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S.13 - Practical strategies and tools for the genetic management of farm animal populations

# Management of local genetic resources: the case of the Creole breeds of Guadeloupe

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## Context:

Urgent need for preservation and improvement of local breeds in the tropics
High productivity due to maternal qualities and adaptation
Natural resistance to environmental stressors (heat, ticks, parasites)
Product quality and acceptability for consumer
Original genetic resources for studies on adaptation traits

## *In situ* management in experimental herds and *ex situ* Cryoconservation

| | Adult females | nb of known generations | Inbreeding Coefficient | Nucleus | Genetic Reserve |
|---|---|---|---|---|---|
| Goat | 250 goats | 12 | 2.3 % | closed | 256 embryos / 16 donors<br>2500 sperm doses / 32 bucks |
| Cattle | 90 cows | 3 | <1% | open | 8000 sperm doses / 21 sires |
| Pig | 25 sows | 16 | 13 % | open | *(planned)* |

**INRA is highly committed in characterization, preservation and improvement of local animal breeds for the humid tropics**

## Storage of DNA collections and other biological samples available for research opportunities:

- Subpopulations from farm survey representative of the diversity of each breed
- Informative families within experimental flocks with known pedigree and phenotypes

## Research and extension tool for

- Genetic markers studies: microsatellites, SNP markers
- Research of QTL for adaptation and production traits
- Animal breeding programs (selection and/or conservation)
- Support to local professional organisations

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