

THE MAGAZINE FOR FARMING & FORESTRY IN WALES

FARMING connect



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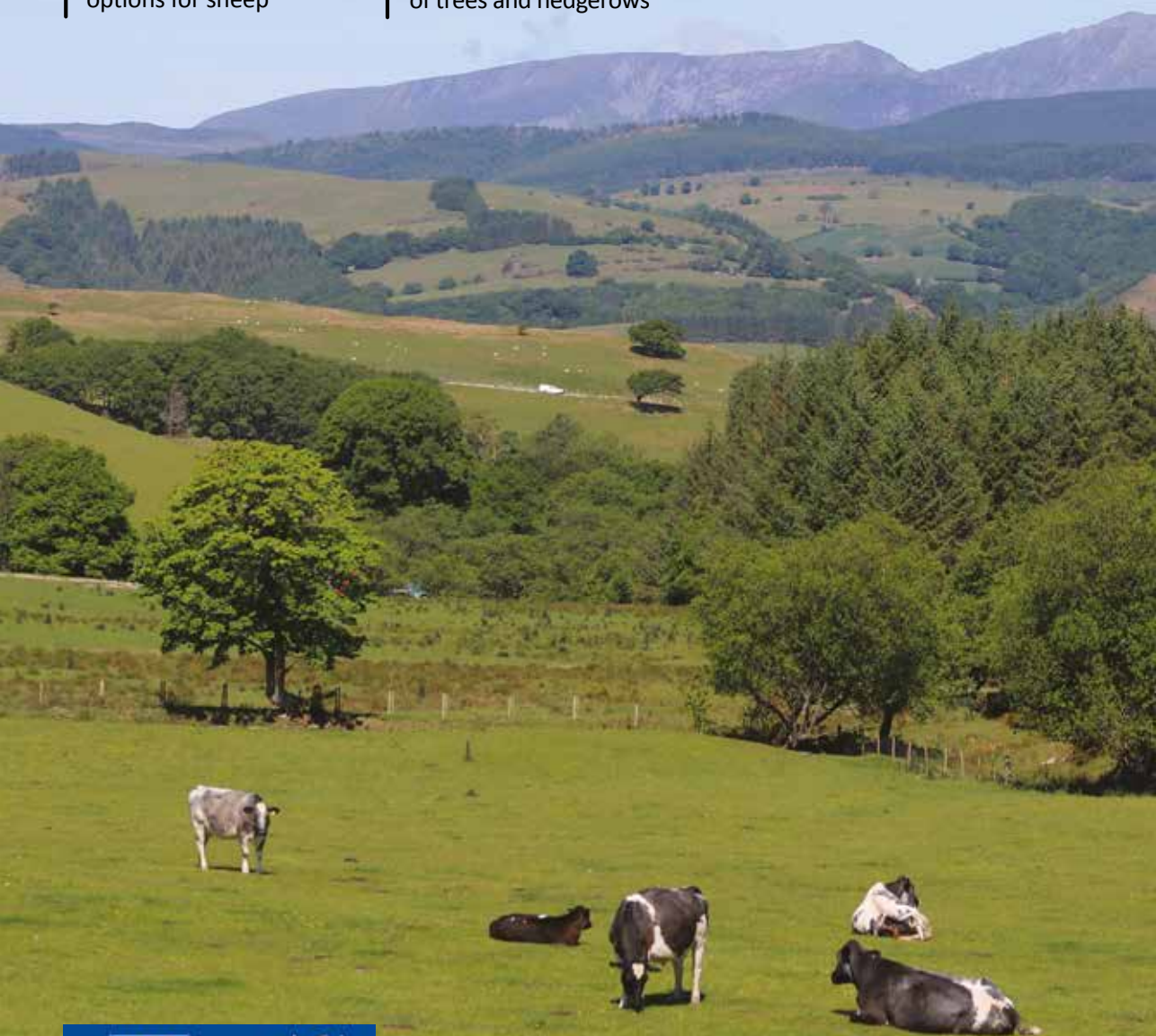
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Demonstration Network

Alternative bedding
options for sheep

Green Infrastructure

Key actions to make the most
of trees and hedgerows



Demonstration Site: Hendre Ifan Goch, Glynogwr, Blackmill, Bridgend

Technical Officer: Elan Davies

Project Title: Comparing various bedding options for in-lamb ewes pre-lambing

Project Introduction:

Straw remains the most commonly used bedding material for housed ewes. However, as its cost continues to increase significantly and its availability decreases, farmers are turning to alternative options. Slatted housing could offer a solution to these problems; however its advantages must be balanced against the initial outlay.

Rhys and Russell Edwards, Hendre Ifan Goch, have been researching the idea of installing slatted floors in their sheep shed for quite some time, but with the price of straw currently at an all-time high, they decided to take the plunge in 2020, converting one of their existing sheds to a slatted floor sheep shed. Despite the significant upfront cost with installing slatted flooring, the Edwards family hope the return on investment will be high due to savings made from not having to purchase as much straw.

Project Objectives:

The main aim of this project was to identify potential alternative bedding options which would offer superior attributes in terms of cost effectiveness and animal health and welfare in comparison to traditional bedding materials such as straw. The project focussed on the impact different bedding materials have on factors such as labour, lameness, ewe cleanliness and overall animal welfare. Cost effectiveness of each bedding material was also evaluated, with the aim of reducing production costs long-term.

What was done?

