

BRITISH LIVESTOCK AND CLIMATE CHANGE

Beyond meat and methane



JOINT STATEMENT BY THE PRESIDENTS OF THE UK FARMING UNIONS

Agriculture has a unique role to play in implementing the historic 2015 Paris Agreement on climate change. Our industry supplies food, stores carbon and generates renewable energy, but farming is also on the frontline of climate change impacts, being particularly vulnerable to extreme weather events. However, British agriculture can address the challenge of producing for the future as well as tackling climate change.

Our declaration prior to the Paris Summit included key asks on advancing improvements in farm productivity and efficiency in order to enhance agriculture's resilience and reduce its greenhouse gas footprint and to ensure that carbon accounting systems 'credit' the added mitigation benefits that agriculture can deliver, through carbon storage and renewable energy export.

This booklet of 23 case studies published ahead of the COP 23 climate talks under the Presidency of Fiji showcases our strong dynamic livestock industry delivering on this potential. Our members have embraced a diversity of practices at different scales to meet the needs of their business and the country. And we are confident that we can do even more in the years to come...



Mervyn Raymond Stephen James A. McNeill John Stanger



Farming's role in the UK economy has always been diverse: food, fibre, environmental stewardship and energy production, meeting both local and national needs. Modern, forward-looking livestock farmers are providing food alongside many other services whilst meeting market demands, to build businesses that are environmentally sustainable, economically viable, and socially and personally rewarding.

Improvements in productivity, whether through better genetics, nutrition or animal health, have been key to reducing the greenhouse gas (GHG) footprint of the sector whilst unlocking core business benefits. The carbon stored in grasslands, diversification into low-carbon renewable energy services of many kinds, and even wool used for insulation, all make a contribution to reducing our national greenhouse gas emissions.

However, agriculture is also on the front line of climate impacts. Some of the farmers featured in this booklet share their experiences of coping with increased flooding and the appearance of new diseases as the climate has warmed. We are

moving into uncharted climatic territory.

The diversity of ruminant livestock systems across the UK offers society a range of additional benefits, which risk being lost in polarised debates on climate change and diet. These include the ability to turn grass and other by-products into food we can eat, the maintenance of some of the most iconic landscapes and habitats, and the useful role of livestock in supporting other farm processes. Livestock also provide entry-level access into farming for the next generation.

We do not seek to underplay the challenges we already face or the tests that lie ahead for food production across the world. This booklet simply serves to celebrate a little of what we have already achieved. Livestock farming has a long history in the UK – sheep have been resident here since Roman times – and we believe it has a long future ahead of it. The combination of indigenous knowledge, enterprise, data and new technology has the potential to transform our sector for the benefit of all.



**NAME:**

Charles Sercombe

REGION:

England – East Midlands

BUSINESS:

Sheep

“Connectivity is vital to allow the benefits of livestock traceability and 2-way data flow along the supply chain to be felt by every farm business. Without superfast broadband and mobile coverage the UK risks leaving many farmers behind”

WHAT:

Utilising technology like EID (Electronic Identification) readers to rigorously record and trace information from individual animals

Genetic improvement through dedicated breeding has reduced time taken to fatten lambs by up to 30 days

Introducing new genetics to improve the flock. With extensive use of performance recording this allows a focus on traits such as fertility, mothering ability and high growth rates

Regularly monitors and tests health status of breeding stock and blood profiles to ensure trace elements allow for the most efficient production

WHY/ BENEFITS:

Reducing time to finish improves the GHG emissions profile of the enterprise

Data collection allows precise application of feed rations and inputs, reducing wastage

Streamlined data collection allows improved benchmarking for both physical and financial information

Reputational benefits to the business

AND:

Sells high quality breeding stock into many markets and has numerous successes in the show ring

**NAME:**

Harri Parri

REGION:

Wales

BUSINESS:

Stabiliser beef cattle and sheep



"We expect our livestock to be at peak performance when conditions are right but also perform robustly when circumstances are challenging "

WHAT:

The business revolves around low maintenance, robust and functional cows and ewes. Days to slaughter are minimised and carcasses hit correct specifications

Embryos have been purchased from some of the best bloodlines. Harri's family breeds and performance records the cattle to create Estimated Breeding Values (EBVs). EBVs provide a measure of the breeding potential of an animal for specific traits. The early lambing flock is based on high index rams. Appropriate culling policy adopted

