorities
 - Cattle database serves as registration point for everybody
 - Barn registration books of the cattle database adopted by authorities
 - Data for animal movement database (AMD, government) to be collected through the cattle database
- February 1998: All cattle registered in AMD

REGISTRATION, NO UNIQUE LIFETIME ID

ID #1
(Heifer)

Earnotch
(Mothers number)

Birth

Insemination

Veterinary treatment

ID #2
(Cow)

Cow number
(no relation to earnotch)

Calving

Milk production

Insemination

Veterinary treatment

Classification

ID #3
(New herd)

New cow number
(no relation to previous)

Calving

Milk production

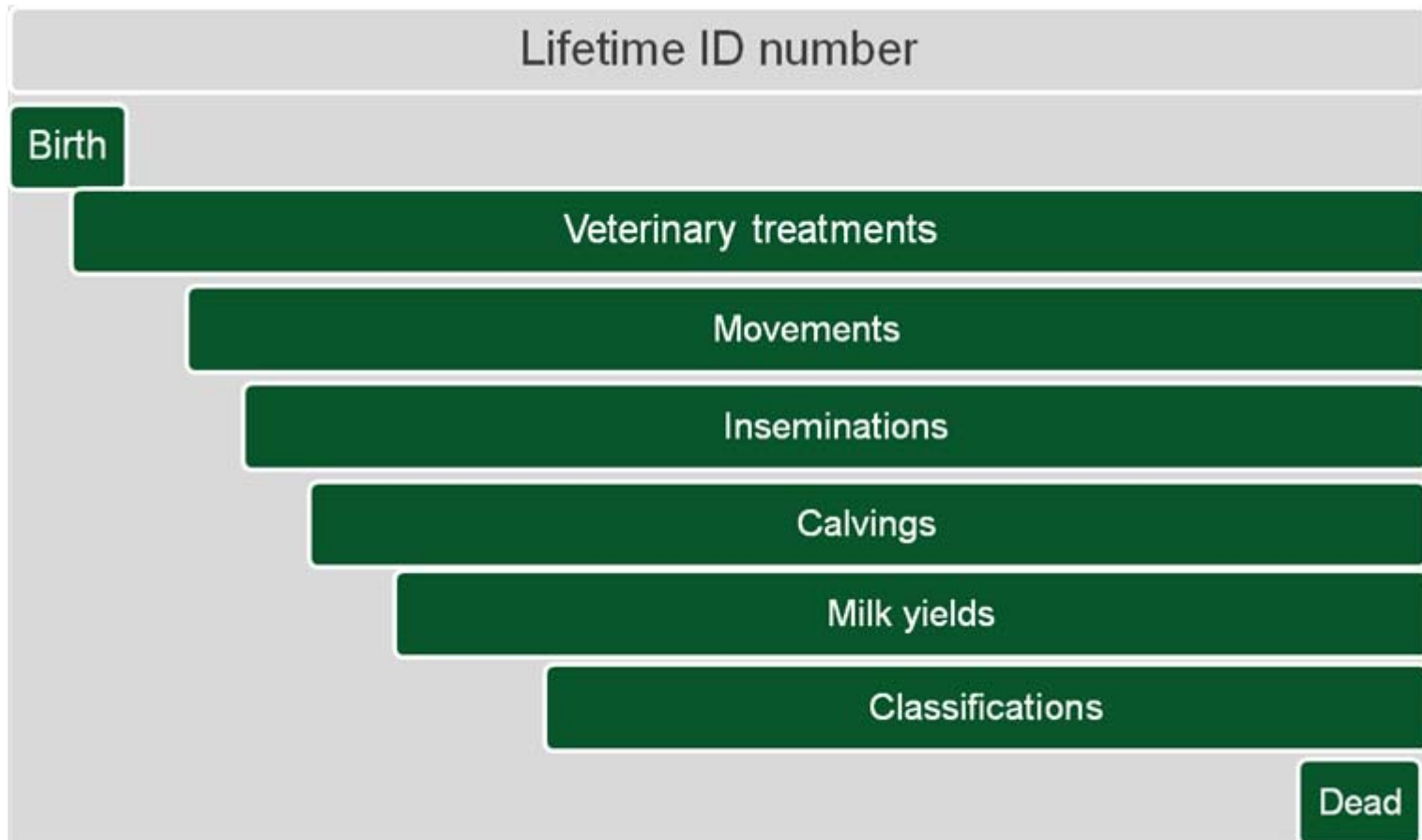
Insemination

Veterinary treatment

Classification

Dead - Slaughter

REGISTRATION, UNIQUE LIFETIME ID



ISO 11784 STANDARD FOR EID NUMBERS

Bit no.	Information	Combinations
1	Flag for animal (1) or non-animal (0) application	2
2 – 4	Retagging counter	8
5 – 9	User defined code	32
10 – 15	Reserved field	64
16	Data Block Flag	2
17 – 26	ISO 3166 numeric-3 country code	1.024
27 – 64	National identification code	274.877.906.944

GENERAL ISSUES ABOUT ID NUMBERS

- Country code (on visual tags normally alpha)
- 11 digits available for animal number
 - Highest code: **274.877.906.944**
- Preferably NOT to include other codes in the animal number
 - Farm code
 - Region code
 - Etc, etc....
- Will limit number of available codes considerably
- Animals numbers unique across all species (pets included). Competent authority necessary

IDENTIFICATION STANDARDS

- Voluntary use:
 - Stand alone systems: OK if they work where installed
 - Standards applied: Manufacturers decision
 - Minimum performance criteria is a matter between user and manufacturer

