

# CRYOBANQUE NATIONALE

Groupeement d'Intérêt Scientifique

CRYOBANQUE NATIONALE

Legal/institutional arrangements for *ex situ*  
conservation for the French National Cryobank

Delphine DUCLOS – Coralie DANCHIN-BURGE

# France signs the Convention on Biological Diversity



- ⇒ Commitment to preserve its domestic species **genetic variability** on a long term basis
- ⇒ **Cryoconservation** (*i.e. storing biological material in liquid nitrogen*) seems an adequate tool for such purpose
- ⇒ It is written since 2007 in the rural code Article D653-11:  
“The Organization created by convention between the State and all the interested partners to ensure the cryoconservation of the national zoogenetic heritage is called ‘National Cryobank’ ”.



# The French Cryobank

- 12 partners  
(including: Minister of Agriculture, INRA etc.)
- All partners are represented in a Group Council
- 13 experts in cryopreservation, population genetics, biodiversity or sanitary rules were part of the Cryobank Scientific Committee till 2011, but now a common Scientific Committee for the members of the CRB Anim project.

# What is in the collection ?

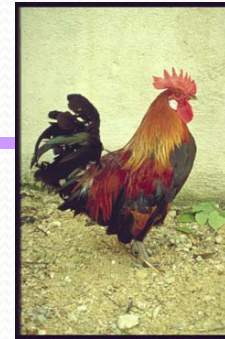
- 11 livestock species present yet
- Type of Biological Material:
  - ✓ Semen (+++++)
  - ✓ Embryos (++)
  - ✓ Cells (+)
- Improved Animal Populations (breeds, strains...)
- Categorized in three types of genetic variability





# 3 types of genetic variability

Rare breeds



Type I

Exceptional animals  
not used as breeders



Type II

Improved  
breeds

Selected  
breeding stock



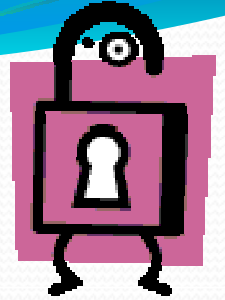
Type III



# Sanitary arrangements/regulations

- For most species (ruminants, pigs and horses), French or European laws specify the sanitary requirements to collect and freeze semen and are the same for the cryobank.
- Possible to use CBS<sup>TM</sup> straws (secured straws) to manage samples with variable sanitary status, or with sanitary status that are likely to change with time.

# Rules of management (1)



"Security first":

- Collection sampled in **double** = Storage in **2 places**:
- "Primary" site contains half of the collection
- "Secondary" sites chosen depending on the species, each site has a convention with the Cryobank

A **specific database** called 'cryobase' :

It can be accessed by the web. Information considered as confidential has a restricted access, but the number of breeds and doses per breed can be consulted: [www.cryobanque.org](http://www.cryobanque.org) .