The family also sends potential breeding bulls to a Net Feed Efficiency unit to be measured for this trait. Grows arable and root crops in rotation with grassland

Bull beef system fed on home-grown barley

55 kilowatt wind turbine

WHY/ BENEFITS:

A diverse, productive and profitable business well matched to the land they farm and sustainable for future generations. Tight calving and lambing patterns will lower the business' GHG footprint

Embryo transfer is being used to progress herd genetic gain. Culling policy aims to maintain the health of the entire herd and flock

Measuring Net Feed Efficiency will identify cattle that eat less feed but perform just as well, therefore improving profitability, using fewer resources and lowering the GHG footprint. Home-grown crops minimise bought-in feed and straw, and create a range of habitats for wildlife

Good management makes the most of daily liveweight gain and efficient feed conversion of bull beef to lower GHG intensity of the finished product

The turbine generates electricity for the farm buildings, workshop, grain store and a poultry shed for the new free-range egg business



WHY/ BENEFITS:

Developed a composite flock with reduced labour requirement and high output

Technology and information have improved efficiency and productivity, thereby lowering GHG intensity

Sward management has increased the utilisation of grass grown

Clean energy from home-grown biomass and additional carbon stored on farm through hedgerow and tree planting and management further reduces GHG footprint

NAME:

John Martin

REGION:

Northern Ireland

BUSINESS:

Sheep

“We have been working with research partners for a number of years now to improve the quality of our sheep flock and this is a continuously evolving piece of work. When farming in the 21st century it is important not to stand still”

WHAT:

Focus on genetics, animal health and welfare and feed efficiency with crossbreeding a top priority

Grass sward measurement and rotational grazing

Uses a recording scheme to identify his best performing ewes for fertility, high growth rates and no lambing problems, and monitors individual growth rates of lambs

Short rotation coppice willow produces woodchip for farm biomass boiler

AND:

John is involved in the easy-care management research programme through the Agri-Food and Biosciences Institute in Northern Ireland

The farm is a member of an environmental scheme with an emphasis on improving field boundaries through hedge laying and new planting. Woodland and wild bird cover have also been established in recent years



NAME: Beef Efficiency Scheme

REGION: Scotland

BUSINESS: Approximately 1,500 Scottish farms and a quarter of the Scottish suckler herd

WHAT:

The Beef Efficiency Scheme aims to improve efficiency and the quality of the Scottish beef suckler herd. Suckler cows are beef cows that rear their own calf for beef or as breeding replacements

Producers are paid per animal to collect and enter 'whole life' data. Additional recording requirements includes calving ease and calf size

Participating farmers undertake a carbon audit, update this audit as the scheme progresses and produce a management plan to tackle their GHG emissions

WHY/ BENEFITS:

Improved management practices are expected through better data recording and management

Farmers are given the flexibility to make farm-specific choices

Research has demonstrated that farms with a lower GHG footprint are often the most efficient and profitable

FUTURE CHALLENGES:

Ensuring that positive progress continues after the lifetime of the current scheme will be challenging. The reputation of the Beef Efficiency Scheme would be enhanced by improved communication between scheme management and participating farmers



The UK is the third largest producer of beef in Europe





NAME:

Rachel Hallos

REGION:

England – North East

BUSINESS:

Salers cows and Scottish Blackface sheep

“When we established our suckler herd in 2000 we decided that if we were going to do it, we’re going to do it right”

Sheep and cattle have shaped some of our most iconic upland landscapes and continue to maintain them



WHAT:

Achieved high health herd: free from Bovine Virus Diarrhoea (BVD) and accredited for Johne’s disease management

Takes a proactive approach to managing disease for example through blood testing

Only purchases new stock from other high health herds

Learnt together with her vet from the Orkney Isles experience on going BVD-free

AND:

Significant area of the farm is part of a heather regeneration project

WHY/ BENEFITS:

Greater productivity resulting from improved animal health lowering GHG emissions

Cattle remotely graze on the hills from May to September so good health is paramount

Good pasture management maintains the carbon stored in the soil

Reputational benefits through good management adds value to the business

Manages traditional hay meadows in partnership with the RSPB



NAME:

Harriet Henrick

REGION:

England – South East

BUSINESS:

Dexter cattle and Wiltshire
horn sheep

"Having had the experience with Bluetongue in the past I worry about warmer temperatures meaning the arrival of new pests and diseases from Europe because the farm is close to the coast."