- Mandatory use:
 - Universal systems: Most work everywhere
 - Must work also when animals move
 - Standards applied: Authority decision
 - Minimum performance criteria is a matter between authority and manufacturer

ISO and ICAR network

- ISO and ICAR together setting up standards for Low Frequency electronic identification of animals.
- Starting with the ISO 11784 code structure
- Continuing with ICAR test protocols
- Later transformed to ISO standard 24631, 1-4
- ISO sets standards, ICAR tests
- Who can monitor the market?
- Who can be the policeman in case of problems?

AMENDMENTS OF STANDARDS

- EU discussion about electronic identification of sheep and goat
 - **EU: Replacement tag with same animal ID number**
 - **ISO: No duplication of transponder number**
 - **EU: Species code**
- Joint workshop EU-ISO-ICAR to provide a solution
- Solution found and ISO 11784 code approved for EID in EU countries

REQUIREMENTS FOR IDENTIFICATION DEVICES

- Identification devices must:
 - Be easy applicable
 - Stay in the animal
 - Be easy to read (clear figures, high quality printing)
 - Be robust (last for the entire lifetime of the animal)
 - Not be reuseable once closed
 - Not harm animal welfare
- Make sure that you ask for all requirements
- Make sure you receive documentation from manufacturers
- ICAR can help you

ICAR TESTED DEVICES

- ICAR test covers most of what any user might want to know about tags
- Plastic tags passing ICAR's test can be found on:
http://www.icar.org/pages/approved_eartags.htm
- Electronic tags passing ICAR's test can be found on
<http://www.service-icar.com/manufacturer.php>
- Always ask also for ISO 24631-3 performance test on electronic tags

