



# **Use of electronic identification for small ruminants**

Institut de l'Elevage – France

L. Marguin, J. Holtz, S. Duroy, A. Debroux, M. Dang

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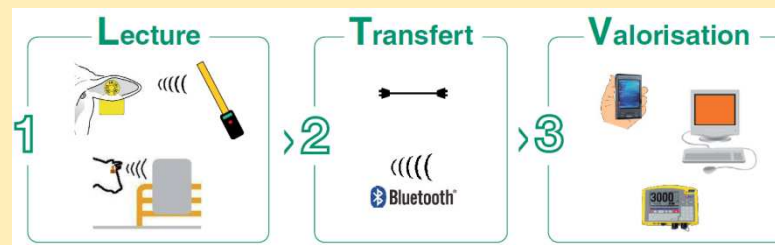
# French rules for small ruminants identification

- ✓ RFID eartag for all the **kids born after July 1<sup>st</sup>, 2010**
  - Before the age of 6 months
- ✓ **New RFID eartag** with the animal identification number for all the animals in replacement of the eartag on the left ear
  - 330 flocks from 2005 to 2010 (pilot projects and first voluntaries)
  - All animals till July 1<sup>st</sup>, 2013

# Constraints for a relevant use of RFID

✓ The final result for the user of RFID depends on

- Reading the RFID eartag
- Transfer of the data
- Valorisation with software



✓ Readers type : *a catalog of RFID readers from Institut de l'Elevage*

- Handheld readers
- Fixed readers
- Integrated readers in automates

✓ Eartags and readers compatibility

✓ Adapted software : *6 sheep management software*


✓ The cost of valorisations

- Readers
- Adapted software

# The French catalog of RFID devices

Many characteristics and parameters to take into account :

- shape and weight
- size of memory
- energy autonomy
- connection type
- screen and indicators
- users' guideline in French
- software's use
- ...

Lecteur portable XXX 100/200	
Utilisation : le lecteur mobile XXX 100/200 a été développé pour une utilisation dans des environnements difficiles (parcs d'élevage, centres d'alimentation, abattoirs, élevages).	
<b>Coordonnées :</b> <ul style="list-style-type: none"> <li>Fabricant : XXX</li> <li>site : <a href="http://www.com">www.com</a></li> <li>Distributeur / SAV : YYYYY</li> <li>contact : <a href="mailto:adcom@www.com">adcom@www.com</a></li> <li>Tel : </li> <li>site : <a href="http://www.com">www.com</a></li> </ul>	<b>Caractéristiques commerciales :</b> <p>Prix conseillé avec assistance :</p> <ul style="list-style-type: none"> <li>Lecteur seul XXX 200 = 790 € HT</li> <li>Chargeur rapide : 154 €</li> <li>Batterie supplémentaire : 40 €</li> <li>Chargeur voiture : 19 €</li> </ul>
<b>Description :</b> <ul style="list-style-type: none"> <li>Références du produit : XXX 100_XXX200</li> <li>Apparence : type bâton robuste</li> <li>Dimensions : 60X10X10cm</li> <li>Poids : 700 g sans batterie</li> <li>900 g avec batterie</li> <li>Modèle : connexion filaire USB + Bluetooth® avec une seule tête</li> </ul>	
<b>Caractéristiques techniques</b>	
<b>Conformité aux normes :</b> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> ISO 11785 pour la lecture des repères officiels</li> <li><input checked="" type="checkbox"/> Format de sortie IE v.3 pour le transfert du numéro</li> <li><input checked="" type="checkbox"/> Protection : IP 67</li> </ul>	<b>Distance lecture annoncée :</b> <p>jusqu'à 35 cm</p>
<b>Connexion filaire :</b> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> RS232</li> <li><input checked="" type="checkbox"/> USB</li> <li><input type="checkbox"/> Autre :</li> </ul>	<b>Connexion sans fil :</b> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Bluetooth®</li> <li><input type="checkbox"/> Wifi</li> <li><input type="checkbox"/> GPRS</li> </ul>
<b>Alimentation :</b> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Batterie : Pack NiMH 9.6V/900mAh</li> <li>Temps recharge batterie : 16 h via câble RS 232</li> <li><input type="checkbox"/> Secteur :</li> </ul>	<b>Méthode de chargement :</b> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Branchement au secteur</li> <li><input checked="" type="checkbox"/> Solaire</li> </ul>
<b>Témoins / indicateurs :</b> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Témoin de charge</li> <li><input checked="" type="checkbox"/> Témoin de niveau batterie</li> <li><input checked="" type="checkbox"/> Témoin de lecture : son paramétrable</li> <li><input checked="" type="checkbox"/> Témoin de lecture son</li> <li><input checked="" type="checkbox"/> Témoin de lecture : voyant lumineux paramétrable</li> <li><input checked="" type="checkbox"/> Témoin Bluetooth®</li> </ul>	<b>Guide et utilitaire :</b> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Notice pour la prise en main du lecteur : support papier et CD</li> <li><input checked="" type="checkbox"/> Notice détaillée du fonctionnement du lecteur : support papier et CD</li> <li><input checked="" type="checkbox"/> Logiciel utilisateur : XXX DXXX software</li> </ul>

# Use of RFID on farms

The restraining conditions are necessary and have to be adapted to the size of the flock and the breeding conditions.