WHAT:

Rigorous approach to animal health. Quarantines and health-checks every new animal before it is introduced to the herd. Vaccinates for Bluetongue



Positive relationship with vet leading to proactive health plan

Converting an unmanaged stand of lime trees into a woodland pasture

WHY/ BENEFITS:

Vaccination against new diseases appearing as a result of climate change

Maximising animal health improves productivity and delivers resilience

Managing hedges and woodland to benefit the herd, landscape and carbon storage

AND:

The farm is right in the centre of the village and the 'farm shop' opens every Saturday morning for villagers. Also supplies a gourmet burger restaurant in London

An additional 8 hectares of old woodland nursery



BRITISH LIVESTOCK AND CLIMATE CHANGE



NAME:

Dave Knight

REGION:

England – South West

BUSINESS:

Beef and sheep



WHAT:

Has focused on improving grassland and sheep management supported by detailed analysis of sheep performance data

Grazes a mixture of permanent pasture and moorland using locally adapted breeds

Chairman of the Exmoor Hill Farming Network



WHY/ BENEFITS:

Additional data analysis and expert advice identified opportunities to improve Dave's system, which led to a robust blood testing and vaccination programme

Significant uplift in ewe health and vitality leading to greater productivity

As chairman of the Exmoor Network, Dave is encouraging farmers to help and learn from each other to improve farm incomes, profitability and sustainable land management

AND:

The mix of cattle and sheep grazing contributes to the varied habitat supporting the biodiversity of Exmoor. In addition, the cliffs and moorlands on which Dave farms are Sites of Special Scientific Interest

Helps maintain the socio-economic fabric of the uplands by contributing to local employment

Maintains the landscape and heritage of Exmoor for the public alongside providing other societal benefits



NAME:

Kate Beavan

REGION:

Wales

BUSINESS:

Beef and sheep

WHAT:

Cutting edge approach to animal health. Regular faecal egg counts and testing for liver fluke ensure optimal treatment

Grows own animal feed and trialling the growing of beans for protein

Re-instating orchards on the farm and managing existing woodland

WHY/ BENEFITS:

Animal health analysis allows for precise treatments and helps prevent the development of resistance in parasites

Targeted approach reduces inputs and leads to improvements in productivity

A source of home-grown protein will enable the business to become fully self-sufficient as it is currently bought in

Additional diversification into orchards will add resilience to the business and the carbon stored in orchard trees will further reduce its GHG footprint

AND:

Kate lectures on animal health and welfare and with her family runs Kate's Country School which has courses on rural skills and animal husbandry

The business currently supports three generations of the family including a family-owned butcher in the nearby town

The farm is in an environmental scheme and is a Farming Connect demonstration farm investigating the viability of small farm shelter belts

Has diversified into cider making





NAME:

Andrew Laughton

REGION:

England – East Midlands

BUSINESS:

Beef finisher

"This is a great business and one that is changing and developing daily. I love welcoming people to the farm, showing them how we look after and care for the cattle, and constantly looking at new ways to harness changing technology to make the job easier and more cost-efficient."



WHAT:

Beef animals fed custom-made diets to make use of a variety of food supply chain by-products like bread crusts and dough, vegetables and co-products such as distillers grains

Accurate recording of weight gain on every animal

Employs specialist, trained staff who check the animals daily

WHY/ BENEFITS:

Focus on efficiency and productivity has lowered costs leading to strong business performance

Provides quality feed and assigns a value to products otherwise destined for landfill

With by-products formulating a large part of the diet, this will contribute to reducing the GHG footprint of the food supply chain

Final product meets market specification, reducing waste

High standard of animal health and welfare

AND:

A member of the AHDB (Beef and Lamb) Beef Key Performance Indicator project



NAME:

Mark Jelley

REGION:

England – East Midlands

BUSINESS:

Beef



WHAT:

Straw and cattle manure exchanged between arable and beef enterprises

Farm-grown crops which do not reach the quality specifications for human consumption are fed to the cattle. The straw produced from the crops is used as bedding