PERFORMANCE CRITERIA

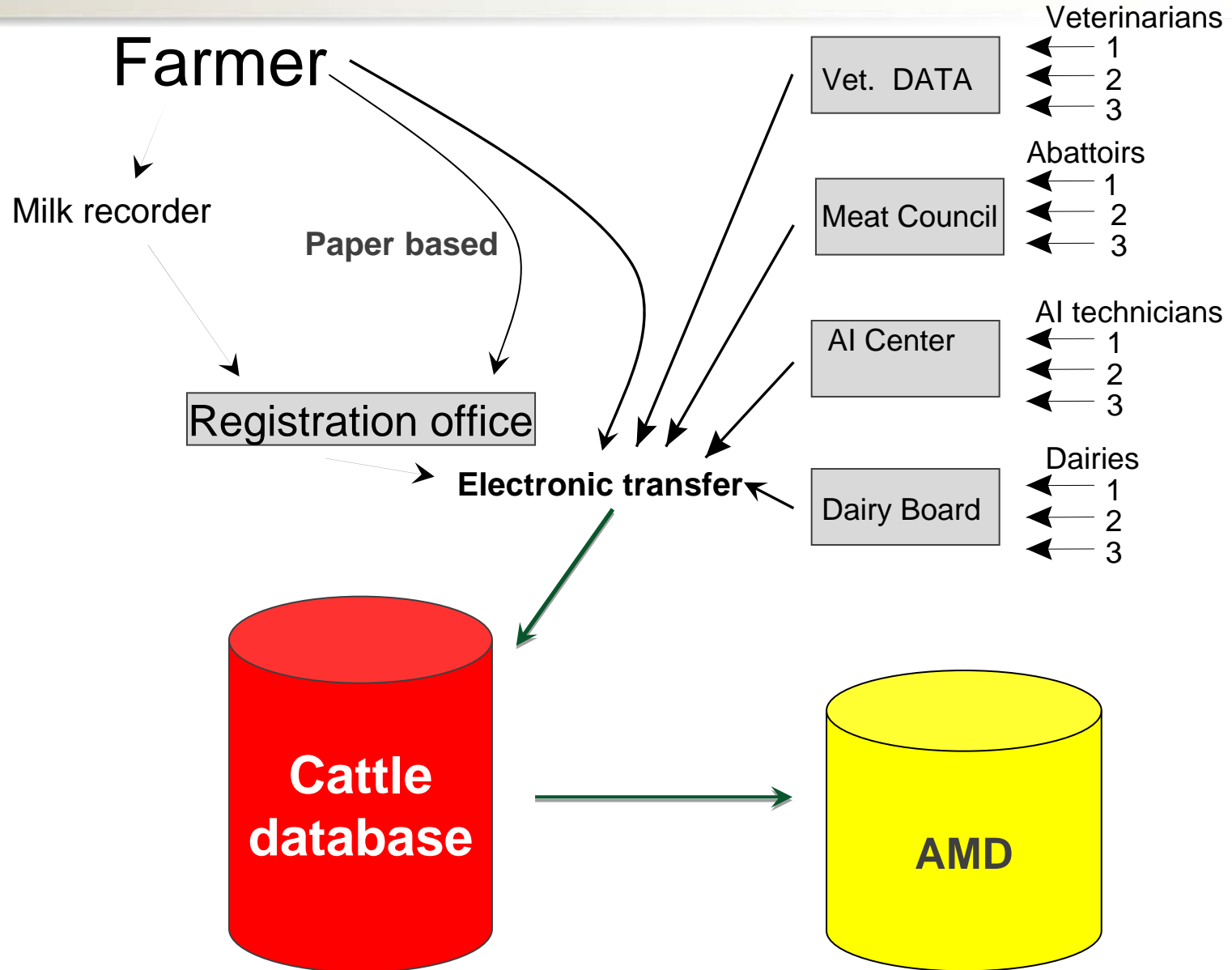
- Read distance of a tag is an important criteria
- User would like to know it in centimeters
- Same tag has different read distance with different readers
- Original EU criteria for sheep and goat expressed in centimeters
- ISO working group made recommendation based on electronic requirements to approx. match the metric requirements
- Recommendation also in pipeline for cattle tags

VIOLATION OF STANDARDS

- Unauthorised use of country code
- Duplicate codes
- Will be discovered locally
- Standard setting organisations will support with technical information and create awareness
 - but they have weak possibilities for sanctions
- Powerful policing can be done locally when referring to standards in local legislation

BAD PERFORMANCE

- Certification tests done in laboratory
- Unexpected bad field performance discovered locally
- Products sold as certified ??
- Bad performing products same as originally tested?
- Local authorities can test product from the market
- Local authorities can report to ICAR
- ICAR can withdraw certification and put report on web site
- Powerful policing can be done locally when referring to standards and certifications in local legislation



