Strategies to add value to local breeds with particular reference to sheep and goats

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Why local breeds are important

- Unique genetic resources: valuable
- Local sheep breeds ~ 88,0% of total sheep breeds
- Local goat breeds ~ 92,0% of total goat breeds

**Convention on Biological Diversity:**

“Conservation and sustainable use of biological diversity is of critical importance for meeting the food, health and other needs of the growing world population”
The Interlaken Declaration (FAO 2007)

“We acknowledge that maintaining the diversity of animal genetic resources for food and agriculture is essential to enable farmers, pastoralists and animal breeders to meet current and future production challenges resulting from changes in the environment, including climate change; to enhance resistance to disease and parasites; and to respond to changes in consumer demand for animal products”
- Local breeds are usually neglected by the powerful players of the livestock production sector.

- The value of animal genetic resources is poorly understood by the general public and, especially, by policy makers.

- Every effort to add value to local breeds, will improve the prospects of their conservation through sustainable use.

- Several strategies available to increase the value of local breeds, include:
Linking local breeds with:

Traditional quality products, Labels (PDO, PGI, TSG etc) – R,M
Tourism (food, non-food products, souvenirs, leisure) – R,M
Adaptive advantage to climate change – R

Promoting the use of local breeds in:

Organic farming (organic products, animal welfare) – R,M
Conservation grazing – R
Silvopastoral systems – R
Small low input farms – R
Hobby farms/Agritourism
Breeding schemes – R

Other strategies

Legislation
Raising public awareness - M
Organisation

R: RESEARCH, M: MARKETING
Traditional products-Labelling:
- add value to the product, producer, farm animal
- form of guarantee for the consumer

EU Labels
PDO: Protected Designation of Origin
PGI: Protected Geographical Indication
TSG: Traditional Speciality Guaranteed

National Appellation systems
France: Appellation d'origine contrôlée
Italy: Denominazione di origine controllata
Portugal: Denominação de Origem Controlada
Spain: Denominación de Origen

Usually, in EU countries the two systems work in parallel

EC Regulation 510/2006: does not exclude unprocessed wool products from EU labelling
Tourism
Linking local breeds to:
• Food
• Non-food products
• Landscape
• Leisure
• Souvenirs
Elements of tradition and speciality
Adaptive advantage to climate change

- Local breeds have an adaptive advantage over other breeds in their native environment.

- In areas with hot climate, the well adapted local breeds is the best choice for use in animal production. Such breeds may prove useful to other presently cooler areas, as global warming continues.

- Hair sheep usually tolerate heat better than wooled sheep.

- Fat-tailed sheep in hot dry climates are better adapted than other types of sheep.
Local breeds are genetically adapted to their environment and have special characteristics that differentiate them from commercial breeds.

- They display better grazing behaviour, utilise lower quality feed, are more resistant to diseases, local parasites, stress and climatic change.

Best choice for use in:

- **Organic farming, Conservation grazing, Silvopastoral systems**
- **Low input farms, Small farms, Agritourism farms, Hobby farms**
Managing the change to lower input systems with UK sheep breeds

Booklet for UK farmers
prepared by the
Scottish Agricultural College
Breeding schemes

- Establishment of breeding schemes for improving production and fitness traits within local breeds

- Systematic crossbreeding for meat production in sheep, implies the continuous availability and supply of purebred animals

- Local breeds are the cornerstone of systematic crossing (two- and three-way crosses) because they provide the purebred females for crossing

- Usually, local breeds play their vital role under difficult conditions by utilising low productivity marginal areas, otherwise unexploitable
Research
- Local breeds benefit from research and research benefits from the large number of local breeds

- Identification, study and utilisation of special biological characteristics of local breeds such as:

  • disease resistance
  • prolificacy
  • longevity
  • ability to utilise poor quality feed
  • adaptation to climate change
  • product quality etc
Examples of Traditional Quality Products
**Manx Loaghtan lamb (PDO)**
Primitive local sheep breed on the Isle of Man (UK)
Meat from Manx Loaghtan lambs is less fatty, darker and with better taste and flavour than meat from commercial breeds
Queijo de Cabra
Transmontano Cheese
(PDO)
Milk of the Serrana Negra goat breed
Portugal
Ekte Gjetost (Geitost) cheese
Norwegian goat milk
Wool products from the local sheep breed, Corsica, France
Corsican sheep
Examples of Silvopastoral systems Conservation grazing Organic farming
Local Cyprus Machaeras goats grazing in a pine forest
Anatolian Black goats in the Taurus mountain forests, Turkey
Andalusian Network of Grazed Fuelbreaks (RAPCA)

- 19 farmers, 7500 sheep and goats grazed 910 ha of fuelbreaks
- Payment*: 34 -70 €/ha/year → 1050 - 4720 €/farmer/year
- 23% of estimated cost for alternative methods of clearing fuelbreaks
- Local sheep and goat breeds

*Government of Andalusia, Environment Department

La Raza Segureña

La Cabra Malagueña
Organic farming
Wales (UK): Good production and income (farm + subsidies) with **Welsh Speckled Face** sheep in hill and upland farms
“Traditional breeds may be best suited to forage-based diets in the organic hill situation”

Canolfan Organig Cymru
Organic Centre Wales

Organic sheep products from Racka sheep, Hungary
Examples of research results
Red Maasai sheep

Resistance to internal parasites
SKOPELOS GOAT BREED

• medium size
• hardy animal
• grazing ability
• adaptation
• very good growth rate and meat quality
• good prolificacy (1,4 -1,6)
• high milk yield (250-350kg)
• very good milk quality (5,0% fat, 4,5% protein, 4,0% lactose)
QUALITY PRODUCTS

For Nisa cheese, PDO, Portugal:

Superior cheese making yield and better quality characteristics of milk from local sheep breeds (Merino Branco, Saloia) compared to a foreign breed (Assaf)

A.P.L. Martins et al. *Options Mediterraneennes* 91:221-225

Milk of local breeds: better price?
Marketing

• Identification of special characteristics of a local breed
• Emphasis on special characteristics and product quality
• Linking the breed and its products to local environment, existing resources, culture
• Market research → likely users in the community, region, country, overseas
• Facilitating access of producers to commercial markets
• Combining several aspects e.g. special products and functions with tourism, organic farming, agriforestry, education etc
• Souvenirs
• Labelling
• Publicity
Legislation → political strategy

*EU legislation provides* → *indirect* (single farm payments, accompanying measures) support to local breeds and, *direct* financial support to “local breeds indigenous to the area and in danger of being lost* to farming”

* For sheep and goats, less than 10,000 breeding females

Subsidies is a very helpful support tool
EU legislation supports the use of local breeds in organic farming systems “…..preference is to be given to indigenous breeds and strains” (EC 1804/1999)

The EU carcass classification legislation does not favour local breeds because is based on conformation and fat classes and can result in difficulties when marketing carcasses from local breeds
Raising public awareness

- Local breeds: unique genetic resources
- Preservation of biodiversity
- Sustainable use
- Quality products
- Organic farming/Animal welfare
- Tradition, Culture
- Alternatives to industrial production
- Environmental aspects

Science journalism may help
Organisation

Breeding Associations

Establishment of breeding associations → critical step for local breed conservation and utilisation - State involvement for guidance and help

Organisation at a higher level

Regional: Nordic Genetic Resource Center

European Association: ATELIER

International Organisation: Slow Food
Members

Breeders (sheep, goats, rabbits, alpacas)
Sheep shearers, Spinners, Weavers, Knitters,
Mattress makers, Artists and craftsmen, Researchers,
Experts, Museums, Pedagogical farms, Teachers,
Schools, Associations

http://atelier.laine.pagesperso-orange.fr/english.htm
Mikuni Construction Co. in Kitakyusyu City, southern Japan, announced in August 2009, that it would be launching a new service to rent goats for weeding grass starting in April 2010. This unique weeding method does not require any machinery, and is drawing attention as an environmentally friendly technique.

Local goat breeds would be the best choice for such a service.
THANK YOU FOR YOUR ATTENTION