



THE COMPLEMENTARY ROLE OF SHEEP IN UPLAND AND HILL AREAS

A NATIONAL SHEEP ASSOCIATION PUBLICATION





National Sheep Association is an organisation that represents the views and interests of sheep producers throughout the UK. It is funded by its membership of sheep farmers and its activities involve it in every aspect of the sheep industry.

This is an NSA publication summarising the findings of an NSA report called *The complementary role of sheep in upland and hill areas*. Find the full report at www.nationalsheep.org.uk/policy-work.

The report replaces an earlier piece of work published in 2012 called *The complementary role of sheep in Less Favoured Areas*.

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The National Sheep Association
The Sheep Centre
Malvern
Worcestershire
WR13 6PH
01684 892 661
enquiries@nationalsheep.org.uk
www.nationalsheep.org.uk



search natsheep



@natsheep

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DESIGN AND PRODUCTION

Kinroy Design
01430 266068
07921 728235
hello@kinroydesign.co.uk
www.kinroydesign.co.uk



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THE COMPLEMENTARY ROLE OF SHEEP IN UPLAND AND HILL AREAS

Sheep farming businesses in upland and hill areas provide a wide range of public goods and services. NSA considers these to fall into three pillars of sustainability – economic, environmental and social. This is supported by the International Convention of Biological Diversity.

All the benefits within these pillars, be they food production, local economies, landscape management, cultural heritage or environmental stewardship, are enjoyed by everyone from rural communities through to international consumers and tourists. NSA believes there has been some increase in recognition of these benefits in recent years, but feels there is still a long way to go and that steps must be taken to ensure the irreplaceable activity of sheep farming in these areas is preserved and enhanced.

It is positive that interest in sheep farming from the general public has increased, linked in no small part to a number of high profile television programmes such as *This Farming Life* and bestselling books such as *The Shepherd's Life*. There has been acknowledgment in some quarters that sheep are an important part of the jigsaw in upland areas, and that agri-environment and conservation schemes have sometimes forced stocking rates too low, unintentionally damaging biodiversity. However, this is not yet resulting in a sufficient change at farm level. There have also been backward steps in terms of the misinformed debate over rewilding and links between sheep and flooding.

The recent referendum decision to take us out of the European Union has dramatically changed the political landscape. Discussions over land classification and support payments for public goods in our four nations have not yet been resolved since the most recent reform of the EU's Common Agricultural Policy (CAP), and we must learn from the past as we create a new UK agricultural policy. This policy must give special consideration to the hills and uplands and the unique combination of public goods farming these areas provides. There has never been a more important time to understand the tri-fold contribution of economic, environment and social benefits.

Within these pages, NSA consider these three pillars of sheep farming in upland and hill areas and lists a number of aspirations for the sector.



THE PRINCIPLES DISCUSSED HERE FOR UPLAND AND HILL AREAS ALSO APPLY TO OTHER MARGINAL AREAS AND MOST OF THE PERMANENT PASTURE IN THE UK.



STEPS MUST BE TAKEN TO ENSURE THE IRREPLACEABLE ACTIVITY OF SHEEP FARMING IN UPLAND AND HILL AREAS IS PRESERVED AND ENHANCED.

THE SHEEP SECTOR IN MARGINAL PART OF THE UNITED KINGDOM

The uplands and hills of Britain are an integral part of the sheep industry, producing breeding stock for lowland enterprises, store lambs, finished lambs and wool. Traditionally an integral part of the stratified sheep industry, and home to some of our hardest native breeds, farming in these areas is now recognised as a multifunctional activity, providing more than just agricultural outputs. These are important areas for biodiversity and ecological processes, as well as being vital in sustaining rural communities.

NSA is concerned that upland and hill farms continually come under threat due to ever-changing market, social and policy pressures. These influence and risk fundamental change to the farming system itself, often ignoring the value that this most traditional and essential form of livestock farming provide. Over the years, upland and hill farmers have been at the mercy of policy makers, increasing livestock numbers when headage payments were introduced to incentivise productivity gains, and then reducing stocking rates when environmental impact concerns came to the fore, despite overly prescriptive requirements often being detrimental and leading to undesirable agronomic, environmental and social impacts.

DISADVANTAGED LAND HAS BEEN RECOGNISED BY POLICY MAKERS AT THE HIGHEST LEVEL FOR DECADES, WITH SPECIAL ATTENTION PAID TO AREAS THAT MAY NOT BE AS FERTILE AS THE LOWLANDS BUT DELIVER PUBLIC GOODS AND SERVICES OVER AND ABOVE FOOD PRODUCTION.

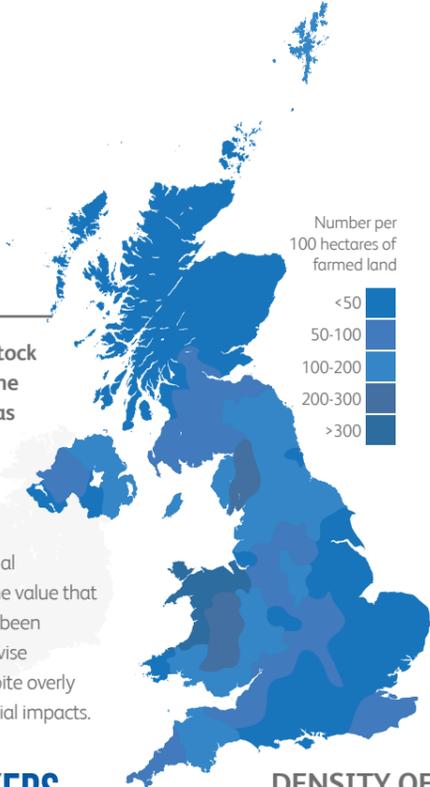
Despite this, disadvantaged types of agricultural land have been recognised by policy makers at the highest level for decades, with special attention paid to areas right across Europe that may not be as fertile as the lowlands but deliver public goods and services over and above food production. At the time of writing this report, new EU regulations were resulting in a change in designation for this type of land, from Less Favoured Areas (LFA) to Areas of Natural Constraint (ANC). Until the UK leaves the EU, those changes may result in quite a difference for individual farmers but leave the total designation of 9.12 million hectares of LFA in the UK (53% of the utilised agricultural area) at a similar level.

NSA fully supports land being designated in this way, regardless of the terminology used, and believes it is important to have a system that recognises disadvantaged/naturally constrained areas within the UK agricultural policy that replaces the EU system post-Brexit.

The latest available data (2014) shows 33.7 million sheep and lambs in the UK, including 16 million breeding ewes. A large percentage of those sheep can be found in upland and hill areas: in England 41% of breeding sheep are found on LFA farms; 63% of cattle and sheep holdings are in LFAs in Wales; 80% of the sheep population in Northern Ireland are within LFAs; and LFAs in Scotland are home to 91% of breeding ewes. Given the land mass and number of sheep, NSA believes it is clear the hills and uplands are a vital part of a complex picture and require particular attention.

DID YOU KNOW?

53% OF THE UTILISED AGRICULTURAL AREA IN THE UK HAS BEEN DESIGNATED AS 'LESS FAVOURED'. THAT'S 5.38 MILLION HECTARES IN SCOTLAND, 2.2 MILLION IN ENGLAND, 1.53 MILLION IN WALES AND 0.69 MILLION IN NORTHERN IRELAND.



DENSITY OF UK BREEDING EWES

Source: Defra, Dardni, Scottish Government, Welsh Government. June 2013

CONTENTS

- 02 INTRODUCTION
- 03 ECONOMIC OUTPUTS
 - Food
 - Genetics
 - Wool and skins
 - Niche markets
 - Public goods
- 09 ENVIRONMENTAL LINKS AND OUTPUTS
 - Water management & flood alleviation
 - Woodland
 - Carbon & peat
 - Heather & bracken
 - Biodiversity
 - Semi-natural landscapes
- 15 SOCIETAL LINKS AND OUTCOMES
 - Tourism, recreation & diversification
 - Culture & heritage
 - Common land & crofting
 - Sheep management skills
 - Opportunities for new entrants
- 21 CONCLUSION
 - Economic outputs
 - Environmental links and outputs
 - Social links and outcomes
 - References
- 22 SUMMARY OF ASPIRATIONS



THE ECONOMIC OUTPUTS OF SHEEP IN UPLAND AND HILL AREAS

There are a wide variety of products that can be sourced from sheep meat: prime lamb remains a firm favourite for Sunday roasts and special occasions in the UK and across Europe; mince, burgers, diced lamb and lamb steaks are starting to find favour with younger consumers; quality mutton is experiencing a resurgence of interest from gastronomes; a variety of lamb and mutton products are highly sought after by ethnic populations; offal and low value cuts are popular in non-EU export markets; wool is seeing increased interest as a sustainable fibre; and Ugg boots and other quality products rely on a supply of sheep skins.

The UK is a world player when it comes to producing sheep meat. It is the sixth biggest producer globally and exports 36% of output to more than 100 countries. The hills and uplands are an essential part of this production model, not just supplying lamb and mutton where possible, but also providing breeding stock and genetics to other sheep farming businesses in less marginal areas.

Despite this extremely positive position, the UK sheep industry still struggles for financial viability, fighting for shelf space alongside cheaper meats, such as poultry and pork, and competing against global competitors in most market outlets. In addition, many of the efficiency drivers of the modern farming economy and its market structure put pressure on the traditional upland system. This means productivity gains are either not appropriate, due to land type, or are openly discouraged or disadvantaged, due to land designation and planning controls.

FOOD

Recent figures show the UK produces 298,000 tonnes of sheep meat a year, of which 64% is consumed domestically and 36% exported.

Our domestic market is hugely important but work is needed to promote the consumption of British lamb and reverse the downward trend that has been seen in recent decades. The unique range of sheep breeds and production systems in the UK, to which upland and hill areas are integral, means lamb can be produced in this country all year round.

Traditional demand in Europe, particularly from France, coupled with the growing global population and projections for increasing wealth in Asia, means the export market is also essential. Increasing market access will grow demand for UK supply and must be a priority in Brexit negotiations between the UK and EU on access to the common market.

An export destination of particular

interest is the ability of the UK to negotiate independently, outside the EU, is not yet known. Currently Australia and New Zealand are leading the way in this area. The UK is an importer of lamb as well as an exporter, and the New Zealand quota for imports into the EU will also be under review as the UK prepares to leave the EU. It could be advantageous for the UK to review this quota and have a trade deal that complements our domestic production far more than it does currently, and to take opportunities to ensure importing nations do not undermine UK production with lower regulatory requirements.