Livestock manure collected whilst the cattle are housed is recycled on to the cropped area

WHY/ BENEFITS:

Such an integrated system recycles nutrients, reduces waste and spreads cost across the different enterprises and improves efficiency

The spreading of manure on to the arable land has improved organic matter, reduced the need for external inputs, and created a better and more resilient soil structure for future productive cropping

AND:

Mark sits on the 'Control of Worms Sustainably' project steering group and has recently joined the Veterinary Products Committee

He is also part of a project testing the potential for the 'internet of things' to deliver commercial benefits for beef producers



BRITISH LIVESTOCK AND CLIMATE CHANGE



NAME:

Robert Brunt

REGION:

England – North West

BUSINESS:

Beef and sheep (and dairy)



WHAT:

Integrated beef and dairy operations

When bought-in feeds are required, the majority are by-products from the food and drink supply chains

Other GHG mitigation measures include scanning and vaccinating livestock, and efficiently utilising manure and slurry generated

Has 10 kilowatts of roof-mounted solar PV which generates 10% of farm's electricity demand

WHY/ BENEFITS:

Integrating livestock enterprises reduces the GHG footprint across the entire farm business

Improved nutrient management has halved the amount of inorganic fertiliser applied

Multiple investments on the farm have improved productivity and the efficiency of nutrient and energy use

AND:

Energy and water use efficiency measures used in the dairy operation

Supported the 'Show The Love' green heart climate change campaign

Over the past 20 years Robert's family have rebuilt about 800 metres of stone walls and repaired traditional farm buildings

Low input management under environmental schemes has encouraged a diversity of plant species and wildlife



"I believe I have an important role in helping manage and look after our beautiful landscape and countryside"



NAME:

Harry Gorse

REGION:

England – North West

BUSINESS:

Sheep



WHAT:

A clear focus on the wool produced from his flock

A forage-based system focussed on easy lambing traits to ensure the highest number of lambs per head of breeding stock



WHY/ BENEFITS:

Harry aims to ensure that the wool he produces meets the highest quality possible

The wool is collected, graded, promoted and sold through British Wool

A natural alternative to synthetic fibres, wool's many properties enable its use in clothing, carpets and insulation

ABOUT WOOL AND SHEEP:

Wool is hygroscopic so it absorbs and releases water vapour. This makes it extremely breathable. The heat generated and retained during the absorption phase means wool is also a natural insulator

The UK produces more sheep than any other country in Europe and is the fifth largest producer in the world. Sheep have been resident here since Roman times

BRITISH LIVESTOCK AND CLIMATE CHANGE



NAME:

Steve Conisbee

REGION:

England – South East

BUSINESS:

Beef and sheep



WHAT:

Short supply chain, supplying family butcher's shop, selling direct to the local community

Cattle fed on home-produced grass, silage, hay and barley

83 kilowatt roof-mounted solar PV

Uses digestate from a local anaerobic digester plant and compost from the nearby green waste recycling centre. Woodchip from the local council recycling centre is used for livestock bedding

WHY/ BENEFITS:

Ability to utilise the whole carcass, minimising food waste thereby reducing the supply chain's GHGs

Product travels short distances from farm to fork and exactly meets market specifications

Clean electricity generated partly meets the farm's energy requirements

Use of locally available recycled materials returns organic matter and nutrients to the cropped area on the farm



"All the meat is locally sourced from our family farm and other local farms where we personally know the farmers and their love and care for their animals"

AND:

Works in conjunction with the oldest family butchers in Surrey which has been in business for over two hundred and fifty years

Rainwater collected from sheds and roofs, making large efficiency savings on water



NAME:

Simon Bainbridge

REGION:

England – North East

BUSINESS:

Organic beef and sheep

WHAT:

Grows all own feed on the farm including: a mixture of leys, protein wholecrop (vetch, barley, oats and peas), high sugar grasses and clover

Brassicas such as rape and kale are grown to finish the lambs. Oats provide extra energy for the finishing lambs and organic straw for the cows

Runs a comprehensive vaccination programme

WHY/ BENEFITS:

Protein crops fix nitrogen improving soil nutrient levels while reducing the business' exposure to feed price volatility

High sugar grasses are a key GHG mitigation measure

Vaccination proactively protects the herd's health as well as improving productivity and resilience

