



Preserving the biodiversity of the French livestock breeds

Complementarities of the Ex-Situ and In-Situ conservation



Implementation of the *in-situ* programs at the French level

1975 – National funding (M. Agr.) for conservation programs

1977/1981 – National coordination of the conservation programs by Technical Institute : cattle, pig, horses

1983 – Bureau des Ressources Génétiques (BRG)

- Animals, plants, micro-organisms
- Coordination, research funding, international representation

1999 – Cryobanque Nationale

Ex situ conservation, complementary to *in situ* conservation
2013: 12 species, 189 breeds/strains, 283 000 doses

2008 – Fondation française pour la Recherche sur la Biodiversité (FRB)

Take over the missions from the BRG and IFB (Biodiversity Institute)

2012 – CRB Anim

Coordination between the major Biological Resources Centers in Animal breeding

Uneven results (1): Pig and Cattle

- ✓ Oldest programs (beginning of the 80s)
- ✓ Strong involvement of the Technical Institutes
- ✓ Over twenty breeds rescued from extinction
15 cattle breeds, 5 pig breeds
- ✓ Global progression
Cattle : by an increased number of flocks
Pig: by an increasing of the flocks size



Uneven results (2): about **Sheep** and **Goat**

✓ Beginning of the 80s :

(+) Limited biodiversity loss since no specific efforts were done to reduce the number of breeds (\neq cattle)

(-) Weak economical weight => less national subsidies
=> Local initiative of the conservation programs



✓ End of the 90s :

Setting up of national actions (Livestock Institute, Flock Book federation)

✓ Demographic evolution of the breeds

Evolution is more difficult to draw out than in cattle breeds

Demography strongly dependant of the local economic context

Fast (good or bad) fluctuation over time

Ex situ: the French Cryobank

- **12 partners**

including: Minister of Agriculture, INRA etc.

- **12 livestock species**
- **3 type of Biological Material:** Semen, Embryos, Cells
- **Over 30 organizations** have collections in the cryobank
- Collections stored in **1 main site** and duplicated in **several sites** (by species)
- **An online database : www.cryobanque.org**
- **Part of the CRB Anim project**

Three types of genetic variability

