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ERFP SCOPING STUDY



HERITAGE SHEEP

- genetically distinct
- geographically concentrated
- adapted to their environments



participating breeds

France 10	UK 15	Holland 11	Greece 5	Slovenia 4
Basco Béarnaise, Bizet, Causses du Lot, Corse, Grivette, Limousine, Manech Tête Noire, Manech Tête Rousse, Mourerous, Rava	Brecknock Hill Cheviot, South Country Cheviot Clun Forest, Dalesbred, Derbyshire Gritstone, Devon Closewool, Exmoor Horn, Herdwick, Lonk, Romney, Rough Fell, Shetland, South Welsh Mountain, Southdown, Welsh Hill Speckled Face	Black Blazed, Blue Texel, Drenth Heath, Flevolander, Mergelland, North Holland, Schoonebeek, Swifter, Texel, Veluwe Heath, Zeeland Milkshoop	Boutsiko (Orino), Frizarta, Kefallinias, Sfakia Katsika	Bela Krajina Pramenka, Bovec Sheep, Istrian Pramenka, Jezersko – Solcava

HERITAGE SHEEP

WP 1 Characterisation and Evaluation of HSBs (UK)

WP 2 In situ conservation - strategies and guidelines for success (France)

WP 3 / 4 Ex situ conservation - collection and cryopreservation (Netherlands)

WP 5 Web based network of HSB genetic resources (Greece)

Work Package 1

objective

collate information to characterise and evaluate HSB genetic resources across the partner countries, as an aid to conservation activities



questionnaire - methodology

designed and validated by the partners in liaison with an external advisor (JW)

translated into local languages, partners collected data from their local breed societies

Greek partners designed the database and this was populated with the breed data

origin and history

breed description and history, current *in situ* and *ex situ* conservation activities , breed society contacts, photo



Numbers and Trends

estimation of number of sheep flock numbers and sizes
number of breeding females etc.

% of sheep in the region associated mainly with the breed;
increasing or decreasing population trends;

estimation of number of breeders aged over 60...

values

The importance of the breed to its region through adaptation and contribution to the local environment, adaptation to and ability to thrive in extensive farming systems, contribution to the local community, such as through social cohesion and tourism, contribution to the local economy such as through high demand for regional products...

current situation and future trends

promotional activities, marketing initiatives, programmes to increase productivity, improved health plans and conservation activities.



threats

social	political	disease	climate
<p>Farms ceasing to farm animals</p> <p>Urbanisation</p> <p>Ageing population of farmers</p> <p>Lack of skilled labour</p> <p>Inability to hand on skills</p> <p>Environmental changes</p> <p>Lack of training facilities</p>	<p>Removal of Headage payments</p> <p>Environmental schemes</p> <p>Need to increase farm productivity</p> <p>Need to make management easier</p> <p>Decreasing area of farmed land</p> <p>Increasing use of inputs</p> <p>Going organic</p> <p>Diversification to non farming activities</p> <p>Ceasing farming altogether</p>	<p>SheepScab</p> <p>Haemonchus</p> <p>Ticks</p> <p>Tickdiseases</p> <p>Scrapie</p> <p>Blue tongue</p> <p>Contagious Agalactia</p> <p>Brucella ovis</p> <p>Liver Fluke</p> <p>Enzootic Abortion</p> <p>Maedi Visna</p> <p>Brucella Melitensis</p> <p>Caseous Lymphadenitis</p> <p>Worm resistance</p>	<p>Reduced availability of water</p> <p>Reduced availability of grazing</p> <p>Reduced availability of winter fodder</p> <p>Increased requirement for housing</p> <p>Reduced availability of bedding</p> <p>Change in average rainfall</p>

major threats

- decrease in public funding
- lack of political will to support rural communities
- policies and legislation, including environmental schemes
- disease
- predators
- urbanisation
- poor return on product, competition from other livestock
- ageing population of farmers
- lack of marketing support
- inbreeding
- loss of skills

conclusions from WP1

breed societies do not always have up to date information
nor quantitative data

some important insights into the perceived threats facing
HSBs were revealed

a new robust evidence base must be compiled to underpin
conservation priorities – this will require standardisation
across breed societies or direct interactions with breeders

geographical isolation

it was estimated that there are 26/45 where 90% or more of the total number of animals is actively farmed in the region associated with the breed and 19/45 breeds where >95% of the breed is concentrated



progress in WP 2 - 5

- WP2 - In situ conservation - Detailed study of three French Pyrenean breeds
- WP3 - Ex situ conservation - strategies for collection and cryopreservation
- WP4 - Collection of semen from 2 breeds per partner country
- WP5 – Development of website and access to database

endemism

Defra funded The Sheep Trust to analyse 16 regional native sheep breeds to gain data on populations and geographical isolation

Amanda Carson, Matt Elliot, Julian Groom, Agnes Winter, Dianna Bowles (2008)

Geographical isolation of native sheep breeds in the UK - evidence of endemism as a risk factor to genetic resources. Livestock Science submitted