The integrated system delivers multiple benefits



AND:

Over 8 hectares of floristically enhanced field margins to improve biodiversity. Red squirrels are also found on the farm

Planted over 6,000 metres of hedges and continuing to plant more hedges and trees

The lake on the farm was designed and landscaped by Lancelot 'Capability' Brown in around 1770 and now stocks rainbow trout



BRITISH LIVESTOCK AND CLIMATE CHANGE



NAME:

Will Dracup

REGION:

England – South West

BUSINESS:

Beef and sheep



"I feel that the education farm has so much to offer in demonstrating where food originates from and how it is produced, and I look forward to sharing my knowledge and enthusiasm with the visiting groups"

WHAT:

A mixture of upland permanent pastures, species rich (purple moor-grass and rush) rhos pastures and high sugar ryegrass leys, in conjunction with root crops feed the livestock

A rotational grazing system operates across the farm

Regular weighing to monitor growth rates and manage livestock performance

50 kilowatt roof-mounted solar PV and a 50 kilowatt log biomass boiler fuelled from the farm's own wood supplies

WHY/ BENEFITS:

In a rotational grazing system, stock is moved frequently across the permanent and ley pastures. This ensures that the available land resource is utilised as efficiently as possible, maximising the productivity of the entire farm business

Managed livestock can improve the environmental condition of the rhos pasture, while utilising the forage effectively.

Recording information allows immediate management gains and more informed decision making

Renewable energy provides heating, hot water and electricity to the business and domestic properties, with surplus electricity exported to the grid

AND:

Works in partnership with a neighbouring education farm which supports additional local employment and provides urban children with the opportunity to understand food production and experience the countryside

Supports three generations living and working on the farm



NAME:

Martin Howard

REGION:

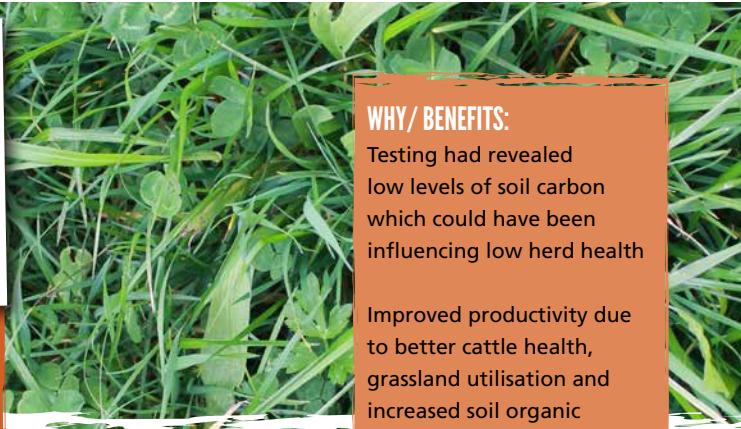
England – South West

BUSINESS:

Organic beef



“Although my farming system is organic, I think of myself as more of a soil biology farmer”



WHAT:

Building soil health by focusing on soil biology

Grass tissue sampling and specific minerals added to soil if required

Increasing use of legume herbal leys, planting deep-rooted species like chicory, plantain, red clover and meadow fescue

Beginning to use minimum and no-tillage to establish grassland

WHY/ BENEFITS:

Testing had revealed low levels of soil carbon which could have been influencing low herd health

Improved productivity due to better cattle health, grassland utilisation and increased soil organic matter so reducing GHG footprint

Cattle now finished quickly off grass, reducing fixed and variable costs

Minimum tillage lowers cost and reduces soil disturbance which could lead to lower soil carbon loss

Additional carbon storage in woodland and orchard trees further reducing the GHG footprint of the entire farm business

AND:

Planted trees and orchards under environmental schemes

Member of a farmer discussion group which involves researchers encouraging best practice

Sells his beef direct to local butcher and abattoir

BRITISH LIVESTOCK AND CLIMATE CHANGE



NAME:

Minette Batters

REGION:

England – South West

BUSINESS:

Beef and sheep

WHAT:

An integrated and diverse land management strategy – converting arable land to grassland, re-introduction of grazing livestock, rigorous soil testing regime and retention of small arable rotation

Water meadow provides important grazing on the farm

Continuous measurement and monitoring of animal health alongside use of Estimated Breeding Values (EBVs). EBVs provide a measure of the breeding potential of an animal for specific traits

