

THE MAGAZINE FOR FARMERS & GROWERS IN WALES

FARMING connect

**Thoracic Ultrasound in dairy
calves to detect early pneumonia**

Our Farms Network

Find out more about our new
discussion group projects!



Ariennir gan
Lywodraeth Cymru
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For more information please visit the Farming Connect website.



For more details about any of the Our Farms projects, click the following link.



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OUR FARMS

> DISCUSSION GROUP PROJECTS - INTRODUCTION

> Farming Connects discussion group members have joined the Our Farms Network and are working collectively on five projects that are of particular interest to them and also to the wider agricultural sector in Wales. Here is an introduction to two of these projects.



Sheep

PROJECT 1

Could Iceberg diseases be hindering flock efficiency?

Thirty-five sheep farms, with the guidance from Flock Health Ltd, are investigating reasons for thin ewes within flocks, despite receiving adequate nutrition. Their aim is to investigate whether Iceberg diseases are playing a significant role or whether more common issues such as broken mouths/poor teeth and parasites are the cause.

Iceberg diseases are diseases which result in sick sheep or perhaps more frequently, subclinical disease, where the only visible signs are poor performance and ill-thrift. Animals showing signs may be the tip of the iceberg, as for every visibly infected animal, the flock will contain numerous non-visible animals or carriers of the disease.

Within the project, farmers will provide information on flock physical performance data for the year 2023 and the age structure of the flock. They will also undertake a 'thin ewe screen' where 12 ewes in the oldest age group will be screened for Maedi Visa, Ovine Johne's Disease, CLA (Caseous lymphadenitis) and pooled fluke Faecal Egg Count (FEC).

Project outcome:

- Participating sheep flocks - provide them with information on possible causes of ill-thrift on their farms. This should enable them to put measures in place to reduce the impact of the causes of ill thrift. This will result in better sheep health and welfare and improved productivity.
- For the national sheep flock – provide information on the possible causes of ill thrift in the national flock and particularly on any possible role of iceberg diseases.

PROJECT 2

Thoracic Ultrasound in dairy calves to detect early pneumonia

Bovine respiratory disease or pneumonia is the most common reason for death and poor performance in young cattle. To reduce the effect of pneumonia on their herds' performance, a group of eight dairy farms will be working with Daleside Vets to trial the use of Thoracic ultrasound scanning, which is a rapid, on-farm validated predictor of lung lesions in pre-weaned dairy calves. The technology will be used to investigate the prevalence and severity of lung lesions and its association with clinical pneumonia and effect on growth rates.



Thoracic scanner being used

By assessing the level of lung consolidation, they hope to raise awareness of the level of subclinical respiratory disease in dairy calves, and its potential impact on herd efficiency and profitability. This information will aim to help the reduction in respiratory disease. The project will also raise awareness of the benefits of using thoracic ultrasound on farms to assess the success of management changes in reducing respiratory diseases.

Over the next year, monthly visits will be undertaken to the eight participating farms. During these visits' calves between 2-6 weeks and 12-16 weeks will be weighed and calves between 6-10 weeks will also be weighed and thoracic ultrasound will be performed.

Data collection will be vital to track and monitor respiratory disease cases and training will be provided to all farm staff involved in calf care on how to determine a clinical case of pneumonia.

Participating farms will be provided with their results which will be a baseline to allow needed changes to be made. If management changes are implemented such as improved nutrition, cleanliness, shed design, further scanning could be undertaken to monitor the effects of these changes.







BRYNLLECH UCHAF

Rhodri has improved a lot of his best land at Brynlllech Uchaf over recent years and has had success in introducing high quality red clover leys into the grazing and silage fields.

To achieve better control of the management of his best improved fields, he is now keen to improve his poorer grazing fields. The main reason for this focus is the current grass leys are not compatible with the changing weather patterns, especially the drier and hotter summers. Over the last 2 years, some fields have not been grazed for prolonged periods over the summer due to a lack of grass growth, forcing him to overuse the best fields on the farm.

By trialling various seed mixtures, it is hoped that we can establish which seed mixtures suit these fields on his farm (which is typical of many hill farms in Meirionnydd and beyond), the system (low N inputs) and the climate.

The following three seed mixtures were planted in August 2023 on different field plots:

	Control plot: Permanent pasture
	Plot 1: Diverse grass and White Clover mix • Cocksfoot, Perennial Ryegrass, Tall Fescue, Timothy and White Clover • 14kg/acre
	Plot 2: Multispecies ley • Festulolium, Perennial Ryegrass, Cocksfoot, Meadow Fescue, Timothy, White Clover, Birdsfoot Trefoil and Yarrow • 14kg/acre
	Plot 3: Longterm Ryegrass and White Clover • Perennial Ryegrass and White Clover • 14kg/acre

Grass dry matter production and quality assessments will be monitored on a monthly basis throughout the summer.

Driving further improvements in efficiency, improving grazing management and reducing input costs, the project will also contribute to reducing the farms' greenhouse gas emissions, support improvement in maximising carbon storage and sequestration whilst reducing the whole-farm carbon footprint and maintaining and enhancing the ecosystem.

For more information and to follow the project's developments, please visit the Farming Connect website.