CATTLE DATABASE STATISTICS

○ At 2. June 2014

- 1.580.000 live cattle
- 665.000 cows
- 19.600 cattle herds

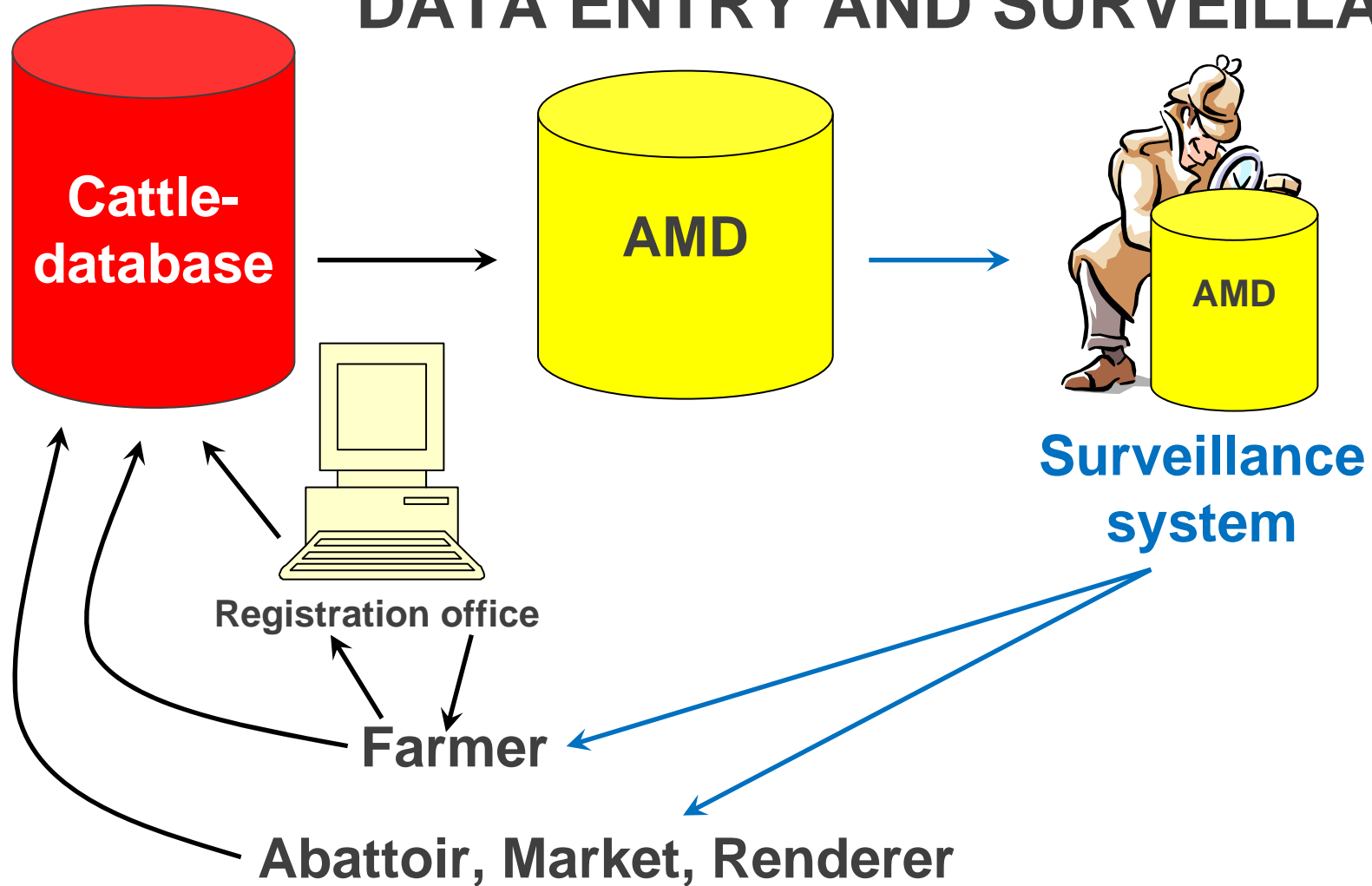
○ Incidents per year (approx.)

- 2.400.000 Movements
- 680.000 Calvings
- 1.150.000 AI services
- 5.500.000 Milk recording information
- 1.200.000 Health information

AUTOMATIC SURVEILLANCE SYSTEMS

- Control at data entry (logic errors)
- Sequence of movements / Sequence of reports
- At the end of the day all information must comply
- Surveillance System
 - Finds data not complying / missing reports / late reports
 - System finds errors and report these to the veterinary authorities
 - Automatic letter with reminder procedure 2 weeks later
 - Not corrected errors are automatically reported for authority intervention 4 weeks after first letter.

