The use of electronic eartags for sheep in France 2004 – 2005

Louise MARGUIN

Institut de l'Élevage

Why some pilot projects for the electronic identification on sheep ?

✓ **After the French IDEA project (1998 – 2001) : technical feasibility on fields, eartags and readers in conformance with ISO standard available**

✓ **To implement progressively on fields electronic identification as planned for January 2008 in the European regulation 21/2004 :**

  demand of the Ministry and of the ovine producers

Electronic identification as official way for individual traceability for sheep and goats

✓ **New European rules from 9th July 2005 :**
  → **2 identifiers with the same number for all the animals over 6 months**
  → **a movement document by group of animals moving between premises**
  → **a herd register in all premises with the entries and exits of animals**
  → **a national data base with the owner of any small ruminants associated to a premises number**

✓ **Planned for 1st January 2008 : declaration of movements by group to the national database**

TO CONFIRM : **the use of electronic identifier compulsory to declare the individual movement of small ruminants**

Electronic identification to help the users for

✓ **Performance recording : weight and milk recording**
✓ **Management of big herds by the farmer**

✓ **Meat traceability on the commercial line**
  → **For the farmer and his producers' organisation**
  → **For the abattoir**

Using electronic identification on sheep

FARMS   TRANSPORTS   SALEYARD   ABATTOIRS

Eartags number read and recorded without any errors

To add :
• birth date, mother
• weight (automatic scale)
• milk weight

To add :
• exit date

To add :
• entry date
• premises nb

To add :
• slaughter date
• carcass weight
• conformation note

Herd register

Automatic draft on different criteria

Identity and traceability

Identity and traceability

DATABASES for identification, genetic, production line…

Organisation of the pilot projects for sheep

✓ **A national steering committee for the use of official electronic identification : with the Ministry and the professional federations and the Institut de l'Elevage for the technical coordination**

✓ **6 areas in France with different production systems :**
  → **100 voluntary farmers with their producers' organisations which concern 7 collecting centres and the trucks**
  → **3 organisations of performances recording (meat and milk)**
  → **1 saleyard**
  → **10 abattoirs**

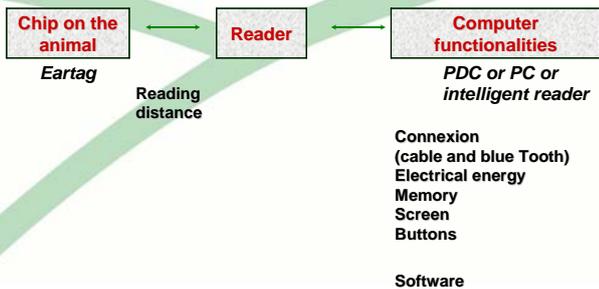## A call for tender in November 2004 for the eartags and readers

✓ **150 000 electronic eartags (button female part and pliers) to apply on ewes and lambs from the birth**
  → **4 manufacturers (Allflex HDX, Reyflex, Zeetag, Néodis) with plastic eartags approved in France**
  → **With ICAR certificate of conformance to ISO standards**

✓ **100 handheld readers and 50 fixed readers**
  → **2 French manufacturers**
  → **With JRC Ispra certificate of conformance to ISO standards**

ICAR 2006 - Kuopio 8th June 2006

7

Only one number of (country code + 12 digits) for the animal identification and the transponder

✓ **A new numbering system is introduced to suit the ISO standard 11 784**

INF	250	0	0	0	0	0	0	0	0	0	0	0	0
BOVINE		0	0	0	1	0	0	0	0	0	0	0	1
SHEEP		0	1	0	0	0	0	0	0	0	0	0	1
GOATS		0	5	9	9	9	9	9	9	9	9	9	9

Free : 06 to 18

WILD ANIMALS	1	9	0	0	0	0	0	0	0	0	0	1
	2	2	9	9	9	9	9	9	9	9	9	9

Free : 23

PIGS		2	4	0	0	0	0	0	0	0	0	0	1
HORSES		2	5	0	0	0	0	0	0	0	0	0	1
PETS		2	6	0	0	0	0	0	0	0	0	0	1
SUP	250	2	7	4	8	7	7	9	0	6	9	4	4

ICAR 2006 - Kuopio 8th June 2006

8

Not only a reader to use the electronic identification number

Chip on the animal	→	Reader	→	Computer functionalities
Eartag				*PDC or PC or intelligent reader*

Reading distance

Connexion (cable and blue Tooth)
Electrical energy
Memory
Screen
Buttons

Software

ICAR 2006 - Kuopio 8th June 2006

9

2006 : French standards around the use of the electronic number

✓ **To read the chips : ISO standards 11784 and 11785**
✓ **To display the electronic number (3 + 12 digits)**
   250 0 123456 12345
   and retagging counter :   0 or 1
   European code species : 04   for sheep / goats
✓ **To send the minimum data of the chips, the ASCII file exit from readers is :**
• **Beginning of message I**
   → **1**   **animal concerned**
   → **00**   **reserved fields**
   → **0**   **retagging number**
   → **00**   **user information with code species for EU**
   → **250**   **country code (3 digits)**
   → **0 + 11**   **digits for sheep and goats**
   → **00 + 10 digits for bovine**
   → **24 + 10 digits for pigs**
• **Reading date ddmmyy** *optional*
• **Reading time hhmm** *optional*
• **End of message CRLF**

ICAR 2006 - Kuopio 8th June 2006

10

The choice of handheld readers

✓ **For farmers (list of animals in a group, management software) and milk recording**

✓ **For reading : ISO standards for both HDX and FDX– B eartags (a reading distance of 10 cm)**
  - ➔ 2 main different types
  - ➔ A screen of 2 lines to display the electronic number
  - ➔ A memory of at least 3 000 records with electronic numbers and time and few software to record, count and exchange data
  - ➔ A connexion with cable and Blue Tooth
    - ▪ to **only a printing machine**
    - ▪ To a PDA or PC with software

13

14

The installation of some fixed antennas and readers

✓ A first visit of the technician to study the requirements and works before fixing the antennas, one or two, depending on carcass or alive animals

✓ The need of a race way with an adapted width to the size of animals, so they can go or run one by one in the field of antennas

For scale, collecting centres, saleyards and slaughter chains

➔ A special question on how to load and unload trucks ?

➔ Another question on how to isolate the few non read animals, to read again with a handheld reader ?

15

Conclusions of the project pilots on sheep in France

1. With **handheld readers**, no problem to read the electronic eartags on ewes and lambs, when they are in headlockers or in small groups
2. A minimum of **software** on the reader, or on the connected PDA is necessary for any use by the farmers
3. For half of the lambs production organised with producers organisations, the **exchange of data** (carcass weight and price) has to become automatic between the abattoirs and the farmers
4. At the **slaughter chain**, no problem to read the electronic eartags on the carcass with the head, with a fixed antenna connected to the abattoir software :

   a cell to detect the unread carcass

26

Improvements for the end of the year 2006

✓ **In a race way, even adapted to the size of the animals so they pass one by one in the field of the 2 antennas, we cannot be sure to read 100 % :**
   → A system to stop or to draft the few non read animals has to be checked (a counter, legible from far away, helps today to know how many animals are not read)

✓ **The reading during loading and unloading of the trucks has still to be improved**

27

An organisation of work and a cost for each need

✓ **The pilot project allows to know :**
   → The actual price of all the materials needed in order to get a result (not only eartags and readers)
   → The state of the actual software to use electronic numbers and to exchange data with other systems
   → The need of installation by a technician and of after sales services for all users

28

5