LOCATION:
Llanuwchllyn,
Meirionnydd



FARMER(S):
Rhodri and
Claire Jones



FARM:

Sector: Red Meat
Farm size (ha): 263
Livestock numbers:
35 cattle and young stock
and 700 ewes



➤ For more information, please visit the Farming Connect website for more related articles, projects and e-learning modules on the topic of Iceberg diseases.



LOCATION:
Llangorse,
Brecon



FARMER(S):
Roger and
Dyddanwy Pugh



FARM:
Sector: Red Meat
Farm size (ha): 94
Livestock numbers:
55 sucklers with calves,
300 ewes and 80 hogs



CRICKIE FARM

GRAZING FODDER BEET SUCCESSFULLY: first winter provides a baseline for next winter

Roger and Dyddanwy had planted 2 ha of Geronimo fodder beet for grazing in the winter of 2023 and into early 2024 to reduce the concentrate and bedding costs which attribute mainly to the overall production costs for the cattle enterprise at Crickie Farm, which is estimated to be 148% greater than the Farm Business Survey (FBS) average.

The first winter of a two-year project at Crickie farm looking at out wintering cattle successfully on fodder beet by effective transition on to beet and grazing strategies for optimal crop utilisation which minimises environmental impacts has been concluded. The total feed available equated to 240t total fresh weight feed (16.8t/ha DM) and was fed alongside silage bales to a group of 40 cattle over a 4-month period.

For winter 2024, a 4.87ha field will be split in two equal parts and one half will be drilled with non primed fodder beet seed and the other with primed seed: these have been pre-germinated, dried and pelleted and should enable faster germination which can be useful with the unpredictable weather conditions.

The field will be split and treatments applied as follows -

<p>Plot 1 -</p> <p>Primed seed 2 applications of Nitrogen (N) (at establishment and late summer)</p>	<p>Plot 2 -</p> <p>Non primed seed 2 applications of N (at establishment and late summer)</p>
<p>Plot 3 -</p> <p>Primed seed 3 applications of N (at establishment, late summer and early autumn)</p>	<p>Plot 4 -</p> <p>Non primed seed 3 applications of N (at establishment, late summer and early autumn)</p>

The same transition plan and crop allocation will be followed as was completed in winter 2023, the yield and quality will be monitored in winter 2024 and compared to winter of 2023.



LOCATION:
Usk,
Monmouthshire



FARMER(S):
Nigel Bowyer
and family



FARM:
Sector: Red Meat
Farm size (ha): 80
Livestock numbers:
270 sheep and
70 beef cattle



TY COCH

Best seed mixed for under-sowing maize and cover cropping

The Bowyer family focus on maximising home-grown feed and forage to feed their flock of crossbred ewes and weanling cattle which are purchased to finish on farm. Their flexible arable rotation varies, including maize, wholecrop peas and barley, winter and spring barley and winter wheat with cover crops being sown in front of spring crops. The rest of the farm is in long-term grass, lucerne, and rotationally grazed red clover and herbal leys. The majority of the winter and spring cereals grown are fed to the beef and sheep enterprises with a mill and mix contractor used every 3-4 weeks to mill the grain with locally grown beans topping up protein as needed. A small amount of excess grain is sold locally most years.

With nearly a third of the farm sown into arable each year, the Bowyer family are keen to explore ways to protect and enhance soil health. The project will therefore aim to trial different seed mixes for under-sowing maize and also for cover cropping following cereals. Under-sowing and cover cropping have known benefits in:

- reducing soil erosion,
- improving soil structure,
- retaining nitrogen in the soil,
- helping to manage weeds, pests and diseases,
- providing grazing and alternative forage for livestock,

- improving biodiversity.

The project will monitor the establishment of each mix, Table 1, their impact on soil structure through visual assessments (VESS), water infiltration rates and the nitrogen residues in the soil.

Table 1. Seed mixes being trialled

Cover cropping mixes	Maize under-sowing mixes
<p>1. 80% Winter Oats 20% Winter Vetch</p>	<p>1. 50 % Westerwolds 50 % Italian Ryegrass (Tet.)</p>
<p>2. 85% Red Vetch 15% Berseem Clover</p>	<p>2. 85% Spring Oats 15% Red Clover</p>
<p>3. 10% Balansa Clover 20% Tillage Radish 27.5% Winter Oats 27.5% Winter Vetch 5% Phacelia 10% White Mustard</p>	<p>3. 50% Strong Creeping Red Fescue 50% Italian Ryegrass (Diploid)</p>
<p>4. 17.5% Winter Vetch 7.5% Berseem Clover 70% Winter Oats 5% White Mustard</p>	<p>4. 10% Gorilla Forage Rape 45% Italian Ryegrass (Diploid) 45% Italian Ryegrass (Tet.)</p>
<p>5. 15% Linseed 15% Buckwheat 5% Phacelia 15% Tillage Radish 15% Fodder Radish 10% Brown Mustard 15% Vetch 10% Crimson Clover</p>	<p>5. 90% Spring Oats 10% Forage Rape</p>





LOCATION:
Llanfechell,
Anglesey



FARMER(S):
Owen Brothers



FARM:
Sector: Red Meat
Farm size (ha): 36
Livestock numbers:
70 Pedigree
Hereford Cattle



FOEL FAWR FARM

The role of ultrasound scanning in producing EBVs

Owen Brothers at Foel Fawr farm run a herd of 70 pedigree Hereford Cattle. The herd is certified through the premium cattle health scheme, is clear of Neospora and has received BVD and Johne's accreditation. It is a spring calving system where careful selection of replacement bulls is deemed essential for ease of calving and producing strong replacement heifers.