Red meat is extremely beneficial to health, by providing a variety of benefits such as improved immune function, a healthy heart, red blood cell formation and growth. Plant-based food

contains four times as much vitamin E and up to four times as many omega-3 fatty acids as concentrate-fed meat. The average fat content of red meat has significantly reduced over the past 20 years and finishing lambs on grass produces a lean product. Mutton is also an excellent source of CLA and contains every essential amino acid.



Richard Young of the Sustainable Food Trust says: "Natural selection has adapted us to eat and thrive on meat as

well as plants. Our combination of incisors and molar teeth is a clear indication of that. Red meat from animals predominantly raised on grass contains the perfect balance of essential amino and fatty acids we all need for health. It also contains a wide range of essential minerals and antioxidants."

PLANT-BASED FOOD HAS TO BE HIGHLY REFINED FOR HUMAN CONSUMPTION, INVOLVING CHEMICALS AND ENERGY, AND WE WOULD HAVE TO CONSUME 25% MORE TO GET THE NUTRIENTS WE NEED FROM SOLELY VEGETARIAN DIETS, RELEASING MORE METHANE AND CARBON IN THE PROCESS.

interest for purebred hill and upland breeds is southern Europe, where light lambs have been traditionally sought after. The economic downturn has seen this market decrease, and the structure of EU exports will change over the coming years, but there has been significant growth in the export of fifth quarter sheep cuts (offal) to non-EU destinations such as South Africa and the Ivory Coast. Access to China and the USA would be a huge boost to all parts of the sheep sector.

The lack of progress made by the EU in negotiating Free Trade Agreements (FTAs) has put UK exporters at a competitive disadvantage for non-EU markets wanting lower-value cuts, but

has to be highly refined in order to be suitable for adequate human consumption, involving chemicals and energy, and we would have to consume 25% more to compensate for the loss of nutrients in solely vegetarian diets.

Sheep reared in hill and upland areas spend the majority of time, if not all of it, outside at grass. Consumption of grass-fed red meat in line with recommended levels is valuable in reducing the risk of cancer, aiding recovery from surgery, cutting high blood pressure and reducing the risk of mental health disorders, such as depression and Alzheimer's disease. Grass-fed red meat is the richest known source of conjugated linoleic acid (CLA) and

FOOD ASPIRATIONS

NSA believes upland and hill areas would benefit from:-

- Improved resources for marketing of upland lamb and other sheep products.
- Mitigation against market volatility.
- Promotion of the health benefits of predominantly grass-fed red meat to a wider audience.
- Sustainable prices for producers and consumers.

THE UK SHEEP INDUSTRY STRUGGLES FOR FINANCIAL VIABILITY, HAVING TO COMPETE AGAINST CHEAPER MEATS AND DEAL WITH GLOBAL COMPETITION IN MOST MARKET OUTLETS. THIS IS EXACERBATED IN THE HILLS AND UPLAND WHERE MANY OF THE EFFICIENCY DRIVERS ARE INAPPROPRIATE OR DISCOURAGED.

DID YOU KNOW? THE UK IS HOME TO 25% OF THE EU SHEEP FLOCK AND 3% OF THE GLOBAL FLOCK, PRODUCING ONE THIRD OF EU SHEEP MEAT AND CURRENTLY SITTING AS THE SIXTH BIGGEST PRODUCER WORLDWIDE.

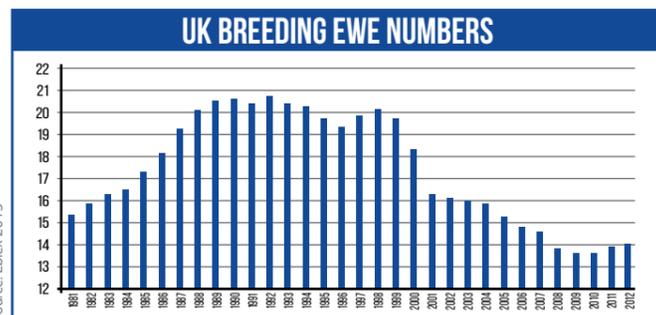
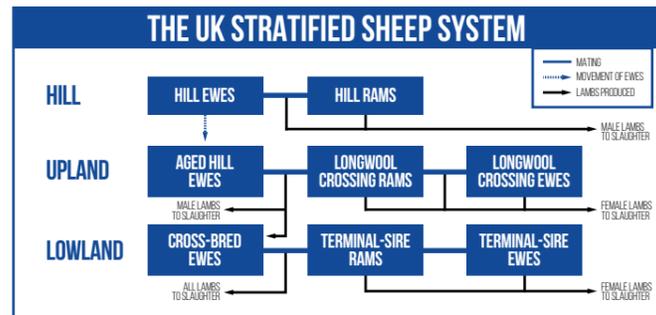
DID YOU KNOW?

THANKS TO MODERN BREEDING, FEEDING AND BUTCHERY, LAMB HAS LESS FAT THAN EVER. TRIMMED LEAN RAW LAMB ONLY CONTAINS 8% FAT.

GENETICS

There are more than 60 recognised pure breeds of sheep in the UK and more than 80 breed societies when you include crosses, halfbreeds, Mules and composites. Most countries only have a handful. NSA estimates almost two thirds of those found in the UK relate to native hill and upland breeds. This high number of breeds provides a uniquely broad base of genetic diversity with some genes, particularly those of upland breeds, not found anywhere else in the world.

The stratification of the sheep industry is unique to Britain and makes the most of the topography and local breed traits found in each area. Traditional hill and upland breeds are physiologically suited to the harsh conditions and are efficient at rearing lambs and maintaining their own body condition from low inputs and relatively poor vegetation. Producing the same amount of red meat without access to these areas would force stock to compete for land in areas more suitable for the production of cereals.



The loss of vital traits from hill ewes, such as good mothering ability and hardiness, would change the whole British sheep industry. The removal of native breeds would also be a loss to the culture and heritage of these areas. However, change is already being seen. The drop in national ewe numbers since 2003

WHY DO WE NEED HILL AND MOUNTAIN EWES?

- THEY CAN REAR LAMBS AND MAINTAIN THEIR OWN BODY CONDITION IN HARSH CONDITIONS.
- THEY CAN TURN POOR VEGETATION INTO AN EDIBLE PRODUCT FOR HUMANS.
- WHEN THEY'RE TOO OLD TO SURVIVE IN THE UPLANDS THEY CONTINUE TO PRODUCE LAMBS WHEN SOLD AS 'DRAFT' EWES TO LOWLAND FARMS.
- THEY CAN BE CROSSED TO PRODUCE MULES AND HALFBREDS, COMBINING THE HARDINESS AND LONGEVITY OF THE HILL EWE WITH THE PROLIFICACY OF THE BLUEFACED OR BORDER LEICESTER RAM. THEIR FAST-GROWING FEMALE PROGENY HAVE GOOD MOTHERING ABILITY AND ARE THE EWE OF CHOICE FOR MANY LOWLAND FARMERS.
- THERE IS A THRIVING TRADE FOR 'STORE LAMBS', WHICH ARE BORN IN THE UPLANDS AND SOLD TO LOWLAND FARMS FOR FURTHER FINISHING.

GENETIC ASPIRATIONS

NSA believes upland and hill areas would benefit from:-

- Recognition of the value of upland and marginal sheep genetics to the UK gene pool and its wider sheep systems.
- Development of practical health assurance schemes and increased sharing of information by sellers to give confidence to buyers of breeding stock and store lambs.

NSA member Samuel Wharry is collecting performance data and using estimated breeding values (EBVs) to ensure his hill ewes at Carnlough, County Antrim, are the very best. He says: "My Scottish Blackfaces are the cornerstone of this farm; they not only produce replacements for my purebred hill flock but also for the lower ground crossbred flock. Their performance is vital for the viability of the entire enterprise so we now select replacement ewe lambs primarily on their performance EBVs."



is largely due to a reduction in the three main hill breeds, Scottish Blackface, Swaledale and Welsh Mountain. Although traditional Mules are still popular, a move towards more ad hoc crossbreeds is threatening the traditional stratified system and the desirable land management assets of upland breeds, such as their preference for eating shrub vegetation and foraging over wide areas. It is also threatening the traditional system where upland breeds are 'hefted' to large open tracts of land, such as commons, where sheep graze their own heft without straying, know the best places for food and shelter, and develop tolerance to mineral deficiencies, plant toxins and specific diseases for the area.

Appropriate stocking rates are essential to discourage selective grazing and therefore prevent scrub and bracken encroachment, disease-causing tick populations and the risk of wildfires. The majority of hill farms rely heavily on payments from agri-environment schemes but stocking prescriptions are too often inflexible and reduced stocking rates and the total removal of stock over the winter months has compromised the hefting instinct and potentially reduced hardiness of stock due to winter housing and different stock selection criteria. It is also one of the reasons for substantial habitat degradation in the uplands.

Populations of some of the less numerous hill breeds have fallen. There were 35,000 Lonk ewes in 2003 compared to 20,000 in 2012, 32,000 Rough Fells down to 17,000, and 16,000 Derbyshire Gritstones down to 11,000. That is why NSA is promoting the need for a national gene bank, as well as protocols to mitigate a disease-related cull that could wipe out certain breeds predominantly found in only their native area of the country.

Alongside the strong arguments in favour of protecting genetics and breeds, there is also the need to make breeding progress and improvements. Returns from genetic improvement in sheep are substantially below their potential in the UK, and there are particular opportunities in the uplands to advance maternal traits. The use of estimated breeding values (EBVs) and genomic breeding values can also reduce the carbon footprint of sheep enterprises, by selecting for production traits. It is imperative the industry works together on disease control too. The regular sale of sheep from the uplands to the lowlands means gains could be made from known health statuses, the passing of information between supplying and receiving farmers, and proper quarantining.

WOOL AND SKINS

Once a year, during the warmer months, sheep are gathered off the hills for shearing. This is done for their welfare, as thick, greasy fleeces designed to help them survive the harsh winter months can lead to health and welfare problems in summer.