Feeds brewers grains, a by-product, from local brewer

WHY/ BENEFITS:

Rotating crops (spring barley and turnips) and grass/clover mix, coupled with grazing livestock have transformed soil health. Soil testing has enabled informed decision-making to optimise productivity and maximise the use of on-farm resources

More frequent flooding of the water meadow has led to an increase in liver fluke, adding cost to the business

Better animal health and introduction of the best genetics through EBVs have resulted in a more resilient and productive herd, lowering the GHG footprint of the business

Using by-products supplements home-grown feed and will reduce GHG emissions from the entire supply chain

Minette's training as a chef has led to her keen focus on meeting customer demands

AND:

The grazed water meadow is also a home for wading birds, but continual summer flooding and increased predation has had a negative effect on them. Minette is also working to re-introduce lapwings on to the farm

Horse livery, a wedding and corporate events venue, and a small catering business based on the farm provide additional local employment

"I aim to be as good as I can be so I leave the farm business and the land in a better state for the next generation"



NAME:

Paul Williams

REGION:

Wales

BUSINESS:

Beef and sheep



"As farmers we play a key role in protecting local communities, which thankfully haven't flooded since, but we are flooding quicker and more often"

WHAT:

Part of a flood alleviation scheme, where floodwater is temporarily stored on farmland to protect local communities

Recurrent flooding has led to Paul having to move stock and debris and re-seed more often

Regular recording and weighing of sheep and use of sexed semen for beef have played an integral role in the improved breeding policy

Significant investment in new housing and slurry storage

WHY/ BENEFITS:

Local communities protected. However the cost of the greater frequency of flooding and the loss of many sheep during the floods of 2015 could no longer be borne by the farm business so some of the land is no longer grazed during the winter months

New genetics in the sheep flock has led to animals better meeting market specifications but still retaining local breed characteristics

New housing has reduced labour requirements and together with improved slurry storage has also improved productivity reducing the business' GHG footprint

CHALLENGES:

The initial one-off payment to farmers for the flood alleviation scheme has proved insufficient to cover costs of more frequent flooding as the climate changes

The loss of grazing has had an additional impact on Paul's business as this was his best land



BRITISH LIVESTOCK AND CLIMATE CHANGE



NAME:

Crosby Cleland

REGION:

Northern Ireland

BUSINESS:

Lleyn and Highlander
cross ewes

WHAT:

Agroforestry with sheep
grazing under ash and
sycamore trees

Enhanced hedgerow
management

Ram selection criteria focused
on maternal ability, ease of
lambing and growth rate

High standard of flock and
grassland management and
meticulous record keeping

WHY/ BENEFITS:

Trees and hedgerows
represent a carbon
store on the farm. The
former have also helped
optimise grazing leading
to improvements in
productivity

Focus on efficiency has
reduced GHG intensity
with less GHGs produced
per kilogram of meat

Records assist with
management and selection
of the best stock to
keep for breeding and
production of farm quality
assured lamb



"If you don't measure it
you can't manage it"

AND:

Over the last 30 years, participation in environmental
schemes has focused on enhancing the many
hedgerows and hedgerow trees which act as
shelterbelts for sheep and provide wildlife habitats

Has worked alongside the Agri-Food and Biosciences
Institute in Northern Ireland on a number of trials
aimed at easing the workload on Northern Irish
sheep farms





NAME:

Hefin Jones

REGION:

Wales

BUSINESS:

Limousin cattle and Welsh Mountain sheep



"Farmers have been improving their systems for decades; we can always improve and look to the future"



WHAT:

Restored 2,500 metres of hedgerows and planted 6,500 trees through environmental schemes

Lambs finished on grass, and root crops grown on the farm provide winter feed for the livestock

WHY/ BENEFITS:

Hedgerows and trees store carbon so contribute to lowering the farm business' GHG footprint

Root crops avoid purchased feed so reducing costs

Combines high quality productive farming with action to improve Wales' environment and landscape

AND:

Environmental schemes have enabled Hefin and his family to build 3,000 metres of dry stone walls, fence off 1,000 metres of streams and restore buildings for agricultural use

Both beef and sheep are used as a management tool to care for the environment and manage the sensitive habitats reliant on the actions of grazed livestock