Currently the female offspring produced are either kept as replacements to the herd or finished and sold at market. The males are either finished on the farm or sold as store cattle.

The farm's goal is to be able to sell Pedigree Hereford Bulls and the next step in achieving this is producing estimated breeding values (EBVs) for every animal.

The aim of the project is to incorporate technology for monitoring cattle performance which will ensure efficient selection of breeding heifers and bulls to improve the future herd performance. Through the project, a cattle weighing system will be introduced that will link up to the Breedplan software where the Owen Brothers will work closely with the Hereford Cattle Society to identify which traits need to be monitored and when they need recording. The replacement heifers and potential bulls will be scanned using an ultrasound to measure eye muscle area, rib fat, rib yield and intramuscular fat.

Ten of the 18-month-old barren heifers were scanned at the end of February 2024 by Gwion Parry, a scanning technician selected through the Hereford Herd Society recommended list. The mobile ultrasound scanner used is the EVO3 and the imagery is sent to Ultrainsight in Colorado to analyse the Eye Muscle Area (EMA), Fat depth and Marbling. With a 48-hour turnover the data is sent back in Excel form to the farmer. The technology used is regarded as one of the most detailed in terms of analysis that is available on the market.



Mobile Ultrasound Scanner

The second group were scanned in April 2024 (average age of 12 months) consisting of entire males and females. From the data obtained and analysis of the EBVs some males will be selected as bulls with the remaining males castrated and kept as store cattle.



RHYDEDEN

Accelerating genetic potential in cross bred cows through genomics

Over the past few years, Rhydedden has increased the herd size to a 300-split block calving herd with 175 calving in the spring and 125 calving in the autumn. The grazing platform has been optimised on the 100-hectare farm with the herd currently averaging 6,500 litres per cow at 4.5% Butterfat and 3.6% Protein. Seventy-five percent of the spring calving herd calves within 6 weeks with all the heifer replacements coming from the spring calving herd allowing for easier management of rearing youngstock.

Eurof is looking to increase profitability by reducing replacement costs without a large investment through improving the genetic performance of the crossbred herd.

The project started in January 2024, when Eurof started genomically testing 15 of the 10-month-old youngstock dairy replacements using GeneEze testing through NMR. For the test, Eurof took a tiny ear notch from the youngstock representing a tissue sampling unit (TSU). The sampling process is shown below in Figure 1.

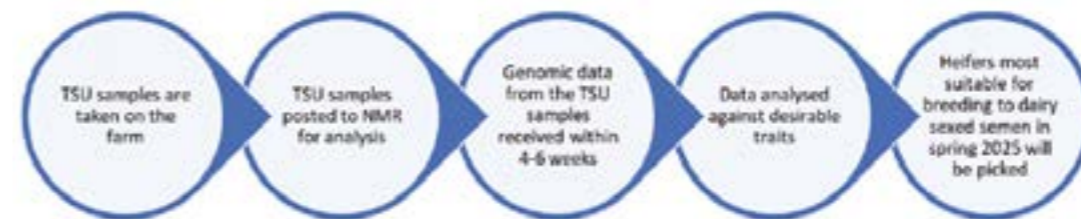


Figure 1: Steps taken for receiving genomic data

Following sampling of the initial 15 heifers, it was highlighted that the degree of cross breeding within the herd at Rhydedden is too great to fall under the standard evaluations carried out for Holstein/Friesian cows. However, AHDB is developing a genomic evaluation for crossbred animals by the end of this year, by which time Eurof will have genomic tested an additional 37 (R2's) heifers and 65 (R1's) spring born heifers in 2024.

This data will be analysed in December 2024 using the AHDB herd genetics report where all the tested heifers and cows will be scored for individual traits, Spring Calving Index (SCI) and Profitable Lifetime Index (PLI) and ranked accordingly. This data will inform decisions regarding which are the most suitable heifers/first calving cows for breeding to dairy sexed semen in spring 2025. This report will enable the farmer to have a list of all his tested heifers and cows in one place together with their genomic scores.



LOCATION:
Conwy



FARMER(S):
Eurof Edwards



FARM:
Sector: Dairy
Farm size (ha): 100
Livestock numbers:
300 crossbred cows
- split block calving





LOCATION:
Clynderwen,
Pembrokeshire



FARMER(S):
Jeff, Sarah, Enfy
and Medi Wheeler



FARM:
Sector: Dairy
Farm size (ha): 105
Livestock numbers:
150 crossbred dairy cows &
60 youngstock heifers



CLYNGWYN

Investigating the pattern of nitrogen release from a spring injection of liquid nitrogen on grazing ground

The Wheelers have used a spring injection of liquid urea/ammonium nitrate on their grazing ground for many years and are interested in understanding more about how efficient the practice is together with the pattern of release and mobilisation of the nitrogen(N) in the soil.