Depending on the breed, a single fleece weighs between 1.5kg and 10kg. Total production in the most recent wool season was more than 28.7 million kg, from which the wool from upland breeds was selected for production of carpets, clothing, furnishings and insulation. Around half the organic matter of the fleece is carbon, unlike synthetic fibres which use carbon extracted from fossil fuels, releasing what has been stored over millions of years. Wool is hygroscopic so absorbs water vapour, generating and retaining heat and making it a natural insulator for homes by reducing carbon emissions and energy costs. Wool insulation has the unique ability to absorb and permanently retain harmful substances like formaldehyde, released from some modern building materials. Wool is flame retardant, due to its high water and nitrogen content, and has a far higher ignition threshold than synthetic fabrics.

NSA member David Griffiths runs a sheep flock on the Derbyshire/Staffordshire border alongside a mini woollen mill. To increase awareness of sheep farming and Britain's wool heritage, he and wife Karen created the educational 'Woolly Roadshow', travelling to UK shows and events. Karen says: "Years ago our farmers valued their wool and sheepskins as much as their meat, but we allowed people to tell us fleeces were of little value and then many people started to treat them as such. We need to re-educate everyone about the true value."



AROUND HALF THE ORGANIC MATTER OF THE FLEECE IS CARBON, MAKING WOOL AN EXCELLENT NATURAL CARBON STORE.

Despite the quantity of wool produced in the UK and its incredible properties, the value has been very low since the rise of synthetic fibres in the 19th and 20th centuries. Apart from farmers running specific wool breeds, wool is a byproduct that only contributes marginally to the bottom line, at best. An average price for shearing is 90p-£1.10 per sheep, plus the cost of handling and transporting the fleeces, compared to returns ranging from 50p to £3 per fleece. These prices are better than they were, as farmers have seen a threefold increase in the value in recent years, in no small part due to the launch of the Campaign for Wool in 2010, a global initiative initiated by patron HRH Prince of Wales.

Sheep skins are also largely considered to be a low value by-product but there is still demand for them, mostly from overseas where regulations are less strict and production costs lower. In 2013

64,000 tonnes of skins from roughly 14 million sheep were sold, with 79% exported to China. Domestic demand is limited to only three UK tanneries, although the possibility of a fourth opening in Wales is bucking a trend of decline across many decades. Pollution caused by tanneries added to the pressure to survive as cheaper, synthetic materials were developed, but the three surviving UK ventures all pride themselves on minimal environmental impact.

WOOL AND SKIN ASPIRATIONS

NSA believes upland and hill areas would benefit from retailers and consumers considering the unique benefits of British wool in an attempt to increase prices for farmers.

NICHE MARKETS

There are real opportunities for farmers in upland and hill areas to exploit premium and niche markets, directly selling lamb and mutton or working with other market players, such as butchers, regional food hubs and retailers. However, it must be remembered the niche market sector accounts for just 1-4% of total UK sheep output and there is a limit to its growth potential outside of mainstream retailers.

The large number of native breeds in the UK, as well as heritage breeds coupled with an array of iconic areas and landscapes, means there are excellent opportunities to create strong brand identities. These brands can appeal to consumer values around welfare, food safety, food miles, taste and the environment, and cater for markets looking

for organic, pasture-fed or local products. Because niche sheep products can be based on either a breed or a geographical location, they can help raise the profile of lamb and red meat and bring the producer closer to their market. It is therefore arguably important for the industry to create more mainstream interests for currently niche products to

sustain populations of rare and upland breeds.

Farmers need a bank of market knowledge and a will to cooperate if they are to be encouraged into niche market entrepreneurship, allowing them to develop marketing, branding and sales plans, find potential customers and, once established, stay connected with changing market trends. With the

wealth of abilities they already need to run their sheep flocks, it is not always practical or possible for farmers to develop this whole other skillset. Retailers have this expertise but do not have a track record of interest in creating mainstream interests for niche products to sustain populations of rare and upland breeds. The exception was following foot-and-mouth in 2001 when some retailers introduced schemes generating demand for high quality, light lambs (16-21kg deadweight), which was ideal for hill breeds.

THE LARGE NUMBER OF NATIVE BREEDS IN THE UK, AS WELL AS HERITAGE BREEDS COUPLED WITH AN ARRAY OF ICONIC AREAS AND LANDSCAPES, MEANS THERE ARE EXCELLENT OPPORTUNITIES TO CREATE A STRONG BRAND IDENTITY FOR PRODUCTS.

NICHE MARKET ASPIRATIONS

NSA believes upland and hill areas would benefit from retailers embracing heritage breeds as new and diverse products, resulting in more mainstream interest in these niche markets.

John Stephenson of the Swaledale Sheep Breeders Association has been involved in a Marks and Spencer's project offering Swaledale lambs through its 'speciality' range in the winter months. The Swaledale is a maternal breed and a specific outlet for finished male lambs is of huge benefit to breeders. John says: "The first season lasted 10 weeks, taking 250 lambs from 13 members. The sixth season lasted 21 weeks, from the end of December 2015 to the end of the first week in May 2016. This saw 40 members supplying a total of 10,500 lambs."



As a result of the Scottish Government offering a very low support payment to poorer rough grazing (so called 'region 3'), Argyllshire-based NSA member Sybil Macpherson is one of many Scottish upland producers trying to maintain sheep numbers via the Scottish Upland Sheep Support Scheme. She says: "It was hoped the scheme would bring support payments to active farmers in region 3 more in line with land in region 2, which is better quality rough grazing and attracts a higher area payment. However, there were 14,000 more eligible hoggs claimed for than expected, meaning the anticipated rate of €100 per hogg dropped considerably. A number of issues emerged following the processing of claims and it now appears a review of the much-needed scheme will be possible."

PUBLIC GOODS

The European Common Agricultural Policy (CAP) was established in 1962 to encourage food production to feed a growing population in the aftermath of the world wars. Livestock headage payments under Pillar One of CAP were one tool to do this, but this blunt format encouraged the keeping of sheep for numbers alone, resulting in overproduction and the sector not being in line with market demands. The 2003 CAP reform 'decoupled' the link with production and moved to area-based payments as a way to encourage livestock sectors to move towards a free market and allow farmers greater freedom to respond to demand.

Among other factors, the impact of decoupling and the devastating 2001 foot-and-mouth epidemic caused livestock numbers in the UK to drop dramatically, particularly in more marginal areas. While other EU countries have taken steps to avoid the loss of farming in vulnerable regions, with the continuation of coupled payments in the form of sheep and goat premiums, Scotland is the only nation in the UK to follow suit. Such schemes are a direct response to concerns over the viability of sheep farming in marginal areas and the risk of losing the public goods provided by this type of activity. Given that the UK will soon need to write its own agricultural policy outside of the EU, it will be

important to discuss the role of payments relating to production – and also acknowledge the debate around whether direct funding should go to the more productive land or to the hills and uplands where farming is less commercially viable and needs protecting.

While agri-environmental work has traditionally been part of Pillar Two of CAP, the newer Basic Payment Scheme has 'greening' requirements for direct payments. These greening rules aim to encourage rotational mixed farming across Europe, including grassland because of its biodiversity value. Farms with more than 75% permanent pasture are exempt from greening, showing the value placed on

this type of land. This means nearly 100% of farms in the upland and hill areas of the UK already provide the level of public goods required by greening. This should be recognised when the UK is replacing the EU CAP.

Pillar Two of CAP is the EU Rural Development Policy, aiming for economic, environmental and social improvement of the countryside. In the UK nearly 90% of Pillar Two funding is dedicated to agri-environment schemes, allowing many businesses to supplement production with environmental practices. The role of agri-environment will be one of many things to consider in the discussion about where to prioritise funding once the UK leaves the EU, but there are opportunities to think about where improvements can be made, specifically linked to 'ecosystem services'. Farming the land in a way that maintains valuable environmental habitats delivers ecosystem services that are highly beneficial to society as a whole but are a serious limitation on farm business productivity and profitability. Agri-environment schemes are calculated on an 'income

DID YOU KNOW?

BETWEEN 2000 AND 2010 BREEDING EWE NUMBERS FELL 31.7% IN LESS FAVOURED AREAS IN SCOTLAND, 31.6% IN NORTHERN IRELAND, 20.2% IN WALES AND 12% IN ENGLAND.

foregone' principle, so compensate only for what income is lost by agreeing to manage land in a certain way. NSA believes it would be beneficial to instead apply a principle of reward for desired outcomes.

There is also a growing acknowledgment of 'natural capital' held and generated by farming practices, such as soil, water and air, particularly in the hills and uplands of the UK. Natural capital and ecosystem services are concepts with an increasing relevance, as putting a price on nature's assets will enable a price to be paid to people who maintain and enhance it. For example, commercial companies with a large environmental impact, such as airlines or power companies, could off-set this by paying farmers for natural capital and/or ecosystem services. This could perhaps fund bracken control to encourage biodiversity, pay for peat management to capture carbon, or support community-based activities to protect the social infrastructure of hill and upland areas. NSA is involved in work by the Black Mountains Land Use Partnership to find a mechanism to value natural capital and pay farmers for delivering it.

Another element of Pillar Two of the EU CAP is delivering public goods through rural vitality. This includes maintaining and promoting natural heritage, farm diversification and tourism activities, as well as providing advice, training and grant funding to farmers. This is done to improve competitiveness of the agricultural sector, but can directly or indirectly provide public goods, such as reducing greenhouse gas emissions through the funding of new, efficient buildings and equipment. The areas defined by the EU as integral to a successful agricultural sector are as appropriate for the UK as elsewhere in Europe and should be considered for the UK's agricultural policy post-Brexit. NSA would also like to see its suggestion

of an agri-health scheme be further discussed in the new political situation, as small-scale trial work of this has been very promising. Such an agri-health scheme would reward farmers for measures such as voluntary monitoring and health initiatives, while reducing carbon footprints and therefore contributing towards the UK target of reducing carbon emissions by 11% in 2020 and by 50% in 2050. It would promote better use of resources, often limited in hill and upland areas, and help sustain livestock numbers for the benefit of landscapes and communities.

NEARLY 100% OF FARMS IN UPLAND AND HILL AREAS OF THE UK ARE EXEMPT FROM EU GREENING REQUIREMENTS AS, WITH MORE THAN 75% PERMANENT PASTURE, THEY ALREADY PROVIDE THE LEVEL OF PUBLIC GOODS DESIRED.