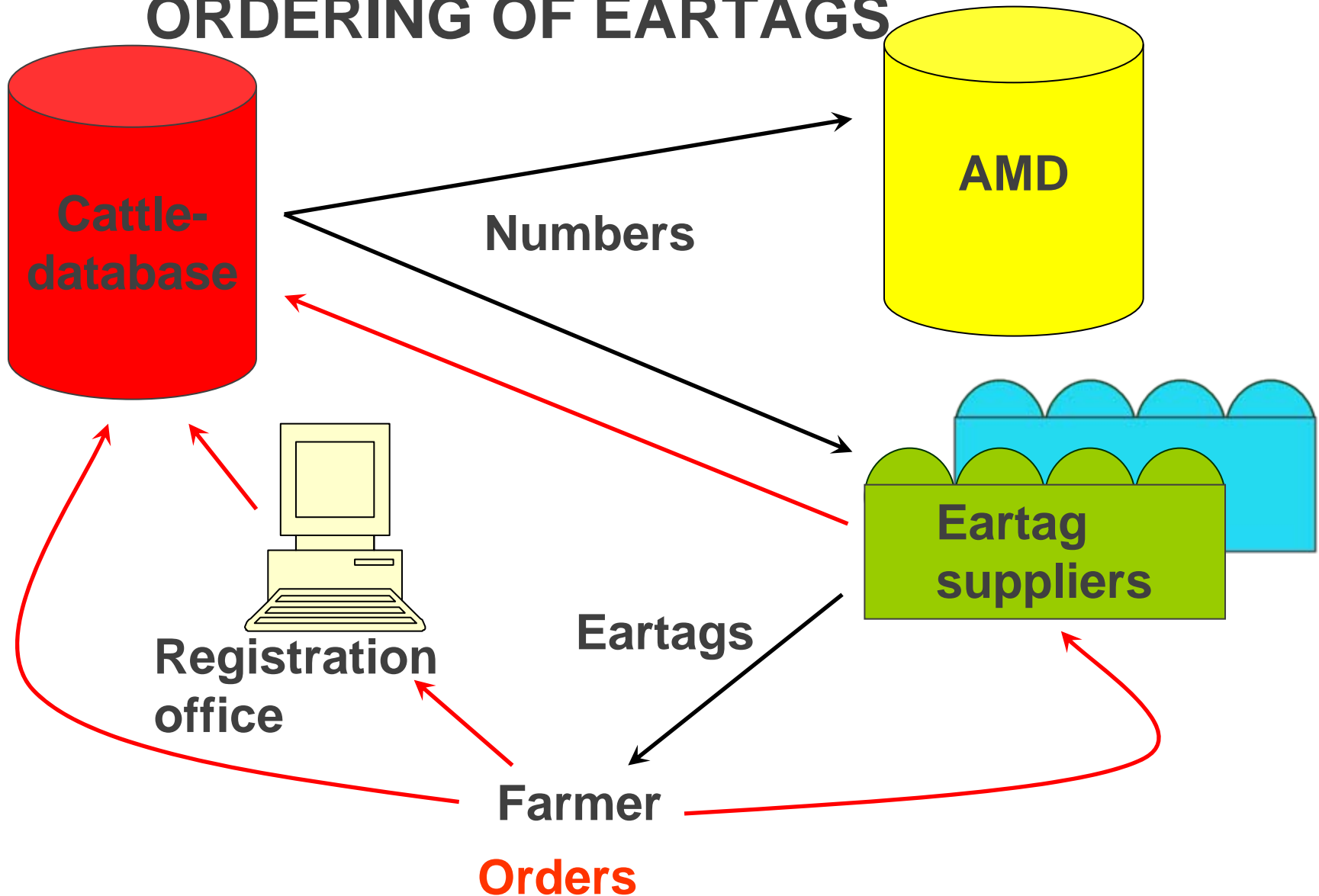
DATA ENTRY AND SURVEILLANCE



EAR TAGS

- Ordering by Internet, Animal Registration, at registration office or through manufacturer
- All orders can be handled only through Cattle Database
- Farmers choice from more than one supplier
- Tags delivered within 3 – 5 days after ordering
- "Rush tags" delivered on the day after ordering
- Replacement tags