Liquid injection of nitrogen is thought to reduce the negative impacts of volatilisation and maintain a continuous delivery of N to grass for several months after injection. While there are many anecdotal claims for a sustained and even supply of N and the potential benefits for supply at rooting depth and especially under drought conditions, there is almost no research on the use of injected liquid N.

With grass growth measurements already being recorded on the grazing platform, there is scope to carry out an evaluation of this application method in terms of its NUE (Nitrogen Use Efficiency).

Aspects that will be investigated:

Are they using an appropriate rate?

1. Is the system delivering an efficient use of N in terms of kg DM grown per kg N injected?
2. Does injection increase soil residual N and the risks of winter leaching losses?

3. Is the delivery of N constant, or is there a risk of excessive uptake of N by the grass with subsequent negative effects on grass quality, NUE, and animal performance (e.g. high milk urea levels)?

What will be done:

Three liquid N treatments will be applied in one grazing field:

- Standard: 200kgN/ha
- Reduced: 130kgN/ha
- Control: Zero

Data to be recorded:

- Weekly rising plate grass measurements
- Forage analysis at two selected grazings in early May and mid-July for Dry Matter, Crude Protein, Nitrates and Water-Soluble Carbohydrate levels
- Soil mineral nitrogen levels in June and September

The data will be evaluated to look at the pattern of N release over the grazing season in terms of grass growth, N uptake and soil residual nitrogen, with results available by November. Guidelines will then be produced for the future use of liquid N on the farm with the aim of providing an improved outcome for NUE.



LOCATION:
North
Pembrokeshire



FARMER(S):
David and
Debbie Best



FARM:
Sector: Red Meat
Farm size (ha): 70
Livestock numbers:
21 Ruby Red Devon plus
youngstock and 44 Lleyn
ewes plus youngstock



TREATHRO FARM

Resilient soils for resilient farms: how do we enhance soil health?

David and Debbie Best have farmed at Treathro Farm, Goodwick since 2017. It is a 170-acre grassland farm that falls within the Pembrokeshire Coast National Park with a history of livestock farming. David and Debbie are keen to maintain and enhance the biodiversity on the farm alongside having a productive herd of Red Ruby Devon cattle and a small flock of Lleyn sheep. They are interested to know how the soils on the farm are responding to the different management regimes as they are fully aware that building soil health and structure is the basis for productivity and diversity across the farm.

The focus of the project at Treathro Farm will be to assess the current soil health status on four areas of the farm that are managed differently. Since 2017 there has been no artificial nitrogen inputs but a small amount of potassium, phosphate and lime was used following some soil sampling in 2021 and 2023.

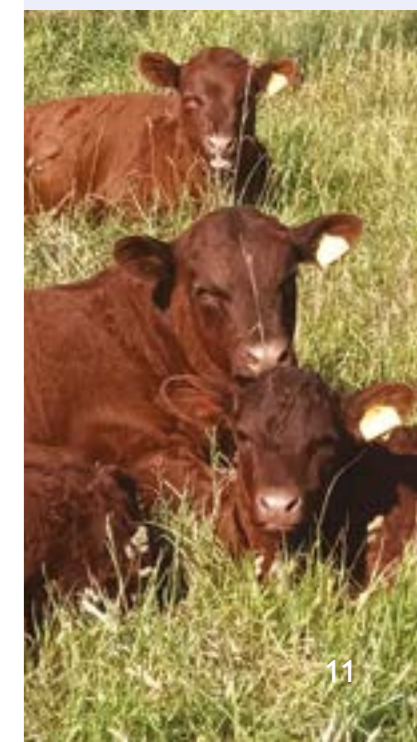
The four focus areas	
Rotationally grazed fields	Coastal cliff area
Permanent pasture that is grazed rotationally by stock throughout summer	Very species diverse and lightly grazed by a couple of ponies
Haylage field	Herbal lay
Ryegrass and white clover. Field is closed up for haylage and grazed in autumn post cutting.	Field to be sown with herbal lay in late summer 2024 following haylage crop. Establishment to be done with min-till techniques.

The soil assessments will be based on Visual Evaluation of Soil Structure (VESS) measurements and includes;

- A surface assessment to record the amount of sward cover
- An assessment of the structure, aggregate size and signs of compaction
- Earthworm numbers
- Water infiltration rates

Soil samples were collected in March 2024 and sent for analysis of nitrogen, potassium, phosphate, pH and carbon stocks. An additional investigation was undertaken into the soil ecology based on the SoilFoodWeb methodology that involves counts of bacteria, fungi, protozoa and nematodes using a microscope.

To assess the impact above ground, monitoring of dung beetle populations, bumblebees and sward species diversity will also be undertaken throughout the summer. Regular forage analysis will be completed to check that stock is receiving the correct level of nutrition throughout the season. All of this information will build a picture of performance, productivity and species diversity across the farm providing a baseline for David and Debbie to refer to as they continue to develop their systems at Treathro.