ASPIRATIONS ON PUBLIC GOODS

NSA believes upland and hill areas would benefit from:

- A UK farm support and reward system, developed post-Brexit, which caters for all agricultural sectors but specifically increases the financial recognition of provision of a broad range of public goods.
- Payment (via public and private means) for eco-system services, based on reward and deliverables, and not on income foregone.

THE ENVIRONMENTAL LINKS AND OUTPUTS OF SHEEP IN UPLAND AND HILL AREAS

Farming and the environment are inextricably linked in the UK. Our unique landscape, formed through thousands of years of traditional farming methods and management by farmers, including the grazing of sheep, has encouraged the adaptation of many animal and plant species.

The late 1990s and early 2000s saw financial incentives push up stocking rates, but the end of headage payments and introduction of environmental stewardship schemes have been widely welcomed by farmers to enhance biodiversity and the environment. However, this has gone too far in some scenarios and reduced stocking rates of sheep in certain parts of the UK hills and uplands are leading to degradation and real changes in habitat structure. NSA believes it is vital to find the right balance.

Fertiliser use has been steadily decreasing since the 1980s, yet effective targeting and technological advances have allowed crop production to increase. Some of the more environmentally damaging pesticides are no longer used due to voluntary best practice measures and the creation of agri-environment schemes, provided through Pillar Two CAP funding, has encouraged best practice farming for the benefit of the environment.

However, it is important to remember that farming sustainability requires biodiversity programmes to be carefully thought out and applied to individual situations and habitats. Farmers must be able to tailor schemes to best fit their practices and the land they farm, to get the best value for money in both production and environmental benefits.

FARMERS HAVE WIDELY WELCOMED MEASURES TO ENHANCE BIODIVERSITY AND THE ENVIRONMENT – BUT THESE HAVE GONE TOO FAR IN SOME SCENARIOS AND REDUCED STOCKING RATES OF SHEEP IN SOME AREAS ARE LEADING TO HABITAT DEGRADATION.

DID YOU KNOW?

75% OF THE UK LANDSCAPE IS DEVOTED TO FARMING, MEANING AGRICULTURE AND THE ENVIRONMENT ARE INEXTRICABLY LINKED.

WOODLAND

NSA is supportive of the integration of trees into some types of farmland, seeing this as preferable to block planting and removal of land from agriculture. Integration will not work on every farm but, in the right place, has a role to play.

As well as having environmental benefits, trees can provide production, health and welfare gains for sheep. One example is minimising losses at lambing time by planting shelter belts, which are particularly beneficial for hill and upland flocks that do not bring ewes into a shed to give birth to their lambs. Another option is planting boggy areas that harbour the mud snail involved in the liver fluke lifecycle. Both these facilitate tree planting with minimal loss of productive farmland, but farmers are understandably nervous about going down this route as it reduces the area of farmland they can claim under the current Basic Payment Scheme. This is one way that the UK could benefit from having to adopt its own agricultural policy outside the EU, as a more holistic system could be put in place that removes barriers for tree planting in order to enhance biodiversity and assist with water management.

Another attraction of trees is that they can be an additional income stream for farmers, allowing them to expand into the timber industry and aiding resilience against economic shock, without detracting their energy and efforts away from livestock production too much. Learning from our European neighbours, where farming and forestry are often seen as mutually inclusive, could increase timber supplies and help the UK meet its climate change mitigation targets.

When it comes to already-established trees, grazing behaviour of sheep is beneficial to the diverse habitats found in niche areas of ancient semi-natural woodland. Appropriate stocking rates of sheep help create and maintain habitats for the invertebrates and vertebrates that depend on the ground flora and shrub layers of these areas, as well as providing pathways for mammals and birds, creating seedling establishment sites and reducing the spread of bracken.

WATER MANAGEMENT & FLOOD ALLEVIATION

The global requirement for water is increasing at the same time as our changing climate is causing more droughts and water shortages and making it difficult to produce food in some countries. Predictions suggest the UK may have an increasing future role in feeding the world, at the same time as safeguarding our own safe drinking water catchment areas, which are mainly in the hills and uplands.

At the other end of the scale, most European countries are experiencing periodic and extreme flooding. The devastating floods here in winter 2015 saw sheep held responsible by some conservationists and commentators, yet it cannot

flow, due to their deep network of roots and surface areas of leaves.

Upland forestry has been promoted by some as a panacea for flooding in lowland areas, but activity is needed at a larger catchment scale

RECENT INCREASES IN SEVERE FLOODING, FOR WHICH SOME CONSERVATIONISTS HAVE HELD SHEEP RESPONSIBLE, HAVE HAPPENED DESPITE A DRAMATIC DECREASE IN UK SHEEP NUMBERS, ESPECIALLY IN HILL AND UPLANDS AREAS.

go unnoticed that recent increases in severe flooding have happened despite a dramatic decrease in UK sheep numbers, especially in hill and upland areas (as described on page 8). Of course the hooves of sheep can cause some types of soil, in particular clay and mineral soils, to cap and water to run off – but in other places, such as peat land, hooves can aid the breakup of the soil cap and increase water absorption. Likewise, some parts of the uplands, with steep sides and rocky outcrops, have low water storage capacity, while other habitats, such as bogs, woodlands and moors, act as natural ‘giant sponge’ flood defences. Well maintained woodland and scrub, mosses and heather are the most beneficial sources of vegetation for intercepting and impeding water

to consider, for example, the appropriateness of building developments further downstream and maintenance and adequacy of sewers and drainage. There is also a difference between traditional and commercial forestry, as the latter can cause severe soil erosion and water pollution at planting and harvesting times.

As all sites affected by flooding are different, so too are the solutions. In some areas strategic planting of trees, shelter belts and hedges will help. In others it will be maintenance of field drains and the use of aeration equipment at appropriate times of the year to aid water infiltration and reduce run off. In areas where there is little chance to slow down the water, the priority must be ongoing stream and river maintenance to get

Peter Brewis is one of the farmers involved in the Flow Partnership project, established in 2010 to successfully prevent flooding that used to regularly affect Belford in Northumberland. Water is held back on specially created ponds, stored at peak times and released once river levels return to normal. Mr Brewis says: “I was approached to get involved after several flash floods affected the area. It was important the work had very little impact on the output of the farm, and we managed to find a number of areas that suited both us and the project, successfully holding water without affecting livestock or fields in arable rotation. Suitable sites include permanent pasture which recovers quickly after flooding, arable field corners and woodland. Belford suffered a considerable storm not long after the first work was completed and did not flood.”



water away quickly. The removal of rocks and sediment will aid this and maintain spawning beds for fish. Non-intervention policies, such as those for streams and rivers in sites of special scientific interest (SSSIs), go against centuries of human maintenance and are unsustainable.

WATER MANAGEMENT ASPIRATIONS

NSA believes upland and hill areas would benefit from deeper understanding of the role sheep and the uplands play in prevention and mitigation of flooding and the supply of vital clean water to many urban communities.

FARMERS ARE UNDERSTANDABLY NERVOUS ABOUT PLANTING TREES UNDER THE CURRENT BASIC PAYMENT SCHEME. THIS IS ONE WAY THE UK COULD BENEFIT FROM HAVING TO ADOPT ITS OWN AGRICULTURAL POLICY OUTSIDE THE EU.

WOODLAND ASPIRATIONS

NSA believes upland and hill areas would benefit from:

- Trees and valuable areas of scrub no longer being classed as permanent ineligible features (PIF) under the Basic Payment Scheme or its post-Brexit successor.
- Resolution of contradictions between the Basic Payment Scheme and agri-environment schemes, and steps taken to ensure no such contradictions exist in post-Brexit schemes.

Roger Jukes is one of several farmers involved in the Pontbren project in Welshpool, Powys, which is a partnership approach to integrating trees and hedges for livestock gains and flood alleviation. He says: “Our driving force was creating natural habitats for wildlife and also natural barriers to give livestock protection from the harsh climate we endure in our region. The project showed agriculture can work side-by-side with activity to enhance biodiversity, wildlife habitats, water quality and flood protection.”



CARBON & PEAT

To help combat climate change, there must be a balance between carbon stored and atmospheric carbon dioxide on a global level. One way of sequestering carbon is where plants take carbon out of the atmosphere through photosynthesis and store it in the soil, through live or dead plant material. Organic soil matter is 69% organic soil carbon.

Upland peatland and peat soils are the largest stores of carbon in the UK, accounting for 42% of the total. Unlike other carbon sinks, peat bogs can store more and more carbon as the depth of the bog increases, while also attracting a wealth of invertebrates, supporting many wading birds, and benefiting fish breeding sites further downstream by natural water management. Current moorland habitats may eventually succeed into peat-forming ecosystems and would store more carbon than woodland ever could in these areas.

Efforts by farmers and grouse moor managers to protect moorland habitats, through sustainable grazing to avoid erosion, bracken and wildfires, help protect the carbon locked in the peat soils below. This might include grip blocking, where drains previously created in the draining of uplands are blocked for the health of peat bogs and to hold back water in the uplands to reduce flooding risk downstream. But there is a fine balance, as over-wet uplands lose their capacity to hold water in times of heavy rainfall. Similarly, care must be taken when planting trees in these areas, as they can cause the peat to dry and release gases into the atmosphere. The difference between peatland soil and peat bogs must be recognised, as despite the habitat advantages of peat bog, it is not as suitable for sheep grazing, especially where there is increased growth of sheep-toxic *Bog asphodel*.

EFFORTS BY FARMERS AND GROUSE MOOR MANAGERS TO PROTECT MOORLAND HABITATS, THROUGH SUSTAINABLE GRAZING TO AVOID EROSION, BRACKEN AND WILDFIRES, HELP PROTECT THE CARBON LOCKED IN THE PEAT SOILS BELOW.

Grassland also provides an effective, profitable and culturally relevant way of storing soil carbon, and optimal grazing livestock greatly contribute to this by transforming bare patches into flourishing grassland biodiversity, providing excrement and urine for fertiliser, breaking up the soil cap of peat soils and trampling dead vegetation into the soil. Many agri-environment schemes require sheep to be removed from the peat soils of the hills at certain times of the year, onto the clay and mineral soils of the slopes and lowlands, which are easily compacted by hooves, increasing the likelihood of run-off in arguably the wettest season.

