

Joint meetings of Documentation and Information, *Ex situ* conservation, *In situ* conservation
Working Groups

Toledo, Spain, May 22nd – 23th 2023



Breed characteristics and traits related to adaptation in specific ecosystems and farming system



1

AUTOCHTONOUS BREEDS

- the classic claim:
 - ✓ *local breeds are better adapted to natural conditions*
 - ✓ *harsh/poor environments*
- little (if any) scientific proof

2

OBJECTIVE


- **Differences with ‘productive’ breeds**
- **Traits related to adaptation**
 - ✓ **promote/select for such traits**

3

ACTION PLAN

- **Bibliographic review**
- **Survey/questioner to stakeholders**
 - ✓ **what they think that are the good properties of the local breeds which make them more ‘useful’ than mainstream breeds**
- **workshop to present the results**
 - ✓ **include in the ‘audience’ people from other areas (like Farming Systems) to look for synergies**
 - ✓ **maybe we could propose the organisation of a particular session in any of the future EAAP meetings**

4



➤ General objective

... to analyse the **patterns of distribution of livestock agrobiodiversity** in mainland Spain to facilitate the development of **integrated and sustainable productive management**, compatible with the **conservation of biodiversity**.

5

➤ Specific objectives

- ✓ Analyse the distribution patterns of the different species of domestic ungulates, considering the **diversity of native breeds**, to explore their **adaptive capacity in relation to the environmental conditions** of the studied territory.
- ✓ Investigate the **relationship between the distribution patterns of the diversity of livestock breeds and different components of wild diversity**.
- ✓ Quantify the influence of environmental determinants on the original distribution of local breeds and the **effect of recent changes in land use on their current distribution**.

6

➤ Conclusions

1) the original distribution is basically driven by environmental factors

- ✓ in agreement with the statement that local breeds are better adapted to natural conditions
- ✓ the most influential factor is different for each species (e.g., it seems that altitude is the key factor in cattle)

7

2) domestic animals diversity runs in parallel with wild animal diversity

- ✓ local breeds are not in conflict with nature
- ✓ joint actions can be proposed for the conservation of both terms of biodiversity

8

3) human activities and changes in the land use are ‘decoupling’ breeds distribution and environment

- ✓ **originally local breeds were confined to
harsh/low input areas**
- ✓ **now they are kept in more productive areas**
- ✓ **sometimes coexisting with mainstream breeds**

9



- **Is there any other example like this?**
- **Is it possible to conduct something
similar somewhere else?**
 - ✓ **global or particular case studies**

10

ACTION PLAN

- **Bibliographic review**
 - ✓ Cited literature in the PhD thesis a good start
- **Survey/questioner to stakeholders**
 - ✓ coordinated by NC's ⇒ countries specificities
 - ✓ List of questions?
- **Dissemination**
 - ✓ target (people/domain)
 - ✓ 'environment' (independent activity/linked to other)