LOCATION:
Radnorshire



FARMER(S):
George Edward
Wozencraft



FARM:

Sector: Poultry
Farm size (ha): 120
Livestock numbers:
16,000 of layers,
30 suckler cows,
230 Welsh Mule Ewes and
650 improved Welsh ewes



GLANALDERS

Assessing the effects of LED lighting on productivity and health and welfare in a poultry layers unit

One of George Wozencraft's main drivers at Glanalders is to become more self-sufficient in energy while improving bird health and welfare. George has 20kW solar panels installed on his 16,000 layer bird flat deck system. However, the energy generated is only contributing around a third of the annual requirement for the shed.

To work towards a further improvement in energy self-sufficiency, Glanalders will replace the shed's current strip lights with LED (light emitting diode) lights.

Poultry have greater sensitivity to colours and vision on the ultraviolet spectrum. The presence of different colours, intensity and periods of light can all have an influence on their behaviour and performance. LED lighting has a better spread than conventional lighting, eliminating dark spots and reducing stress. LEDs therefore have the potential to improve stimulation of the birds' natural day/night behaviour and also improve performance by:

- Increasing egg production - by up to 38 eggs per hen
- Improving Feed Conversion Ratio (FCR)
- Reduction in incidences of floor eggs

LED lighting has also shown improvements in bird health and welfare by:

- Reducing mortality

- Reducing antibiotic costs
- Improving feather cover

What will be done:

The current flock of hens left Glanalders in March 2024, with the new flock arriving at 16 weeks of age at the end of April. The new flock will be laying from May onwards.

During the changeover period, the current 54 x 2ft strip lights in the shed will be removed and replaced with 3 lines of 35 each of 48V/9.6W warm white LED lights.

The project will compare data gathered from the last flock of hens with the first 8 months (May-Dec 2024) of the next flock including:

- Egg production
- Hen mortality
- Feather cover
- Water consumption
- Feed consumption
- FCR

All flock data is gathered and recorded monthly via the 'Eggbase' software already in use.

In addition:

1. Lux of light will be compared via the 'Light Meter' app.
2. Energy use and costs for both types of lighting will be calculated and compared.

The aim is for Glanalders to improve bird health and welfare while reducing the farm's energy use and carbon footprint.



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CLASSES

Master Carbon Footprinting round up

Estimating a farm's carbon footprint is a useful process to understand the business' contribution to climate change. Greenhouse gas (GHG) emissions produced, as well as carbon sequestered on-farm (the removal of carbon from the atmosphere by soils, trees and hedges) is estimated. Consequently, areas for improvements (to reduce GHGs produced or enhance sequestration) are highlighted. Many of these areas also make sense in terms of a farm business' efficiency and profitability.

It is not possible to manage or change a farm's carbon footprint without a starting point - i.e., identifying the current status / baseline. A roadshow of events focusing on the basics of carbon footprinting took place earlier on in the year. The purpose of these interactive meetings was to drill down to the details of the process of carbon footprinting. This included discussing the carbon and nitrogen cycle to better understand the impact of agricultural practices on these cycles, both below and above-ground. The three main GHGs (carbon dioxide, methane and nitrous oxide) derive from different sources on-farm. During the meetings, farmers were encouraged to discuss the biggest sources of GHGs on their individual farms.

Carbon sequestration and storage in soils, trees and hedges is increasingly researched. The importance of managing these assets on the farm to enhance carbon sequestration and storage was discussed. The data captured from Farming Connect's Welsh Soil Project provides an estimation on carbon stocks within Welsh soils to a depth of 50cm.

Farmers attending these events were interested in discussing the process of calculating a farm's carbon footprint, including the data required to input within a carbon calculator, calculations and interpretation of the results.

Every farm is different, and so, every farm's carbon footprint figures, as well as feasible measures to reduce their carbon footprint will differ. However, every farm can implement some farm-specific practices. Farmers interested in having support to estimate their own farm's carbon footprint may apply for funding to do so through Farming Connect's Advisory Service. For more information, please contact your local Development Officer.

A factsheet and podcast on the topic are available at -

- [Farming Connect Carbon Jargon Busting factsheet](#)
- [Farming Connect carbon footprint podcast](#)



Figure 1. Sources of GHG produced and carbon sequestration on-farms (red arrows denote GHGs produced, yellow arrows denote carbon sequestration).



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Mentoring gives former BBC journalist courage to embark on right environmental projects for family farm

In the days when Sara Edwards' great-grandmother farmed, agriculture had an informal network of mentors in the shape of neighbouring farmers, sharing ideas and passing on knowledge. Three generations later and Sara sees the Farming Connect Mentoring programme as the modern-day equivalent.

The former BBC journalist returned to Pantyfen Uchaf, her family's 200-acre farm on the Carmarthenshire-Ceredigion border, to continue the work of her father, John Edwards.

Throughout his many years of looking after the farm he has seen great value in agri-environment schemes, planting 2,000 native trees and managing 1.5 miles of riverbank along the River Teifi.

Sara shares his passion for nature and the environment but is the first to admit that what she lacked when she took on the management of the farm was her father's practical knowledge.

"I realised how little I knew about how things worked, but what I did know was how much I wanted to learn," she says.