While it must be acknowledged ruminants are emitters of dangerous greenhouse gases, it is the crudeness of current carbon footprinting methods that suggests meat production on hill and upland farms has a higher environmental impact than its lowland counterparts. Current methods do not take account of the full carbon cycle and more holistic measuring tools are needed that look at more than just the fact the harsh upland climate and poorer quality grazing result in reduced growth rates in lambs and lower productivity. There is scope to improve performance, such as through selective breeding and alternative management, but this is a challenge within the delicate balance of farming and environment. It is important not to strive for improvements in isolation without considering the wider picture.

↳ CARBON & PEAT ASPIRATIONS ◁

NSA believes upland and hill areas would benefit from:-

- Recognition of the extreme importance of the uplands as carbon sinks, in particular peat soils, and the role that farmers play in protecting them.
- Recognition of the environmental and social benefits of grazing and farming to reducing risks of wildfires.



DID YOU KNOW?

MORE CARBON IS STORED IN UK PEAT THAN IN THE FORESTS OF BRITAIN AND FRANCE COMBINED.

DID YOU KNOW?

VALUABLE HEATHER IS RARER AROUND THE WORLD THAN RAINFOREST, WHILE UNWANTED BRACKEN IS ENCROACHING AT A RATE OF 2% PER YEAR IN THE UK.

HEATHER & BRACKEN

Heather moorland is a globally threatened habitat, mainly due to over-grazing, afforestation and bracken encroachment, and 75% of what remains is found in Britain. Its international importance is linked to its role in providing habitat for a rich variety of flora and fauna, including rare birds.

A good working relationship and balance between all stakeholders on heather moorland is essential, as areas are often shared by farmers and grouse shoots. Grouse moor managers in England alone have regenerated and recovered 217,000 acres in the last 25 years, spending around £52.5 million a year on management. Much of this is privately invested and benefits the economies of local rural communities by supporting 1,520 fulltime equivalent jobs including associated services such as game dealers, accommodation and equipment suppliers.

Managed moorland, which involves controlled burning, provides a mix of older heather for nesting cover and newer shoots for food. In comparison, unmanaged heather becomes a dense mass of woody stems and a wildfire risk that supports fewer sheep and very little wildlife.

Heather is negatively impacted by bracken, which is a dominant monoculture that smothers more sensitive and ecologically valuable habitats. It blocks out light and rainfall, preventing many plant species from thriving, not just heather. It also reduces sheep grazing, wildlife habitats and young tree growth, it hampers access for farmers and walkers, is toxic to animals, carcinogenic to humans and harbours dangerous ticks. Tick-borne diseases in birds, wildlife, livestock, pets and people are attributed to increasing areas of bracken, while water-soluble, toxic bracken spores pose a risk to sources of drinking water.

Global warming favours increased encroachment of bracken, alongside fewer people working the land and cutting back the plant by hand. Modern options for control are mechanical and chemical, and the essential need for this action is emphasised by 'emergency authorisation' being given to the UK every year since 2011 to use chemicals off the EU's non-approved list, under strict guidelines, to control growth. Sheep are an essential post-treatment tool to trample surviving fronds, speed up the breakdown of litter into the soil and reduce opportunities for re-growth. Cattle and ponies can also do this, but are more damaging to other vegetation than sheep and, to this end, tailor-made agri-environment schemes

for different habitats to allow winter grazing would have great benefit for the control of bracken. Incentivising bracken control could also take into consideration alternative uses for the plant, such as producing winter animal bedding, composts or briquettes for burning.

BRACKEN REDUCES SHEEP GRAZING, MORE VALUABLE WILDLIFE HABITATS AND YOUNG TREE GROWTH, IT HAMPERS ACCESS FOR FARMERS AND WALKERS, IS TOXIC TO ANIMALS, CARCINOGENIC TO HUMANS AND HARBOURS DANGEROUS TICKS.



NSA member Hamish Waugh, who farms in Wester Kirk, Dumfriesshire, has provided this image showing clear heather growth on the left hand side of a fence, where sheep graze, compared to an un-grazed area on the right. Hamish says: "The sheep were removed from this patch around 28 years ago and it is clear the heather regrowth has been poor, if any at all. The land to the left of the fence is grazed at a rate of one ewe per two acres and the heather here is knee-deep. I believe this shows the effect of under-grazing from the partial or total removal of sheep is not always what is desired. Grazing at a suitable stocking rate for each unique area, to maintain and even flourish the heather and other vegetation, is the most beneficial option for all aspects of biodiversity and environment."

↳ HEATHER & BRACKEN ASPIRATIONS ◁

NSA believes upland and hill areas would benefit from encouragement of farmers to control bracken responsibly.

BIODIVERSITY

The uplands hold a complex mosaic of habitats, much of which has been created or highly influenced by livestock grazing. Sheep control the growth of more aggressive plant species, give mobile wildlife species the chance to move through the habitat, benefit invertebrates and microbes with dung and plant litter, and create gaps in the vegetation to allow new seedlings to grow. This habitat diversity is brought about by appropriate grazing supporting species that prefer long or short vegetation or rely on the interaction between the two.

Many bird species benefit from sharing their habitat with grazing sheep, including using naturally-shed wool as sturdy nesting material and feeding on dung-eating insects. Song birds in particular prefer the patchwork landscape that sheep create by their natural grazing behaviour and are more commonly found in sheep-grazed areas. The situation reverses when under-grazing results in the encroachment of coarse grasses that give a mono-cultural vegetation structure. Off-wintering of sheep entirely decreases habitat diversity, and moving them to in-bye land intensifies use in these areas.

Invertebrates also flourish around sheep, benefiting from the dung and utilising the plant diversity within effective grazing regimes as a food source. Beetles and their grubs are in turn an excellent food source for birds and some mammals. Dung beetles are good for soil health and populations of certain species, such as the northern dung beetle (*Agoliinus lapponum*), have declined in line with less grazing livestock on historic pastures. As explained on page 12, sheep can be used to reduce habitats for ticks and, therefore, reduce the risk to humans of Lyme disease and other animals of louping ill virus.

At the extreme end of the push for reduced stocking rates is land abandonment. Destocking or reduced management in the UK has commonly led to semi-abandonment, where the land is still viable for future use but is in real danger of total abandonment. Factors contributing to this include the distance from roads, retirement and lack of succession, and poor communication networks. Difficult decisions need to be made in places where land abandonment is a risk, in order to conserve these areas and ensure biodiversity where there has been a long history of agriculture and human intervention. It is also important to consider the role of the human in biodiversity, as the potential for rural depopulation increases with a decline in the sheep farming of the hills and uplands. As much as we do not want to see the extinction of ground nesting birds or fragile upland flora, we also do not want to see the extinction of the shepherd, surely one of the oldest occupations. With such a large sheep population in this country, and sheep farming being threatened throughout Europe, protecting the UK shepherd is an activity of international significance.

DIFFICULT DECISIONS NEED TO BE MADE IN AREAS WHERE LAND ABANDONMENT IS A RISK, IN ORDER TO ENSURE BIODIVERSITY WHERE THERE HAS BEEN A LONG HISTORY OF AGRICULTURE AND HUMAN INTERVENTION.

BIODIVERSITY ASPIRATIONS

NSA believes upland and hill areas would benefit from:-

- Recognition of the value of sheep grazing to ecology and biodiversity.
- Site-specific grazing prescriptions and exploration of outcomes approaches, as there is no such thing as an optimal grazing level for all habitats and different seasons/weather require flexibility.

DID YOU KNOW?

IN ONE SUMMER, 13 SPECIES OF GRASSHOPPER AND FOUR SPECIES OF SNAIL WERE RECORDED IN THE WOOL OF ONE SHEEP AND 133 PLANT SPECIES IN THE WOOL OR CLAWS. 'HITCHING A RIDE' IN THIS WAY ALLOWS PLANTS AND ANIMALS TO RANGE OVER GREATER DISTANCES THAN OTHERWISE.

NSA member Maurice McHenry farms 120ha on the north coast of County Antrim, Northern Ireland, under an agri-environment scheme. This includes 61ha of heather moorland, 32ha rough moorland grazing, 18ha unimproved grassland, 6ha improved grassland and 2ha species-rich grassland. Maurice says: "We have won titles including 'most beautiful farm' in Northern Ireland and were a finalist in the UK Silver Lapwing awards for commitment to the environment. Farming and Volunteer Alliance surveys have found 33 species of birds and at least five sites for frogs. Sheep ensure diverse flora and fauna and ensure the natural vegetation does not grow unchecked and smother the smaller plants. Sheep do not poach the wet areas on the moorland or species-rich grassland and so this land is protected."



SEMI-NATURAL LANDSCAPES

The UK rural landscape is mostly as a result of man-made intervention. Wildlife and ecology have evolved to live around this human activity and rewilding on any scale would disrupt this. Britain is a small island with a high population that cannot accommodate the vast areas of wilderness sought after by some environmentalist groups.

Habitats would never return to their original wild state, only develop from a current point, and so rewilding is a highly emotional concept that is not based in science and would actually be a designer habitat not a natural one.

Much of the rural landscape that we see today is thought to have been established by the time of the Magna Carta in 1215. Britain's woodland areas had declined while wolves and other predators still populated our landscapes, before the introduction of large-scale sheep farms. Sheep were not the cause of the reduction of woodland and the reintroduction of predator species, such as lynx, would not help regenerate it.

In a country as densely populated as the UK it is important for the physical and mental wellbeing of urban dwellers to have access to the countryside – and the role of farming in providing this access is outlined on page 16. Access is complemented by the 15 National Parks in England, Wales and Scotland. Provision of 'parks' with 'national public rights' often means those areas suffer from environmental damage, disturbance to wildlife and damage to farm properties and livestock. These areas are not wildernesses, as they are in other parts of the world, and this must be considered within the rewilding debate.

Special reference should be made to the current proposals to release the Eurasian lynx in the UK. NSA has completed a review of these

proposals, which are to obtain a licence to release six adult lynx on one of three possible sites for a five-year trial period. NSA did not find any tourism benefits, as the lynx is such a shy animal, and concluded that sheep farming and its related ecology would be at substantial risk if the proposed scheme went ahead. A further reduction in sheep numbers from predation by lynx would do nothing to help the biodiversity in upland areas provided by sheep. NSA is concerned the lynx would be introduced as a protected species, adding to problems sheep farmers already have with the lack of options to control problematic populations of ravens and sea eagles.