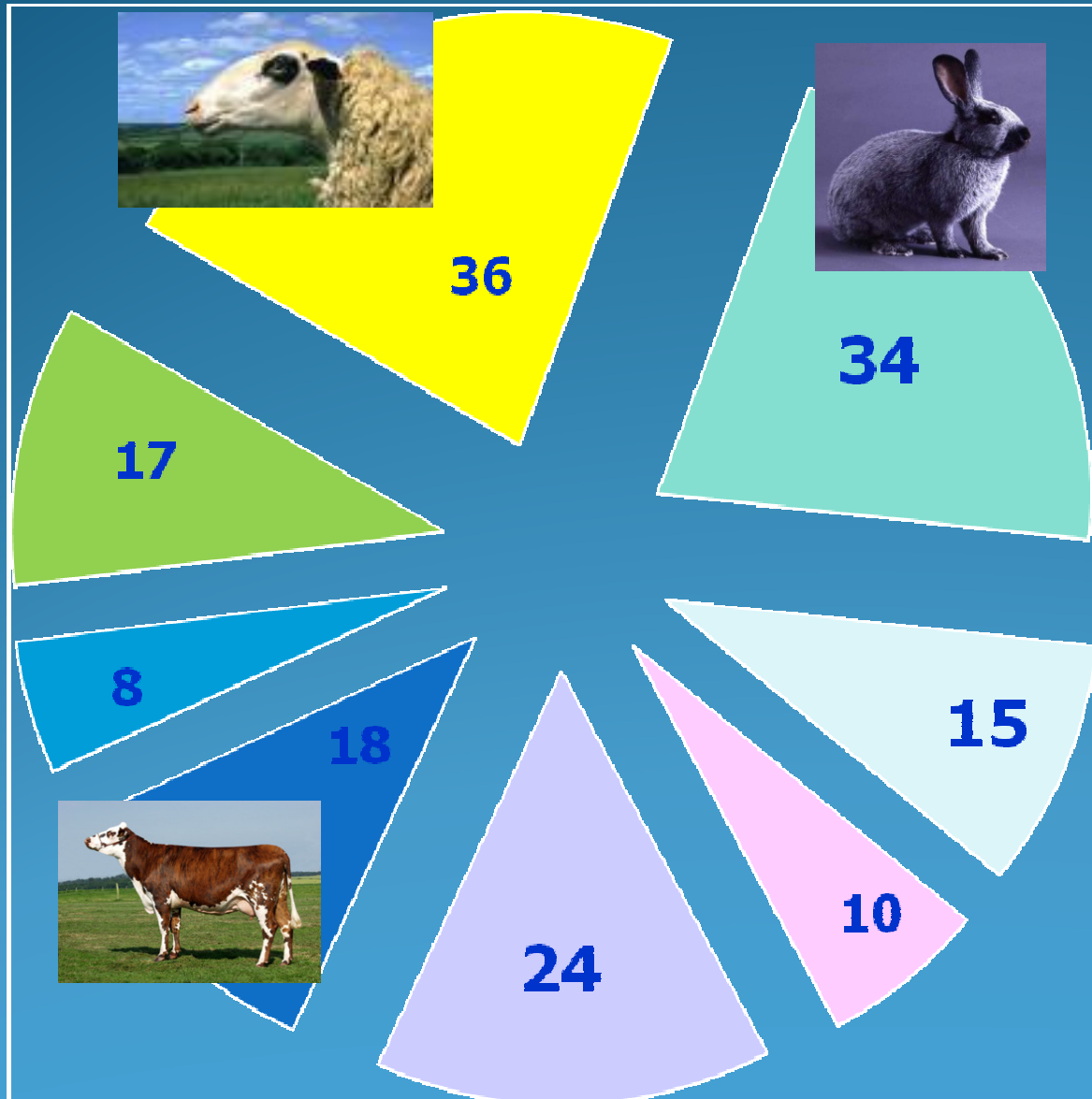
## Rules of management (2)

- Convention between Depositor / Cryobank
- Group Council decides on what biological material can be put in or taken out of the Cryobank
- Depositor keeps its ownership but leaves the collection management to the Group Council
- To use a sample, the depositor's agreement is mandatory and reconstitution of the stock is asked
- If a depositor want to use its own samples the process will be much faster => the Group Council wishes to keep the Cryobank's management practical.
- If a commercial use is planned, a financial agreement must be made between the applicant, the material depositor and the Cryobank.