That gap was quickly bridged thanks to the Farming Connect Mentoring programme.

The scheme allows farmers and foresters to receive support and guidance from their peers on a wide range of topics.

The mentor Sara was matched with was her near neighbour, Ioan Williams, who has undertaken substantial environmental work on his own farm including many kilometres of hedgerow restoration and double fencing, tree planting and fencing streamside corridors.

With his support and guidance since September 2020, Sara has planted hedgerows and small blocks of woodland and coppiced hedgerows.

"Last year we carried out a programme of hedge coppicing and gapping up and recreated one of the original fields," Sara explains.

From their very first meeting, she has felt her confidence grow. "Ioan has walked the farm with me and my observational skills have improved with his guidance. He has made me more aware of the possibilities.

Ioan's comprehensive understanding of agri-environment schemes has also helped Sara with her applications for initiatives including the Glastir Small Grants scheme, the Habitat Wales Scheme and, with one eye on the future, with her understanding of the proposed Sustainable Farming Scheme.

"If I am hesitant about applying for a particular scheme Ioan will get me to question what I want to achieve and gives me the courage to take on the right schemes for our farm, and I am carrying on with what my dad has always done, he has always been keen on planting here, putting up nesting boxes there.



Ioan Williams and Sara Edwards

"I am now the one who is physically doing these things and future proofing the farm for the next generation. It feels really good to see the farm in good heart while helping the environment and encouraging more wildlife."

Registering her interest with the Farming Connect Mentoring programme was a good decision, she says.

"As farmers we are all on a journey, all on a learning curve, and there is so much we can gain from the services that Farming Connect can provide."

Get on the farming ladder!

Services for new entrants include –

- **Start to Farm** - support to apply for, develop and formally establish a joint-venture or apply for a tenancy
- **Agri Academy** - the flagship personal development residential programme
- **Mentoring** - receive up to 15 hours of free one-to-one support
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Local Development Officer

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Dry stone walling

Elite Wool Industry Training UK Beginners and Advanced Shearing course

Introduction to Peatland Restoration

Fencing and Gate Installation Post and Strained Wire

Level 2 award in animal transport by road - short journey

The Rural Manager - suite of business courses including time management, communication, motivation and team work.

Health & Safety Awareness of Forestry and Woodland Operations for Landowners



Continuous Professional Development (CPD) helps young farmer prepare for a greater role

Training and development opportunities have helped Ernie Richards learn about best practice and the latest thinking on technical and business management ideas, giving him the confidence and knowledge to take on a bigger role in his employer's upland sheep farming enterprise.

Ernie manages a flock of 1,000 pedigree Lleyn ewes for Stuart and Helen Morris at 350-acre Wernoog, near Clyro, Powys.

As he steps up into a management role, he will draw on the Leading and Managing training course he completed in 2023.

"We will have two students with us for up to six weeks during lambing and for the first time it will be me who will be responsible for managing them, I learned so much on the training course that will help with this," he explains.

Ernie has also completed a training course on environmental awareness, audit and management of farm businesses.

"This focussed on the new rules and it helped me get my head around what we needed to do to be compliant," says Ernie.

Both courses were funded at 80% through Farming Connect.

A record of the courses completed and certificates gained are stored on Storfa Sgiliau, Farming Connect's online CPD recording tool.

"Although I have paper copies of the certificates, it is really useful to have everything stored online, in one easily accessible place, through my BOSS (Business Online Support Service) account," says Ernie. You can also download a complete report of all your records, in a single document.

To find out about how Farming Connect can help you and your business develop, contact your local Development Officer, take a look at the website, or visit us at the Lantra building during the Spring Show, Builth Wells in May.



For the latest information, a full list of courses and/or support on how to register and apply, please contact your local development officer or the Farming Connect Service Centre on 03456 000 813 or, visit our website.

Rydym yn croesawu galwadau'n Gymraeg / We welcome calls in Welsh

 **Local Development Officer**

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Welsh Sheep Genetics Programme (WSGP) PROJECT UPDATES

As year 1 of the WSGP draws to a close, we look back on some of the project work completed and what has been achieved so far.

1. INTRODUCTION TO GENOMIC BREEDING VALUES (GEBVS)

Farming Connect and Welsh sheep farmers leading the way with genomics on a global platform.



Sheep

Genomic breeding values were introduced to flocks involved in the WSGP in June 2023. Through the WSGP, it is the first-time genomics has been rolled out to flocks within the global sheep industry.

Since its implementation last year, the project has evolved greatly, with tweaks being made accordingly to ensure that robust and accurate breeding values are published. Switching from estimated breeding values (EBVs) to genomic breeding values (GEBVs), ensures greater accuracy in performance figures, therefore strengthening farmers' trust in the animals they buy.

Changes have also been made to how the hill sheep index is expressed, with breeding values now demonstrated in economic terms which will represent the economic merit of a ram's daughters. The objective of this change is to make breeding information easier to interpret by ram buyers.

2. BREEDING FOR REDUCED METHANE EMISSIONS

A WSGP project with the aim of eventually breeding animals with less methane emissions has concluded its first year of data collection. Although there are many factors which contribute towards emissions, including diet and management, genetics also plays a role. The project has been measuring methane emissions from lambs using portable accumulation chambers (PAC), as well as CT scanning lambs to predict their rumen volume, with the ultimate aim of identifying animals which are genetically emitting less methane.