The existing ISO standards are not sufficient to guarantee the use of the complete systems. The user needs only one technical contact.

- ✓ For the farmers using an adapted sheep management software

*The minimum price is around 1 200 euros*

- ✓ with just a reader and the adapted printer

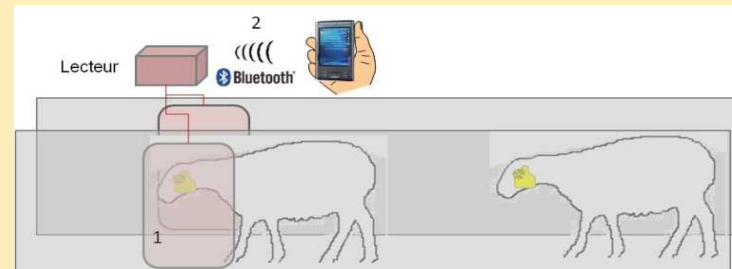
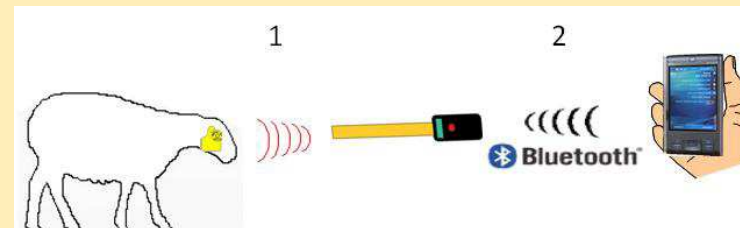
- To print the European official documents (inventory and movements)

*The minimum price is around 1 000 euros*

- ✓ For the reading of a big number of animals

- Fixed antenna in a race way
- Helpers to regulate sheep's flow

*The minimum price is around 3 000 euros*



# Use of RFID on the farms : feeding automates

From private RFID tags to the **ISO RFID tags** (FDX and HDX technologies)

- no more RFID necklace needed
- manufacturers are waiting before adapting the reading systems
- some automates read only HDX, so some sheep or goats can have HDX eartags



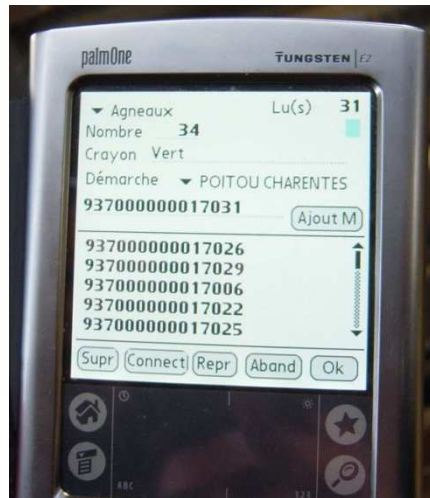
# Use of RFID on the farms : inventory and exit



Individual tracing for the movements can be assumed

- by the farmer or the agent of the collecting center
- with the printing of the animals' list before the exit of farm
- by sending data to a national database

Individual tracing is a compulsory new step, so the additional time is to plan and it needs some training.