Although not directly related to rewilding, the term High Nature Value (HNV) farming is another approach being promoted by conservation bodies. This concept appears more advanced in other parts of Europe, due to its potential to offer market opportunities for products produced in harmony with special semi-natural habitats. It could arguably do this in the UK, particularly to differentiate some of our rarer and heritage breeds from global commodity products, but NSA feels many hill and upland farms are already functioning as high nature value farms and that any HNV scheme should be inclusive and not just to cater for extreme conservation approaches. The Scottish Government recognises this and describes more than 40% of land (2.3-2.4m ha farmland and 1.4m ha woodland) as being High Nature Value.

NSA members Robert and Sarah Helliwell farm in the Peak District National Park's Edale Valley and welcome some of the park's 16 million annual visitors to their campsite. Robert says: "People often want to know more about the landscape and wildlife that have been created by years of predominantly sheep farming, and we keep in mind that each visitor is a potential customer of UK agriculture, but the benefits come with problems." He lists sheep worrying by dogs, dog faeces, gates left open, litter and increased traffic. He adds: "Sheep farming has been a major element in the creation of the Peak District landscape over many years – that is what they come to see – but it would be interesting to see in 400 years' time what lasting landscape features result from the mass influx of visitors to the area."



SEMI-NATURAL LANDSCAPE ASPIRATIONS

NSA believes upland and hill areas would benefit from:-

- Easing of licences for control of problematic protected species, such as badgers, ravens and sea eagles, to a level that keeps farming and wildlife in balance.
- Recognition that the UK has very little truly wild landscape, instead the landscape, wildlife and ecology seen today is a result of thousands of years of farming.

BRITAIN IS A SMALL ISLAND WITH A HIGH POPULATION THAT CANNOT ACCOMMODATE THE VAST AREAS OF WILDERNESS SOUGHT AFTER BY SOME ENVIRONMENTALIST GROUPS.

DID YOU KNOW?

NATIONAL PARKS IN THE UK ARE NOT RECOGNISED AS SUCH BY THE INTERNATIONAL UNION FOR CONSERVATION OF NATURE AS, UNLIKE OTHER PARKS AROUND THE WORLD, THE MAJORITY OF LAND IS PRIVATELY OWNED AND ARE PLACES WHERE PEOPLE LIVE AND WORK, NOT WILDERNESSES.

THE SOCIETAL LINKS AND OUTCOMES OF SHEEP IN UPLAND AND HILL AREAS

Farming people are an important but decreasing part of rural communities, and their falling numbers mean changes for the character of rural life.

Populations of rural communities are changing, as people moving out from urban areas often change the balance of influence on how the country should be. Demand for rural housing from outside the area, particularly for affluent retirees and second/holiday homes, has increased house prices making it more difficult for young local people to find affordable places to live and making retirement for farmers and farm workers a challenging decision. This contributes to driving young local people out of a local area to look for employment and affordable living, and reduces acceptable retirement options for older farmers.

If young people can be encouraged to stay in the area and involved in agriculture, through innovative and educational support schemes, the industry will continue to flourish and traditional methods and heritage can be preserved in the best way possible. Providing existing farmers with the business skills to improve their farming establishments and to diversify in different ways can also enhance their returns for now and the future generation. Tourism is a huge industry, particularly linked to the breath-taking landscapes of the hills and uplands, and there are great gains to be made from farmers diversifying into the tourism sector in their local area where appropriate.

TOURISM, RECREATION & DIVERSIFICATION

Tourism and recreation is reliant on the countryside being a managed environment, as visitors come to see the landscape, views and long clear vistas. Tourism would be negatively affected if the landscape was unmanaged and blocked with trees and scrub, and recreation opportunities would be limited without easy access.

There are 225,000km of footpaths in England and Wales, while the 15,000km of pathways in Scotland were superseded in 2005 by most land becoming open access to walkers abiding by the Open Access Code. In Northern Ireland there are very few rights of way but the kindness and trust of landowners means WalkNI is able to provide 'quality walks' totalling 1,566km of footpaths. The ten National Parks in England, three in Wales and two in Scotland total 2,265,800ha.

Contact with green space and the natural environment is important for health, with 'green exercise' linked to improvements in self-esteem and total mood disturbance. This is important in

abattoirs and auction marts. A research project in 2012 found that 34,000 people were employed on English sheep farms alone, supporting a further 111,405 jobs in allied industries and contributing a value of £291.4m to employment. Farmers and farming families recycle money in the local community by using local shops and businesses, by using local amenities such as transport, church halls and schools, and being part of local councils and committees. Farming families are often the backbone of rural communities, and it is the upkeep of the services that rural communities can provide that pays off during the tourist season. Many upland sheep farms are reliant on direct

NSA Next Generation Ambassador Jennifer Craig from Biggar, Lanarkshire, and her father were approached to be in a windfarm project covering farm and forestry ground in their area. Jennifer says: "With beef and sheep over 700ha of mainly hill ground we have limited diversification options. We decided to sign up to this and have seen benefits for our business and the community since. The company leases the land and access roads, which gives us a second income, and the construction and operations employees spend their money back into the local economy through local shops and accommodation. The project also encompasses a community fund, topped up yearly, which organisations can apply to for funding towards different local projects."



THERE IS A REAL ROLE FOR UPLAND AND HILLS AREAS IN CREATING A FITTER AND MORE EMOTIONALLY CONTENT POPULATION, BUT THE INTERESTS OF VISITORS MUST BE BALANCED WITH THE NEEDS OF RURAL COMMUNITIES.

an era where one in four people a year is affected by a mental health issue, and obesity and related illness cost the taxpayer more than the fire service, police and prisons combined. There is a real role for upland and hills areas in creating a fitter and more emotionally content population, evidenced by the fact rural residents have better mental and physical health than their urban counterparts, but the interests of visitors must be balanced with the needs of rural communities. Farming groups are arguably the most significant within these communities, as they earn a living directly from the land, are resident year round and support local services and businesses on an ongoing basis.

The 'multiplier effect' of farmers recycling money into the local economy is huge, with farming supporting other industries such as feed, fertiliser and machinery merchants, vets, hauliers,

funding from the EU Common Agricultural Policy, but this money is recirculated amongst rural businesses whose success relies on farming families.

With some farmers turning to tourism, energy production and other diversification opportunities to stabilise incomes, it is important they are given the widest range of opportunities and support. This includes proportionate easing of planning controls, particularly in National Parks, as well as improved broadband and mobile phone coverage. Digital exclusion is highest in rural and hard-to-reach areas with 1.2m small businesses operating without a crucial tool for their success.

FACTFILE

AT LEAST 86% OF THE OPEN ACCESS LAND IN ENGLAND IS FOUND IN THE UPLANDS, ATTRACTING 40 MILLION VISITORS AND MAKING £1.78 BILLION FOR LOCAL ECONOMIES EVERY YEAR.

RURAL WALES ATTRACTS 19M DAY VISITS AND 2.28M OVERNIGHT STAYERS IN A YEAR, SPENDING A £674M AND £367M RESPECTIVELY.

THE SCOTTISH COUNTRYSIDE SEES 2.64M OVERNIGHT STAYERS AND 26M DAY VISITORS IN A YEAR.

TOURISM IN NORTHERN IRELAND IS RECOVERING AND IN 2015 70% OF HOTELS AND 47% OF ATTRACTION PROVIDERS SAW POSITIVE INCREASES IN VISITORS.

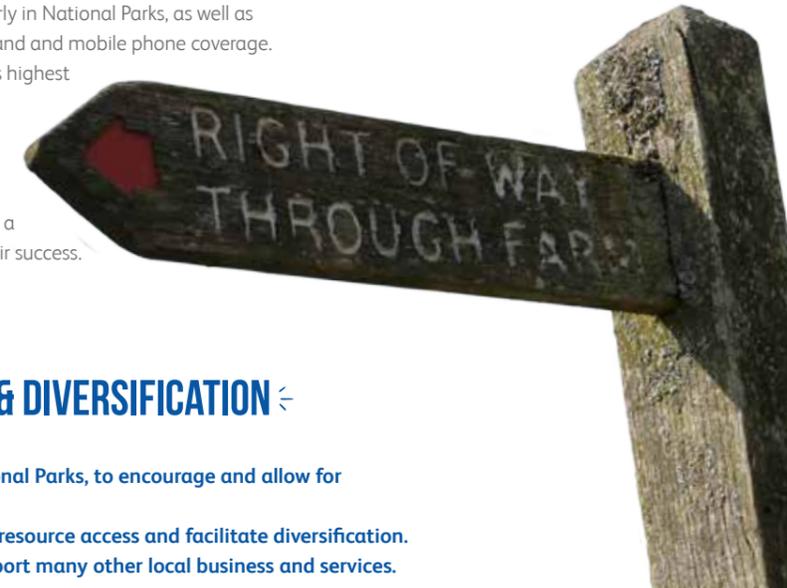
SECOND HOMES AND HOLIDAY COTTAGES ARE A CONTRIBUTOR TO DRIVING YOUNG LOCAL PEOPLE OUT OF A LOCAL AREA AND REDUCING ACCEPTABLE RETIREMENT OPTIONS FOR OLDER FARMERS.

DID YOU KNOW? RURAL COMMUNITIES SUFFER WHEN FARMERS EXPERIENCING LOW RETURNS AND FEELING THEIR ROLE IN SOCIETY IN UNDERVALUED ARE LESS LIKELY TO PARTICIPATE IN COMMUNITY LIFE.

ASPIRATIONS FOR TOURISM, RECREATION & DIVERSIFICATION

NSA believes upland and hill areas would benefit from:-

- Proportionate easing of planning regulations, particularly in National Parks, to encourage and allow for investment and appropriate energy-generation projects.
- Improved broadband access and mobile phone coverage, to allow resource access and facilitate diversification.
- Recognition of the multiplier effect and how farm enterprises support many other local business and services.



CULTURE & HERITAGE

Culture and heritage can be typified by the physical features found in rural areas, and the traditional customs and practices that survive to this day. Both are equally important in understanding the unique source of identity and learning in an area.

Stone walls and barns spring to mind when thinking of physical features, and these are maintained because they still have a role in containing stock, as well as being a link to past agricultural systems and important to local history. Environmental stewardship encourages the preservation of heritage features too, such as ridge and furrow ploughing patterns and old sheep washes. These are important on an international level, with the UK having an obligation to preserve traditional knowledge, innovations and practices.

