

New survey shows regional sheep breeds at risk from geographical isolation

A report released today by the Sheep Trust highlights the urgent need to protect many of the UK's commercially farmed native breeds.

The survey has used detailed census data and geo-referencing to accurately map the distribution of a number of these breeds for the first time. It reveals that many of them are highly concentrated in a single location – massively increasing their vulnerability to disease.

The Sheep Trust team studied 16 regional breeds, selected to represent different parts of the UK. Combining a detailed census of flocks with the latest GIS mapping technology and statistics, the team plotted the distribution of regional breeds across the British Isles. The results revealed that the genetic resources of commercially farmed sheep breeds existing in significant numbers can be endangered through their geographical isolation.

Herdwicks for example, are thought to have come to the Lake District with the Vikings. Today, 95 per cent of these sheep – some 50,000 animals – are still found within 23 km of Coniston. Similarly 95 per cent of the South Wales Mountain breed is less than 26 km from the coal fields of the Rhondda Valley while the South Country Cheviot remains concentrated in the Cheviot Hills of the Scottish Borders.

Sheep Trust vet and Trustee, Amanda Carson says: “Such an intense degree of localisation makes these breeds vulnerable to devastating losses from major disease outbreaks such as those caused by foot-and-mouth [FMD] or blue-tongue viruses [BTV].”

The breeds studied are not rare breeds: they are commercially farmed and exist in substantial numbers. They provide sustainable livelihoods for local communities and continue to form a significant part of the national sheep industry. But unlike rare breeds, which enjoy legal protection, the law does not treat them as endangered.

“We are strongly recommending that new measures are put in place to protect these important genetic resources now that their vulnerability has been so clearly demonstrated,” says Professor Dianna Bowles OBE, founder and Chair of The Sheep Trust.

The study involved close collaboration with breed societies and direct interactions with over 900 individual breeders across the British Isles. It demonstrated that methods used for assessing rare breed numbers are not always applicable to commercial breeds. “Interacting with individual breeders is the only means of sourcing accurate information on the size and composition of commercially farmed native breeds. This is the first good quality data we’ve had,” says Professor Agnes Winter, internationally recognised sheep expert and Trustee of the Sheep Trust

The report also reveals huge differences in population structure between breeds. Some breeds, like the Rough Fell are dispersed across large numbers of flocks whilst

others such as the Lonks have most of the breed numbers contained in fewer flocks. Such information is essential when designing conservation strategies.

Amanda Carson has first-hand experience of the devastation that a disease can cause when it hits the region in which a breed is concentrated. "In 2001, I saw FMD destroy huge numbers of Herdwicks, South Country Cheviot and Rough Fell sheep in Cumbria and now we can see just how dangerous this was for the breed. We can also see that the same risk is there for other breeds. For example, the Romney is the breed concentrated closest to mainland Europe. This puts it at risk from BTV, if the disease spreads this year and vaccination is not taken up by farmers."

ENDS

Notes to Editors:

(1) "Geographical Isolation of Commercially Farmed Native Sheep Breeds in the UK—evidence of endemism as a risk factor to their genetic resources" a Report to the UK National Standing Committee on Farm Animal Genetic Resources from The Sheep Trust . Copies available on request.

(2) The Sheep Trust is a national science-led Charity aimed at protecting and conserving the genetic resources of Heritage Sheep Breeds. The Charity operates from the Centre for Novel Agricultural Products at the University of York. The Sheep Trust was founded from Heritage Gene Bank an initiative set up in 2001 to protect sheep breeds at threat of extinction from Foot and Mouth Disease.

<http://www.thesheeptrust.org/>

(3) The survey was carried out with funding from the Department for Environment, Food and Rural Affairs (<http://www.defra.gov.uk/>).

(4) The report is underpinned by an associated publication in Livestock Science,(2009)Carson,A.,Elliott,M,Groom,J.,Winter,A.,and Bowles,D.doi:10.10./j.livsci.2008.11..026

(4) High resolution pictures are available at ;
http://www.york.ac.uk/org/cnap/tst/images_for_media/index.html
but should only be used to accompany articles relating to this release.

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