# Number of breeds - Stocks 15/04/12

CRYOBANQUE NATIONALE

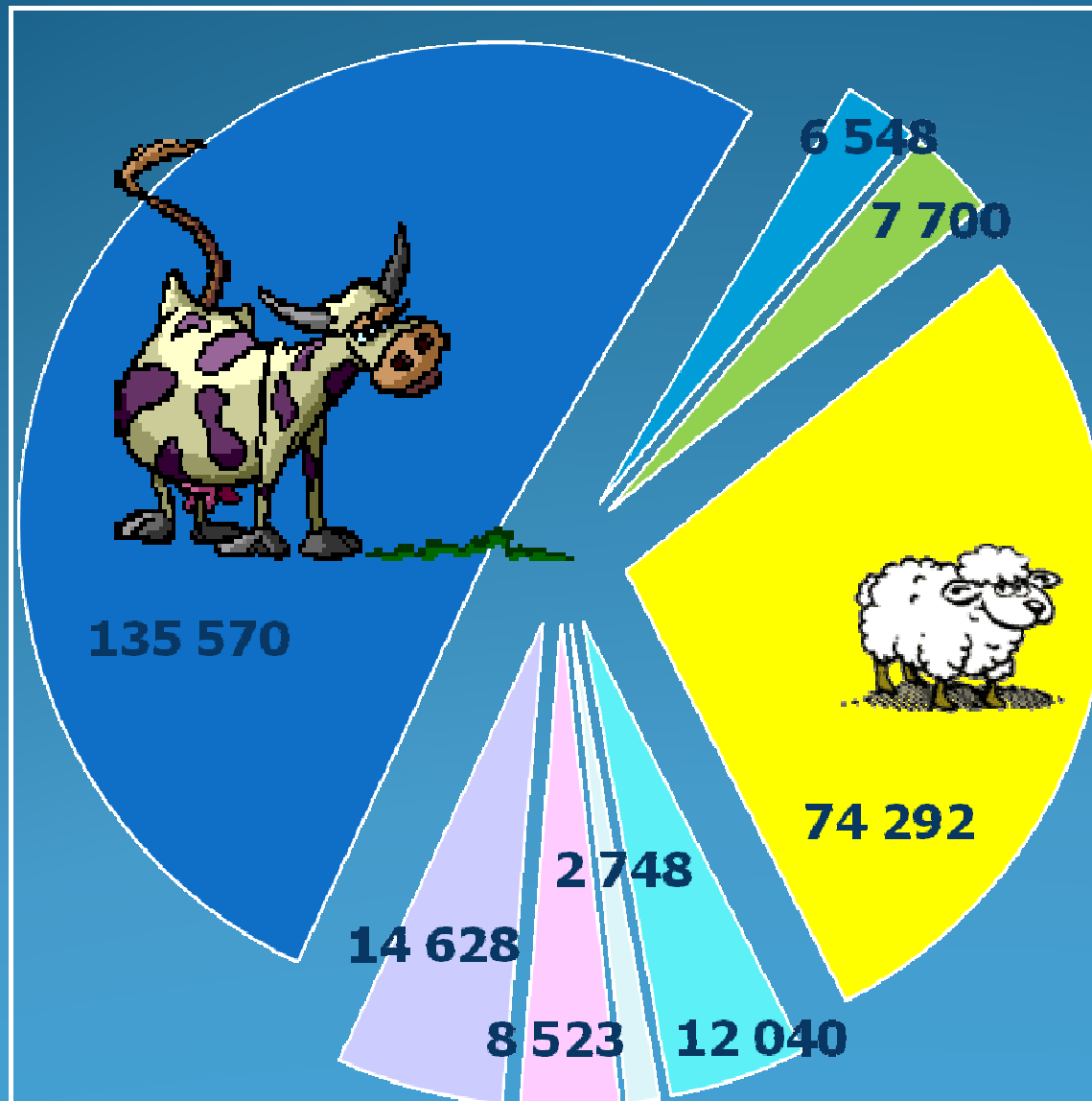


Number of breeds:  
**162**

- Cattle
- Goat
- Equine
- Sheep
- Rabbit
- Duck
- Pig
- Poultry

# Number of doses - Stocks 15/04/12

CRYOBANQUE NATIONALE



Number of doses:  
**262 049**

- Cattle
- Goat
- Equine
- Sheep
- Rabbit
- Duck
- Pig
- Poultry



# Thank you !