Data was collected on methane emissions (CH₄) in hill flocks, which form Tier 1 of the WSGP, who had previously recorded data. Working in conjunction with Innovis and Signet, data was collected on over 1,000 lambs during the first year of the project. Preliminary results show a variation of up to 30% between animals in the amount of methane emitted. Methane emissions has a high heritability of between 0.17-0.34, which means that producing lower levels of methane is a trait which can be passed on to offspring. The objective of the project is to collect enough reliable data to formulate an estimated breeding value (EBV) specifically for methane emissions.

Genetic progression in Welsh sheep flocks

An uplift in annual margin per ewe of £4, and 1kg added to lamb weight during same period seen in Welsh recording flocks.

A positive genetic progression can be seen in performance recording flocks, which now form the Farming Connect Welsh Sheep Genetics Programme. A combination of valuable data collected from recording flocks since 2016 by Hybu Cig Cymru's Hill Ram Scheme, followed by data collected from the WSGP in 2023 has shown an impressive genetic progression in Welsh sheep flocks. This trend can not only be seen for Welsh Mountain sheep, but across the board for other breeds, including South Wales Mountain, Beulah and Brecknock Hill Cheviots.

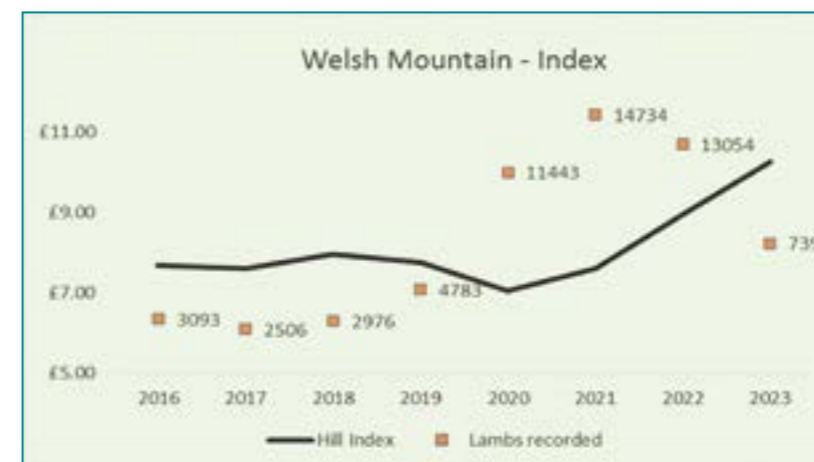


Figure 1. Welsh Mountain breed index – showing the number of lambs recorded and increase in the hill index between 2016-2023.

Source: Innovis

By focusing attention on specific traits, a steady increase can be seen in lamb survival, resulting in more live lambs. The same pattern can be seen when looking at lamb weight (kg), with birth weight EBV, eight-week weight EBV and scan weight EBV steadily increasing through from 2016 to 2023 as seen in figure 2.

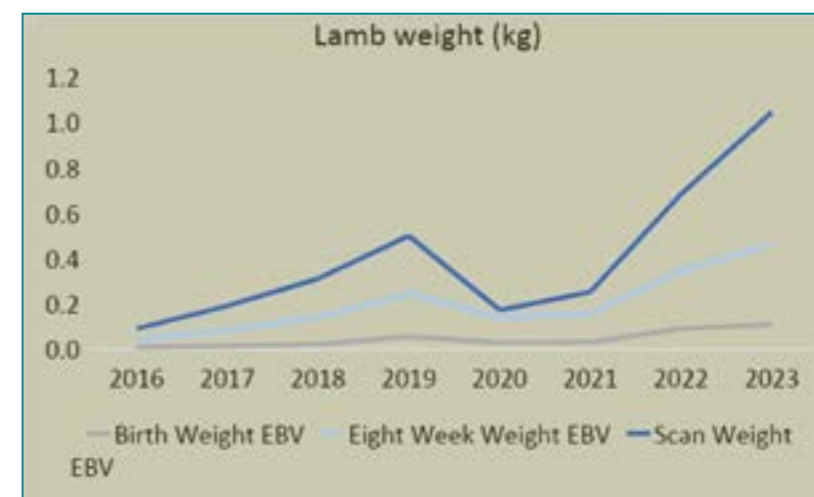


Figure 2. Lamb weight (kg) from performance recorded flocks 2016-2023

Source: Innovis

It is also important to note that lamb weight has increased during this period without increasing ewe weight and size. Data has also shown that muscle depth is also increasing, with fat depth remaining at a steady pace. Maternal ability has also increased during the last three years, demonstrating the benefits of using the data collected to make management decisions to improve flock performance. The average rate of improvement in individual flocks per year is £0.93, which is a cumulative gain.



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HORTICULTURE

Farming Connect skills courses key to staff development at horticulture business

A plant nursery that specialises in cultivating new and unusual species is applying the same ethos of nurturing to its workforce by utilising Farming Connect training courses and knowledge transfer events to fill skills gaps and help its staff develop.