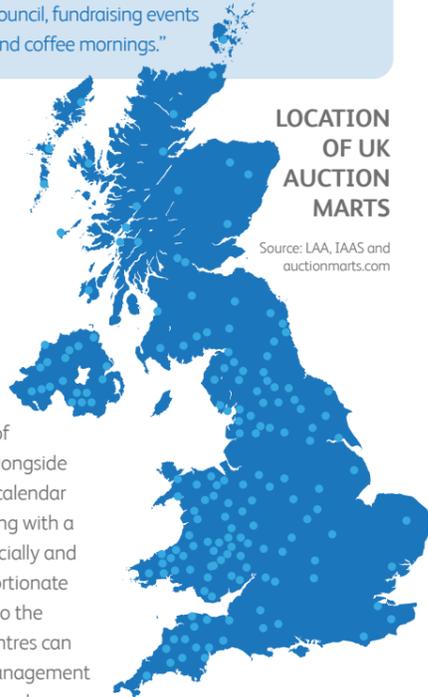
Cultural heritage covers traditional practices, customs and dialect too. Some are everyday names, of places like Shepherds Bush or pubs like the Golden Fleece, and others are traditional words still used by shepherds around the country. The farming family is widely viewed as the social institution upholding the traditional upland way of life. Farmers with ancestral links to the local area have a strong sense of belonging and link production to their social status within the farming community, demonstrating their desire to make a living from farming.

FARMERS AND THEIR FAMILIES OFTEN SERVE ON SCHOOL BOARDS AND PARISH COUNCILS, VOLUNTEER DURING TIMES OF SNOW AND FLOODS AND ARE INVOLVED IN LOCAL EVENTS AND FUNDRAISING.

Local and agricultural shows allow for the display of traditional skills and practices, as well as the native breeds of livestock that add distinctiveness to cultural heritage. The 18th century practice of showing pedigree animals sits alongside a more modern role of promoting British farming and bridging the rural-urban divide. There is an important social calendar surrounding traditional farming activities, such as shearing, livestock shows, hunts and markets, linking sheep farming with a strong sense of community. Auction marts have an important social function for farmers who may otherwise be socially and geographically isolated, with 92% of farmers socialising with other farmers in this way. The uplands has a disproportionate amount of livestock markets in comparison to the lowland areas, highlighting the stratified system of selling stock to the lowlands. Around 60% of fat lambs and 80% of cull ewes are sold through livestock auction markets and these centres can often be a vital link for farmers to other amenities, such as drop-in medical services. Many grazing practices and management activities in hill and upland areas are a product of family or local traditions and communities working together, examples being hefting and gathering of stock, particularly on common land with shared grazing rights. This is complemented by new forms of social interaction, such as discussion groups and farmer networks.

Farmers and their families are seen as important parts of rural communities, particularly by non-farmers, and are often well represented on school boards and parish councils. They voluntarily help in the community by clearing roads of debris and snow, clearing drains and rescuing others from floods. The National Federation of Young Farmers Clubs in England and Wales, and its equivalents in Scotland and Northern Ireland, play a huge part in rural society, providing members with social events, skills training and opportunities for travel, as well as raising huge amount of money for charity. Charity fundraising is important throughout rural communities, including for farming charities that provide one-off grants, housing, disability equipment and relief staff.

NSA member and County Durham sheep farmer Greg Dalton sends his three young children to Forest of Teesdale Primary School, which is facing closure after 300 years. Greg says: "The school now only has 14 children on its roll but is vital if we want to attract young families to the tenanted farms in the area. It utilises the beautiful environment on its doorstep for learning and upholding the traditions and farming values of the area – and with no actual village surrounding the school, it is a valued meeting place for social groups, the parish council, fundraising events and coffee mornings."



LOCATION OF UK AUCTION MARTS

Source: LAA, IAAS and auctionmarts.com

DID YOU KNOW?

THERE ARE NEARLY 200 AGRICULTURAL SHOWS IN THE UK, ATTRACTING UP TO 240,000 PEOPLE OVER A FOUR-DAY EVENT. 10% OF THE UK POPULATION IS ESTIMATED TO VISIT AN AGRICULTURAL SHOW EVERY YEAR.

ASPIRATIONS FOR CULTURE & HERITAGE

NSA believes upland and hill areas would benefit from:-

- Maintenance and investment into local infrastructure that supports hill farming families and others, such as schools, banks, roads and medical facilities.
- Recognition of the historical value, culture and heritage that upland communities provide, and the strong sense of belonging that farmers place on their ancestral link to their farm and local area.

COMMON LAND & CROFTING

Ranging from extensive pastoral grazing, woodland areas, coastal marshes and even land near towns, common land is mostly (but not exclusively) found in upland and hill areas. Beneficial for heritage, public access and environmental factors, commons are protected from development and agricultural intensification through grazing rights and statutory protection. They provide space for exercise, recreation and fresh air for the wider public, who often do not understand or appreciate the complex practice of commoning.

As with other upland and hill areas, commons have been influenced by fluctuations in policy over a period of years. Farmers with grazing rights for commons are generally in favour of involvement in agri-environment schemes, but they seek flexible schemes that can be site specific and adaptable depending on changing conditions. For commons, this means allowing farmers and graziers to design their own grazing prescriptions for the benefit of the common and to best mitigate any costs occurred, such as fencing, off-wintering and reduced labour. This must be taken into consideration as the UK looks towards its future outside the EU and develops its own schemes to support marginal areas. One concern that must be addressed is the protection of legal rights when agri-environment schemes or land designations are agreed.

FARMERS WITH GRAZING RIGHTS FOR COMMONS ARE GENERALLY IN FAVOUR OF INVOLVEMENT IN AGRICULTURE ENVIRONMENT SCHEMES, BUT THEY SEEK FLEXIBLE SCHEMES THAT CAN BE SITE SPECIFIC AND ADAPTABLE DEPENDING ON CHANGING CONDITIONS.

The future of the commons is a concern for many. As with other sectors of upland farming, there is a reducing pool of knowledge and skills as farmers cease farming and young people move out of the industry in search of better wages. Successful farming in these areas requires knowledge of the specific common, as no two are the same and there is a long tradition of commoners working together and being mutually dependent on each other's stock management practices. These barriers for new entrants could be overcome through learning opportunities with current graziers.

Crofting is a traditional practice found in the Scottish Highlands and Islands where a tenant crofter is responsible for ensuring their area of land remains productive. There are around 18,000 crofts in total (approximately 25% of the land in the Highlands and Islands) supporting up to 12,000 crofting households and around 33,000 individuals. In Scottish parishes dominated by crofting land use, up to 80% of the farmed land can be common land so many of the issues are similar to those facing commons elsewhere in the UK. Crofting has a strong cultural identity in parts of Scotland, and this should be of benefit for recently developed schemes to encourage young people to learn traditional skills and safe-guard their culture and history. However, most crofters are now part-time, subsidising their croft from other employment, and crofting is potentially very vulnerable to a reduction in direct or agri-environment payments and must not be forgotten in Brexit discussions.

Jeff Gwillim, who farms at Talgarth, Brecon, says the common land his sheep graze has seen the effects of both overgrazing and under-grazing over recent times. He comments: "We experienced overgrazing when we had the headage payment scheme, which meant many plant species did not have chance to grow. Now we are seeing the opposite effect, as minimum sheep are required to claim payments and bracken is encroaching on land previously suitable for grazing. Appropriate stocking levels are needed to keep everything growing as it should and best manage the land." Mr Gwillim also highlights the cultural significance of farmers working together in the unique practice of commoning. He says: "Our hill is so big that if we don't work together we can't get the sheep gathered. We also work together to help tackle diseases like sheep scab effectively. With less people turning sheep onto the common, the remaining shepherds have difficulty managing their sheep over such a large area. The sheep are spreading so far it is also leading to under-grazing on the less palatable areas of the hill, as sheep can be more selective."



DID YOU KNOW?

THERE ARE 1,166,781HA OF COMMON LAND IN THE UK – 372,941HA IN ENGLAND, 173,366HA IN WALES, 591,901HA IN SCOTLAND AND 28,573HA IN NORTHERN IRELAND. DARTMOOR FOREST IS THE LARGEST SINGLE PIECE OF REGISTERED COMMON LAND IN ENGLAND.

ASPIRATIONS FOR COMMON LAND & CROFTING

NSA believes upland and hill areas would benefit from support of traditional commons and crofting communities and the services they provide, allowing them to continue as a viable farming practise.



SHEEP MANAGEMENT SKILLS

THE SKILLS, KNOWLEDGE AND CULTURE OF SHEEP FARMING IN THE UPLANDS AND HILLS MUST NOT BE LOST TO THE NEXT GENERATION – BUT EXISTING FARMERS ALSO NEED TO BE UP-SKILLED AND TAKE ON NEW TECHNOLOGIES VITAL FOR IMPROVEMENT.

The uplands and hills require specific, specialist sheep management skills in order for stock to be cared for and businesses to operate successfully. If generations do not succeed their parents, or new entrants are not given the opportunity to learn directly from the previous generation, the skills, knowledge and culture which they have learned will be lost, locally and for the industry.

There is also an important need for existing farmers in the sheep industry to be up-skilled and take on new technologies vital for improvement. There is no shortage of knowledge exchange provision in the industry, but there are arguably improvements that could be made in targeting and engaging producers with this information. For example, the realised returns of genetic improvement technology in the UK sheep industry are substantially below their potential, despite the fact they currently bring an annual £10.7 million benefit to the farmers making use of it.

There are numerous existing knowledge exchange schemes, including those provided by UK levy bodies and/or funded by the Government – and the Government has recently described its vision for the UK to become a world leader in agricultural technology, innovation and sustainability. It recognises the UK agricultural sector already has a strong set of skilled workers, world class retailers and is a traditional leader in agricultural sciences, but the current regulatory regime and skills gap is hindering the development and use of new technologies and innovation. The Government pledged to spend £90 million over the five years from 2013 to update the skills of those currently in the sector and attract new entrants, and while it is expected this funding is safe through to 2018, the longer-term future for this type of support is unclear with the UK potentially not having the same funding opportunities outside the EU.

Of equal importance is research to ensure new technologies and skills are always being developed for the agricultural sector to take up and use in order to move forward. European funding has been an important catalyst for some of this research in the past and the UK must not be allowed to fall behind the rest of the world as it designs and determines its future outside of Europe.

