

Defining the breeding objectives for small populations

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Animal production has experienced large improvement in productivity during the last decades, including both improvement of the management and feeding and also the genetic improvement. The genetic improvement programs involved mainly the mainstream breeds, while few selection programs have been designed for local breeds.

Local breeds have not undergone the intensive selection programs that were used during the last decades for the mainstream breeds, but generally perform better in low input –output systems, usually show better performances for the functional traits. Furthermore local breeds are raised in production systems that are linked to natural agro – ecosystems and genetics, environment and farming practices are reflected to the high diversity of animal products.

The above features can be very well fitted in the objectives of the CAP, multifunctionality of agriculture, managing of agro-ecosystems, quality and diversity of products. An important issue that should be considered is the role of the farmers in providing environmental service, which can be paid for through the agri-environmental measures. Farmers who commit themselves, for a five-year minimum period, to adopt environmentally-friendly farming techniques that go beyond usual good farming practice, receive in return payments that compensate for additional costs and loss of income that arise.

Therefore the objective should not be the efforts to reach the performances of the intensively selected breeds, but to maintain the characteristics that contribute to the low production cost and the environmental and cultural values of their production systems. The breeding objective may include, adaptation to the specific environment, production system, functional traits, as longevity, fertility, milk and meat quality.

With sustainable development and multi-functional agriculture, we are moving towards a new type of agreement between society and livestock farmers, in particular farmers in areas less-favored at agronomic level, but which often have a rich heritage and potential for tourism. Political measures are being taken, at European, national and regional level, which make it possible to propose means of support to favor the emergence or consolidation of projects to develop quality products, in the framework of the Rural Development plan. But like any local development initiative, those relating to quality sectors have to be able to rely on people, jobs and very different skills, all motivated by a same project and sharing a certain number of values in common.

To better understand the sustainability issues, it is important to realize that the different stakeholders have different perspectives. In this context: 1. Animal breeders and producers focus mainly on production and the factors that reduce the cost of production, 2. manufacturers and retailers focus on product quality, quantity, adding value of the primary product, 3. consumers and the general public concern on product quality, safety, prices, cultural and political issues, animal welfare, environmental issues.

Steps to follow

In the frame of this action we could prepare a reference list for the development of a sustainable breeding scheme that will serve as a tool for the breeders. The sustainability code comprises: food safety and public health, product quality, genetic diversity, efficiency, environment, animal health and welfare. A major aspect that should be considered, as these breeding schemes refer to small size populations, is the control of inbreeding and maintenance of breed genetic diversity.

The first step is to work for the preparation of a questionnaire addressed to the different stakeholders that can include the following aspects:

1. The market and product definition
2. The breeding goal definition
3. The consideration of the sensitivity to environmental factors,
4. The availability of resources, economic, technical and human
5. The control of inbreeding
6. Sufficient recording

International Cooperation

In the frame of the ERFP call for action, the project “Various aspects and possible evolution of in situ conservation in Europe”, is funded aiming to form a permanent working group for the in situ conservation of AnGR that will develop guidelines for national and cross border cooperation for sustainable breeding programs.

Furthermore, other ERFP projects aim to propose measures for the sustainable development and conservation of local animal genetic resources, as the project “Current Status of the Brachycerous Cattle Populations in the South Eastern European Countries and Strategies for their Sustainable Conservation”.

The EU funded project under 870/2004 regulation, HERITAGESHEEP, among its objectives is to provide guidelines for *in situ* breeding programmes vital for the survival of Heritage Sheep breeds.