Tucked away in the countryside on the outskirts of Caernarfon, Seiont propagates and grows hundreds of varieties of shrubs and perennial plants, including a big collection of ferns, using cuttings from its own mother stock and from tissue culture imported from laboratories across the globe.

The team of 13 is headed by managing director Neil Alcock.



Neil Alcock

He appreciates the value of skills and training opportunities having joined the family-run business as a trainee in 1987.

Having a well-trained, capable team is important for any business, says Neil.

“We have enrolled the staff on several training courses run by Farming Connect, from how to operate a forklift safely, first aid and health and safety to rodent control and manual lifting. All are important in a business like ours,” he says.



Kathleen Dawson - staff member, Seiont

“Horticulture is an industry which runs on very tight margins, so, to have that helping hand with funded courses really does make a difference.”

All training courses offered by Farming Connect are subsidised by up to 80% for registered individuals.

Knowledge transfer events run by Farming Connect have also helped the team build on their expertise.

After a site visit to a plant nursery in Hereford last year, the team came back “bursting with ideas”, says Neil.

Seiont has also been host to Farming Connect events, when horticulture experts David Talbot and Chris Creed led the discussion on biological control methods and peat-free growing last autumn.

“We have been leading the way on peat-free growing but we will need to take this further as Wales transitions away from peat completely, so it is important for us to hear the latest thinking on this,” says Neil.

The event drew growers from across Wales, he adds. “The staff love it when we host open days, they allow them to interact with others in the industry.

“Any business can become insular and blinkered if people don’t get out and see and hear what others are doing and saying.



Neil Alcock with grasses

“Even though we are a very different business to the smaller nurseries who sell direct to the public there are several things that affect us all, such as legislation on plant protection products.”

Seiont operates on a 25-acre site and has a 3,500m² propagation glasshouse at the heart of the operation.



Plug Plants

It sells around half a million plugs annually and grows others in polytunnels in 9cm pots to supply wholesalers who sell to the retail trade.

Every year new varieties are introduced – more recently Dryopteris Jurassic Gold, a fern with gold foliage that originated from a grower in Dorset.

“We sent the spores to a tissue culture laboratory and those produced tiny plants, we created 20,000 units from those,” Neil explains.

Another new variety is a miniature pampas grass, Tiny Pampa, which grow to a diminutive 60cm.

Seiont’s customer portfolio ranges from smaller retailers who grow young plants themselves, to the biggest plant finishers who supply garden centre chains and DIY stores, as well as the nation’s major specialised online retailers.

Introducing new varieties to the market gives Neil and his team a huge sense of achievement.

“There is something very satisfying about going into a retailer and seeing one of our new plants for sale, plants that originated from a cutting or a spore,” he says.

Take advantage of up to 80% contribution towards

REDUCING YOUR FARM CARBON FOOTPRINT

Farming Connect can provide **confidential** advice on how to improve the sustainability of your business and also help you run your business more efficient, effective and profitable.

A tailored carbon audit for your business can help by providing information on the farm's current carbon footprint, including -

- Greenhouse gas (GHG) emissions, and their sources on the farm
- Carbon sequestered by trees, hedges and soils

The audit will also suggest recommendations on how to:

- Reduce GHG emissions produced on-farm
- Increase carbon sequestration levels to off-set GHG emissions

These recommendations may also relate to methods of enhancing farm efficiency, such as improved nutrient management and soil health.

With increasing pressure on the agricultural sector to improve its environmental performance, whilst also producing food in a sustainable manner, Farming Connect can offer the support needed.

For more information contact your local Development Officer, or call the service centre.

 **03456 000 813**

 **gov.wales/farmingconnect**

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KEEPING CHILDREN SAFE ON FARM DURING THE SUMMER HOLIDAYS

1. Children should not be allowed in the farm work place (and for young children they should enjoy outdoor space in a secure fenced area).
2. Any access to the work area by children under 16, for example for education, or knowledge experience, should be planned and fully supervised by an adult not engaged in any work activity.
3. Children under the age of 13 years are specifically prohibited from driving or riding on any agricultural machine.

For more information, scan here:
Or, search **Farm Safety Wales**
on Facebook



[Work Right Agriculture](#)

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HORTICULTURE

Are you going to the Royal Welsh Smallholding & Countryside Festival at Builth Wells on 18th and 19th May?

Why not come and visit the Farming Connect team to discuss how we can support you and your business.

The **Horticulture team** will be available within the Members Pavilion (*Main Entrance*) to discuss the opportunities that are available for growers and businesses that are looking to diversify into horticulture.

Development Officers will also be available to discuss all the support that is available through the programme.

If it is training support you need, then call into the Lantra building (*bottom of the cattle ring/main display area*). **Training Providers** will be present on both days to discuss the accredited training courses. The team are on hand to support you with the completion of your **Personal Development Plan (PDP)**, **e-learning modules** and submitting **funding applications**.

There will be various demonstrations held over the two days, from planting up baskets to showcasing how to cook seasonal vegetables.

If you would like support with the completion of a PDP, please bring your BOSS login details and ensure you can log into your relevant e-mail account.

This invitation does not cover the cost of entry onto the showground.