NSA members Helen and Roy Radmore are part of the Dartmoor Hill Farm Project, set up in 2003 to provide training and skills for farmers in the Dartmoor National Park. Topics for training courses are suggested by the farmers involved, so are as relevant as possible, and training is aimed at all family members to recognise the different roles they play in sustaining the family business. Helen says: "It has helped the whole family attain new skills and get formal training. We really value it as it usually fits in with the farming calendar and stays relevant to the needs of upland farming and our community. My son has particularly enjoyed several meetings and brought new ideas back to the farm." Projects have included social media, business planning, animal health studies, farmer-led training of government agency workers and study trips to Switzerland. It has also linked with the Forest of Dartmoor Fire Plan to provide training and equipment for 29 commoners to respond quickly to wild fires. Helen adds: "The fire training has given commoners the confidence to manage the common better, reduced the risk of wild fire and has given us a plan of action if there is a problem."



OPPORTUNITIES FOR NEW ENTRANTS

It is estimated that for a sustainable future agriculture must attract 60,000 new entrants over the next decade – and sheep farming can often be a great first step towards a larger, more diverse enterprise as it traditionally carries lower capital and investment costs and less need for a permanent base.

There are evident successes and opportunities in the sheep industry by attracting and maintaining new entrants and, although starting from a low base, there does appear to be an increase in the number of young people attending agricultural events, industry activities and sheep-related courses at agricultural colleges and universities. It is good news for the industry if this means the new blood coming through is knowledgeable and skilled, but these people must continue to be inspired and provided with the tools for best practice. This is where the biggest gains can be made, as young people tend to be more open to the use of new technologies and are more likely to adapt to future needs and drive the industry forward. In order to compete in a volatile market, they must have an entrepreneurial outlook and seek to add value through greater efficiencies by cutting costs and increasing outputs.

The NSA Next Generation initiative is not alone in its work to support young and new entrants to the industry. Other UK-wide projects include work by Fresh Start and the Prince's Countryside Fund, and operate alongside national projects such as Venture from the Welsh Government and a Scottish Forestry pilot for new entrants, plus local projects including ones by the Farmer Network in Cumbria and the Yorkshire Dales.

Under the most recent CAP reform all member states are required to have a scheme to support new entrants. The uptake of schemes in the four UK nations has been variable, depending on how prescriptive they are, but the concept of having this support is essential for the long-term sustainability of the industry and must not be neglected in future discussions for a UK support system outside of the UK.

Activities allied to sheep farming also need to attract new entrants. These include veterinary, research, trade and supply companies, food science and environmental fields. Otherwise sheep farmers will not have access to the services and advice they need, or will incur increased costs by having to source them from further afield.

ALTHOUGH STARTING FROM A LOW BASE, THERE DOES APPEAR TO BE AN INCREASE IN THE NUMBER OF YOUNG PEOPLE ATTENDING AGRICULTURAL EVENTS, INDUSTRY ACTIVITIES AND SHEEP-RELATED COURSES AT AGRICULTURAL COLLEGES AND UNIVERSITIES.

ASPIRATIONS FOR NEW ENTRANTS

- NSA believes upland and hill areas would benefit from:-
- Support and encouragement of future generations entering upland livestock farming with a holistic focus on productivity and provision of public goods.
 - Support for existing and older farmers to step back with dignity.

NSA Next Generation supports the future of the sheep sector by encouraging participation by young people through training, competitions and events. Activity also includes a yearly intake of up to 12 NSA Next Generation Ambassadors. Phil Stocker, NSA Chief Executive, explains: "These individuals are selected for their passion for the future of the sheep industry and undertake several training sessions and seminars over the course of the scheme, to provide them with the ideas and tools for a prosperous business. The rigorous selection process ensures an even spread from across the UK, which also helps sustain the future of NSA's vital work at a regional level, encouraging future office holders and volunteers. Themes of the sessions

range from performance recording and grassland management to financial skills and media training."



ASPIRATIONS ON SHEEP MANAGEMENT SKILLS

NSA believes upland and hill areas would benefit from identification of skills gaps in the industry and a joint approach to up-skilling the current workforce for optimal production and utilisation of new technologies.

CONCLUSIONS AND REFERENCES

ECONOMIC OUTPUTS

A stable, sustainable sheep industry is essential to supply domestic, export and developing markets with nutritious and enjoyable food for a growing world population that is expanding in ethnic diversity and wealth. Sheep meat will be the primary economic driver for the industry for the foreseeable future, with breeding stock and store lamb production being a key part of this. Decision makers and the public should be better informed on the importance of red meat, in particular sheep meat products, as part of a balanced diet with responsible credentials. The support of large retailers to improve public awareness is of great importance, but also to promote products that support the traditional hill system. Adding value through wool and other sheep related products is crucial and retailers and textile manufacturers could develop the British wool industry to driver better prices for fleeces. The traditional stratified sheep industry, unique to Britain, is an economical, practical and environmentally sensible way of sheep farming, making the most of the different characteristics of breeds and environments. However, the stratified sector must rise to the challenges presented, particularly in relation to disease control and information sharing. The loss of breed traits of hill pure breeds and upland Mules would change the entire face of the sheep industry and it is highly desirable to create and maintain a wide range bank of genetic material. It is vital the hill and upland sheep sector, producing sustainable meat and wool, is additionally supported and financially rewarded for the public goods and services it provides.

ENVIRONMENTAL LINKS AND OUTPUTS

The unique environment created by hundreds of years of upland farming provides a valuable source of quality water, carbon sequestration and biodiversity. The uplands provide an environment of minimal input use and pollution, giving clean, fresh water much further downstream and combating carbon dioxide emissions by transforming the gases into valuable stores of carbon. Rough vegetation and areas of woodland are excellent forms of flood mitigation and create habitats for the many species that share the environment with grazing livestock. Farmers are important managers of their environment and must be encouraged to maintain the mosaic habitats of heather and shrubs, by the removal of bracken through grazing and other forms of management. Appropriate stocking rates are essential to environmental outputs and schemes must be flexible and site-specific in order to avoid the detrimental effects of both over and under-grazing. It is important the traditional practices and environmental management undertaken by farmers are not undermined by a desire of other interest groups to rewild the landscape, reducing our farming capital and making the countryside inhabitable to more fragile plant and animal species, and less accessible to visitors.

SOCIETAL LINKS AND OUTCOMES

Upland communities, of which farmers are a central part, provide a wealth of social and health benefits for residents and tourists alike. Many people working in urban areas look to the great outdoors for recreational activities and to boost their mental and physical health, with proven results. They also provide a wealth of history and culture, with many traditional practices, buildings and ways of life maintained by the local people. Farmers pride themselves on their work and achievements, which often span generations, and the strong sense of place which their ancestral heritage provides them. Attracting visitors to the area boosts the local economy and allows for farmers to diversify into travel and tourism, increasing their incomes from the otherwise poor returns from farming. The opportunity for succession and entrepreneurship encourages young people to stay or move into the industry, and this must be encouraged by providing both existing farmers and the next generation with skills and inspiration to drive the sector forward.

This booklet is a summary of the NSA's full *Complementary role of sheep in upland and hill areas report*. Go to www.nationalsheep.org.uk/policy-work for the full version, which includes all the references for statistics and comments made on these pages.

SUMMARY OF ASPIRATIONS

- Improved resources for marketing of upland lamb and other sheep products.
- Mitigation against market volatility.
- Promotion of the health benefits of predominantly grass-fed red meat to a wider audience.
- Sustainable prices for producers and consumers.
- Recognition of the value of upland and marginal sheep genetics to the UK gene pool and its wider sheep systems.
- The development of practical health assurance schemes and increased sharing of information by sellers to give confidence to buyers of breeding stock and store lambs.
- Encouragement of retailers and consumers to consider the unique benefits of British wool in an attempt to get better and fairer prices for sheep farmers.
- Encouragement of retailers to embrace heritage breeds as new and diverse products, resulting in more mainstream interests in these niche markets.
- A farm support and reward system, developed post-Brexit, which caters for all agricultural sectors but specifically increases the financial recognition of provision of a broad range of public goods.
- Payment (via public and private means) for eco-system services based on reward and deliverables, and not income foregone.
- Deeper understanding of the role sheep and the uplands play in prevention and mitigation of flooding and the supply of vital clean water to many urban communities.
- Trees and valuable areas of scrub within grazing areas no longer being classed as permanent ineligible features (PIF) under the Basic Payment Scheme or its post-Brexit successor.
- Resolution of contradictions between the Basic Payment Scheme and agri-environment schemes, and steps taken to ensure no such contradictions exist in post-Brexit schemes.
- Recognition of the extreme importance of the uplands as carbon sinks, in particular peat soils, and the role that farmers play in protecting them.
- Recognition of the environmental and social benefits of grazing and farming to reducing risks of wildfires.
- Encouragement of farmers to control bracken responsibly.
- Recognition of the value of sheep grazing to ecology and biodiversity.
- Site-specific grazing prescriptions and exploration of outcomes approaches, as there is no such thing as an optimal grazing level for all habitats and different seasons/weather require flexibility.
- Easing of licences for control of problematic protected species, such as badgers, ravens and sea eagles, to a level that keeps farming and wildlife in balance.
- Recognition that the UK has very little truly wild landscape, instead the landscape, wildlife and ecology seen today is a result of thousands of years of farming.
- Proportionate easing of planning regulations, particularly in National Parks, to encourage and allow investment and appropriate energy-generation projects.
- Improved broadband access and mobile phone coverage, to allow resource access and facilitate diversification.
- Recognition of the multiplier effect and how farm enterprises support many other local business and services.
- Maintenance and investment into local infrastructure that supports hill farming families and others, such as schools, banks, roads and medical facilities.
- Recognition of the historical value, culture and heritage that upland communities provide, and the strong sense of belonging farmers place on their ancestral links to their farm or local area.
- Support for traditional commons and crofting communities and the goods and services they provide, allowing them to continue as a viable farming practice.
- Identification of skills gaps in the industry and a joint approach to up-skilling the current workforce for optimal production and utilisation of new technologies.
- Support and encouragement of future generations entering upland livestock farming with a holistic focus on productivity and provision of public goods.
- Support for existing and older farmers to step back with dignity.





The National Sheep Association

The Sheep Centre | Malvern | Worcestershire | WR13 6PH

Tel: 01684 892 661

enquiries@nationalsheep.org.uk

www.nationalsheep.org.uk