BRITISH LIVESTOCK AND CLIMATE CHANGE



NAME:

Alex Higgs

REGION:

Wales

BUSINESS:

Beef and sheep



"Through green energy schemes, planting trees and high sugar grasses, farmers like ourselves are actively supporting the vision of becoming a low-carbon Wales"

WHAT:

5.5 kilowatt micro-hydroelectric scheme

Utilising latest developments in grass breeding by planting high sugar grasses in appropriate fields

Planted trees on marginal land and 5,000 metres of mixed species hedges as a result of environmental schemes

WHY/ BENEFITS:

Hydro scheme meets some of their electricity needs and provides power for five other homes. As a diversification measure, it also helps spread business risk

Using the abundant natural resource on their farm - water - to generate clean energy

Improving the productivity of their core farm business

High sugar grasses are a recognised GHG mitigation measure whilst clover reduces reliance on external inputs

Trees and hedges are a carbon store. Wood from hedgerow maintenance and coppicing is used locally

AND:

Trees have improved connectivity in the landscape for biodiversity; existing woodland managed by coppicing and managing livestock

Sensitive areas are managed by utilising different levels of grazing throughout the year

Alex also works in partnership with her parents and son on a mixed farm on the South Wales coast



NAME:

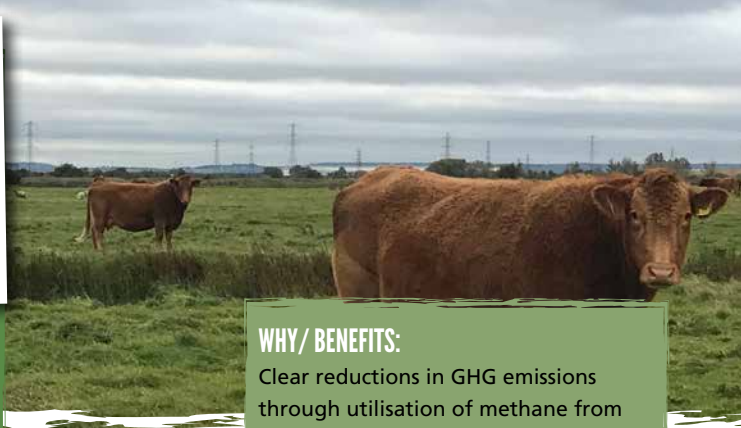
Tim Sell

REGION:

England – East Anglia

BUSINESS:

South Devon cows and sheep



WHY/ BENEFITS:

Clear reductions in GHG emissions through utilisation of methane from manures and slurries in the AD plant

Some of the electricity generated is used on the farm with the remainder exported to the grid

Utilises heat from the AD plant to dry the digestate, making it more efficient to transport and apply. The digestate is tested for its nutrient value before being spread back to the land saving on fertiliser costs and ensuring application of appropriate levels of nutrients

To develop and diversify farm business income streams

WHAT:

500 kilowatt anaerobic digestion (AD) plant

Cattle manure, maize silage and spoiled crop provide feedstock for the AD plant

AND:

Grazing large areas of marsh is integral to delivering biodiversity outcomes for both the RSPB and the Essex Wildlife Trust

The South Devons are a perfect fit for both the farm business and delivering wider societal benefits

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NAME:

Clive Sage

REGION:

England – South West

BUSINESS:

Poll Dorset sheep



WHAT:

4.8 megawatt solar farm with sheep grazing on 11 hectares

Considerable thought given to the grass seed used for re-seeding the area after construction, and to sheep-proofing the solar farm

WHY/ BENEFITS:

Farming income in West Dorset has been challenging so hosting a solar farm offered an opportunity for agricultural diversification into clean, green renewable energy

Clive looked for a solar farm developer that was willing to offer the business grazing rights for the operational lifetime of the project so the family can also continue producing lamb. The panels offer shade and shelter for the sheep

The solar farm generates over 4.5 million kilowatt-hour electricity units per year, enough to meet the annual needs of over 1100 homes

The ryegrass and clover mixture planted enables efficient lamb production whilst providing ground cover for the solar farm

AND:

Bird and owl boxes installed in surrounding trees

90% of their lamb is sold within a 40 mile radius of the farm



#COP23



November 2017