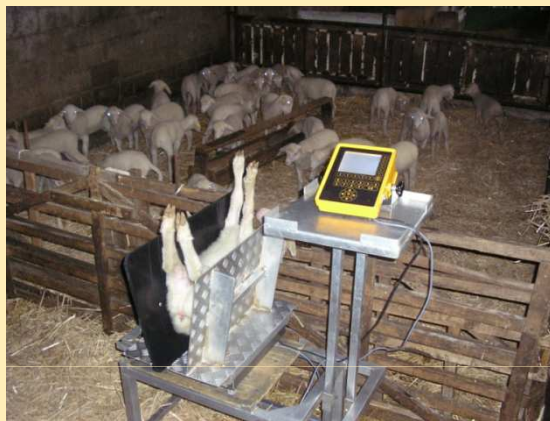


# Use of RFID for meat performances control

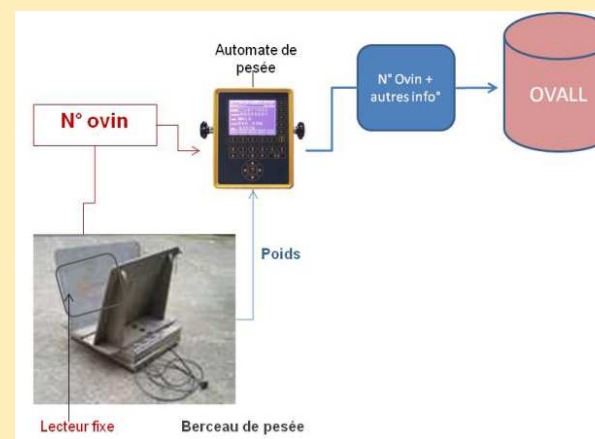
✓ Depends on the age of the lamb

- A cradle
- A crate

linked  
to a weighing automate



✓ A French AFNOR standard : to collect and transfer to the national database the weight with the official animal identification number from RFID reading



# Use of RFID for goats milk recording

The official animal identification number is read from the pastern tag on the back leg of the goat in the milking parlor.

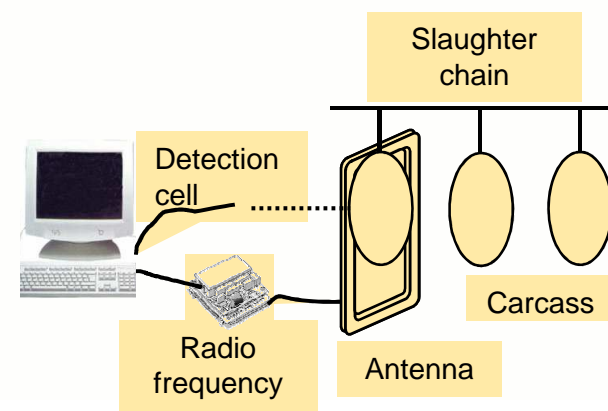
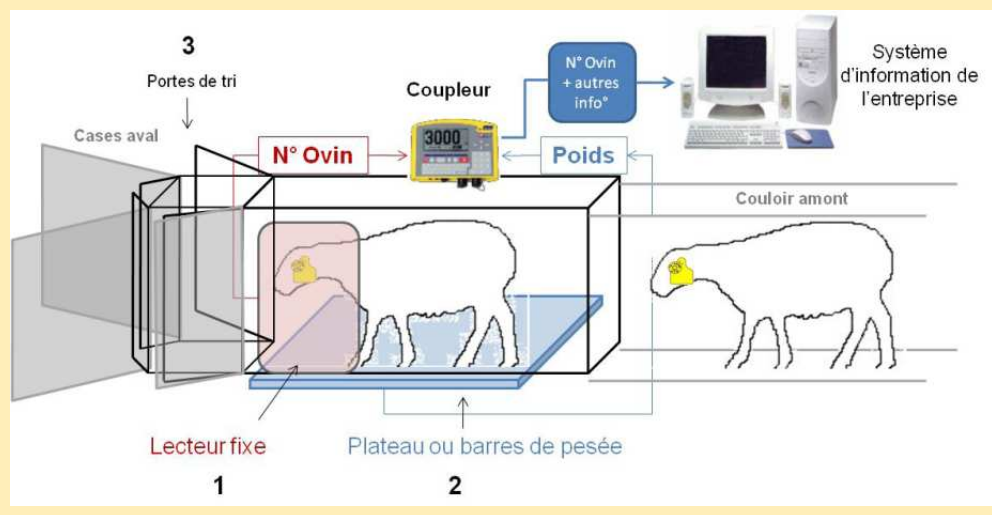
The same handheld reader also reads the RFID numbers of the milking stand and the automatic milking system reads the milk sample bottle number.

Other devices and a computer record all data together (sample n°, milk weight) to send to the national database.



# Use of RFID for animal trade

- ✓ For saleyards and markets
  - The biggest constraint is to read 100 % of sheep
  - Two solutions with stop : weighing or drafting system
- ✓ For the slaughter chain
  - Few constraints to read the carcass with the eartag
  - Fixed readers to integrate in the environment



# Supervision of the RFID devices

As during the French pilot projects (2005 – 2008) and till now with the first implementation of RFID, the **Institut de l'Élevage** has to continue to work on the technical points :

- Restraining conditions for a successful reading
- Performances quality of the RFID eartags and the reading systems
- Information and help to the users of RFID devices
- Tests of new RFID tags and reading systems
- ...

Web site : [www.inst-elevage.asso.fr](http://www.inst-elevage.asso.fr)



## Use of RFID for small ruminants in France

**Thank you for your  
attention !**