ORDERING OF EARTAGS



VISUAL FLAG TAG AND EID BUTTON TAG



VISUAL FLAG TAG AND EID FLAG TAG



ANIMAL PASSPORTS

- An animal moving to other farm had to be accompanied by a document
- An animal moving to other countries still must be accompanied by a document
- Document must be ordered for each movement
 - Not valid after 14 days
 - Valid for one movement only
 - Farmer confirms information by his signature
 - (Health document for movements inside Denmark)
 - Cattle passports for cross border movements



- Validity
- Herd, Animal, Owner
- Movements
(Farm and date of departure)
- Health Status
 - BVD, Salmonella, Leucose, IBR,
 - Restriction etc.
 - 7/30 Day rule
- Confirmation / Signature

Udskejtt fra CHR: 18.08.2004
Ikke gyldig efter: 02.07.2004

Sundhedsdokument

I henhold til bekendtgørelse nr. 759 af 10. september 2002 om mærkning, registrering og flytning af kvæg, svin, får og geder.

Identifikation

Ejendommens CHR-nummer: 002359
Besættingsnummer: 002359
Dyrets CHR-nummer: 002359-01389
Fødselsdato: 10.12.2001
Køn: Kvie
Racer: SCM
Moders CHR-nummer: 021564-000642

Ejers navn og adresse

Bonde Selvejør
Lundsgade 18
9620 Korup

Afgangsbesætning og afgangsdate

CHR-nummer og afgangsdate fra de besættinger, hvor dyret har været siden 1. januar 1998:
002359 10.03.2002
002314 15.02.2004

Dyret er registreret i afgangsbesætningen, som ikke er påagt offentlig til syn eller forebud mod salg af kvasæg til levebrug omfattet af lov nr. 315 af 2. juni 1999 om sygdomme og infektioner hos dyr, som ændret ved lov nr. 986 af 4. december 2002.

BVD

Besættingsstatus: FRI

Status gyldig til: 06.09.2004

Dyrets status: FRI

Prøvedato for BVD virus:

Resultat:

Prøvedato for BVD virus:

Resultat:

Salmonella Dublin niveau

Status 1: Sandsynligvis Salmonella Dublin fri, på basis af bakterieprøver

Andre erklæringer

Undertegnede erklærer,

at 7/30-dages-reglen er overholdt.

Det vil sige: Der er ikke tilført kreatur eller andre kvægsartere dyr til ejendommen inden for de seneste 7 dage (inkomsttiden inkludert), og ovennævnte dyr har været i besætningen i mindst 30 dage (inkomsttiden inkludert) på dato for underskrift eller er født i besætningen.

at oplysningerne på udskejften er korrekte og gældende på dato for underskrift

Underskrift

Dato

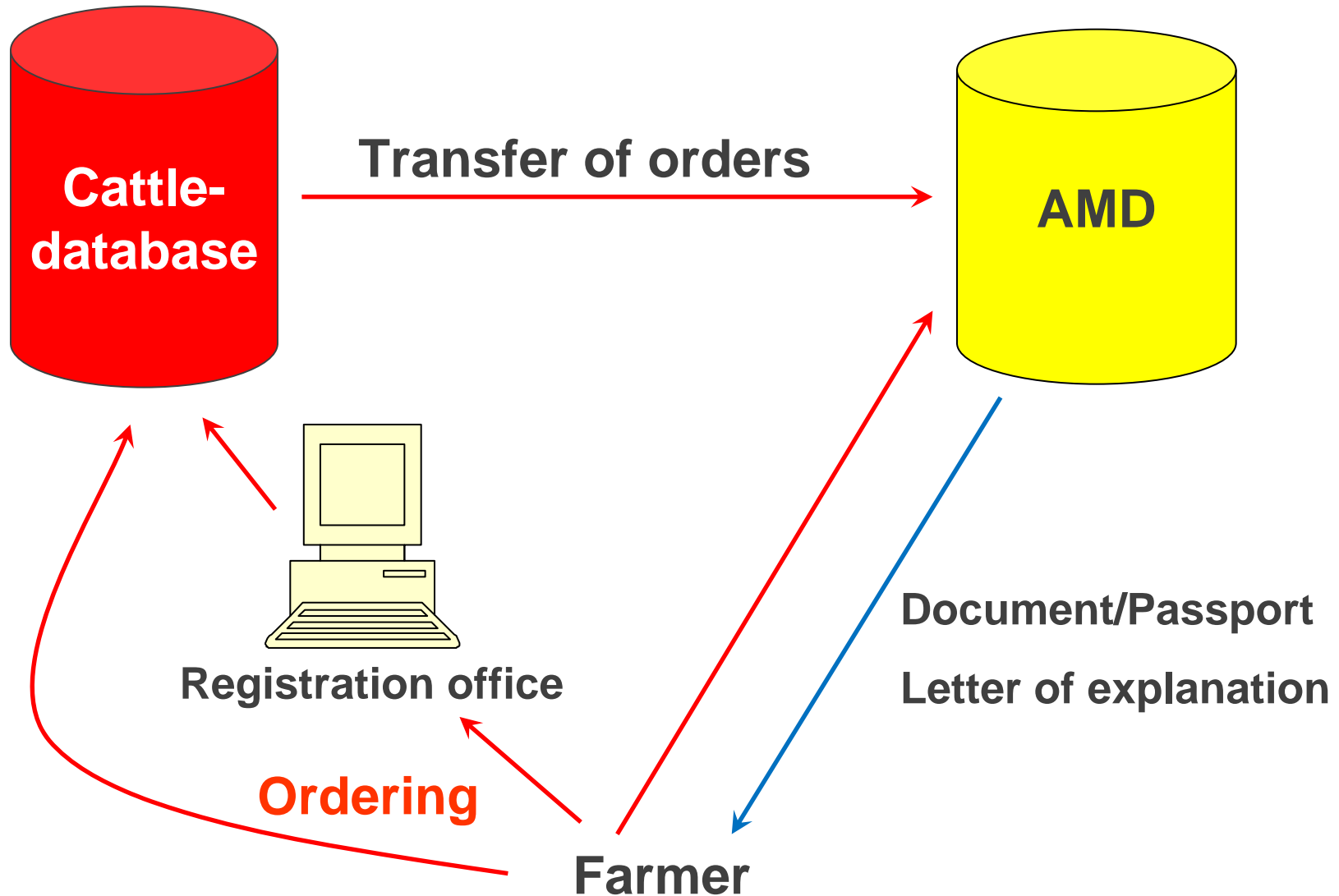
Mærket, auktion el. lign.
(stempel, dato, underskrift)

Sundhedsdokumentet er kun gyldigt, som original med besættings CHR-nummer, den anerkendte underskrift og dato for underskrift. Dokumentet kan anvendes inden for 14 dage fra udskejtsdatoen.

Sundhedsdokumentet er gyldigt på datoen for underskrift og gælder kun for én flytning på denne dato.

Dokumentet skal følge dyret til modtagelsen.

ORDERING OF DOCUMENT/PASSPORT



AMD CONTROL (CHR-KONTROL)

- Slaughtering without document/passport
- Information is verified on line in AMD
 - Identity
 - Herd
 - BSE test
 - Blood sampling (Surveillance: IBR, BVD, Leucosis)
- GREEN, YELLOW or RED light for slaughter
- Immediate reporting from slaughterhouse possible

HEALTH SURVEILLANCE

- Leucosis, IBR and BVD
- Dairy herds are checked through milk samples
- Beef producing herds are checked through blood samples
- The AMD control selects the sufficient number of animals from beef producing herds for blood sampling
- Aimed selection facilitates the optimum effort

LIVESTOCK STATISTICS

- National and EU requirements
- Until 2001:
 - Statistics Denmark made written surveys
 - Farmers filling in forms
 - 2 surveys per year
 - Spot checks extrapolated (10 – 15%)
- As of 2001:
 - Statistics Denmark collects information through AMD
 - No surveys on herd and cattle to the farmer
 - Number of involved herds now much larger (80 – 90%)
 - 4 surveys per year

REGISTRATION AND USE OF DATA

- AMD is a legal requirement
- Once registered data should, when possible, be reutilised in other applications
- Coordination of requested data necessary
- Less bother – More precision
- Open minds on all sides (Authorities, Farmers, Industry)

THE IMPORTANCE OF THE INTERNATIONAL ANIMAL ID NETWORK

- Each party can do something
- No party can do everything
- Together we can do more
- Networking between organisations, authorities, manufacturers and users gives us the full picture
- Join the network, for your own sake and our sake

Thank you for attention