The following five different bedding options were compared:

- 1. Slatted flooring
- 2. Sawdust (£20/tonne delivered)
- 3. Wheat straw (£100/tonne delivered)
- 4. Barley straw (£100/tonne delivered)
- 5. EnviroBed [dried paper waste] (£186/tonne delivered)

Following scanning, the triplet bearing ewes were split into four equal groups for the trial. Groups of 14 ewes were allocated to a pen each at a stocking density of 2.1m² per ewe; bedded on sawdust, wheat straw, barley straw and the EnviroBed paper waste. Due to a larger pen size in the slatted flooring shed, 50 sheep were stocked at a density of 0.8m².

The following information was recorded on a weekly basis for the 6 weeks leading up to lambing:

- Cost of each bedding (local current figures were used for these values, as well as calculating the return on investment of installing the slats)
- Bedding used (tonnes)
- Labour (working-hours spent bedding each week)
- Lameness instances (number of lame ewes treated)
- Ewe cleanliness (scored on a 1-5 clean score)
- Any other observations (ewe behaviour).

Project results

Only eight ewes were treated for lameness over the 6 week period of the trial, with five of these lame ewes on wheat straw. The distribution of the lame ewes can be found on the pie chart in Figure 1.

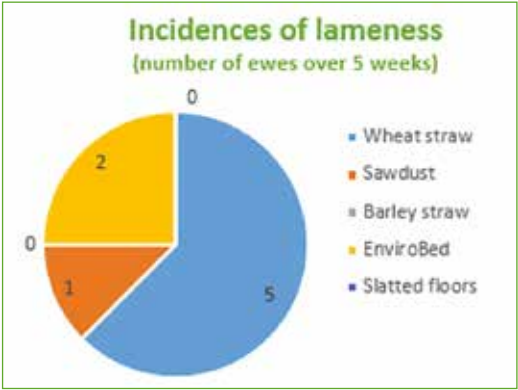


Figure 1. Incidences of lameness over five weeks

Ewes, in general, were cleaner on the slatted floors when compared to the other four bedding options. The cleanliness scores of all beddings can be seen in the graph in Figure 2.



Figure 2. The cleanliness scores of each bedding option

In terms of how much bedding was used, 340kg and 420kg of barley and wheat straw was used respectively over the 6 week trial period, with just over a tonne of sawdust used. 819kg of EnviroBed was used over 5 weeks (as it ran out before the end of the trial). Labour (working-hours) spent bedding the pens was seen to be fairly similar across the wheat straw, sawdust, barley straw and

EnviroBed, spending on average 30 minutes to 1 hour each week to bed the pens. Labour and bedding used was obviously not applicable with the slatted flooring.

In terms of the cost of each bedding, the following results show the actual price of the bedding used over the 6 week trial. It includes the total price of how much was used as well as a pence per day, per ewe figure (which enables us to compare directly with the cost of the slatted flooring).

- 1. **SAWDUST**
(£21 worth used – 11p per day per ewe)
- 2. **WHEAT STRAW**
(£42 worth used – 12p per day per ewe)
- 3. **BARLEY STRAW**
(£34 worth used – 11p per day per ewe)
- 4. **ENVIROBED**
(£155 worth used – 30p per day per ewe)
- 5. **SLATTED FLOORING**
(cost of slats [excluding labour and machinery] = £18,000)

10 year guarantee = assuming residual value of £5,000

- Depreciated over ten years = £1,300 per year
- House 500 ewes for 100 days = 3p per day per ewe

25 years with no residual value

- Depreciated over ten years = £720 per year
- House 500 ewes for 100 days = 1.5p per day per ewe

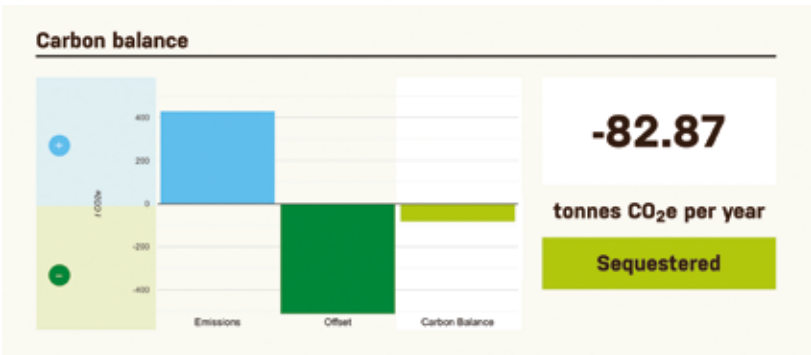
For further information, along with the full project report, please visit the Farming Connect website: gov.wales/farmingconnectourfarms



Demonstration Site: Bryn, Cardigan
Technical Officer: Menna Williams
Project Title: Calculating and reducing your carbon footprint
Farm Stats:

| | |
|------------------------|---|
| Land area and type | 101 hectare, light sandy loam |
| Livestock and cropping | 80 suckler cows Grassland, wheat, oats and barley. Rape, turnips and/or kale as winter fodder |

Project Introduction:
Huw Jones from Bryn Farm used the Farm Carbon Toolkit to calculate the farm's current carbon footprint. The results demonstrate that Bryn Farm is acting as a carbon sink. This means that the farm is reducing the amount of CO₂ in the air by storing it within its soils. Nearly 83 tonnes of CO₂-equivalent is being sequestered per year, which is approximately equivalent to 1 tonne per hectare per year.



Graph 1. Carbon balance



Graph 2. The breakdown of emissions and sequestration for Bryn farm

Once you have this information, the challenge is acting upon it. Every farm can improve what they are currently doing in regards to improving their carbon footprint by ensuring the system is productive and inputs are being used efficiently.

Huw, for many years, has been striving to improve the soil health at Bryn Farm and has been min-till for over 15 years and uses very little synthetic fertiliser or sprays. These healthy soils have organic matter levels of over 12% explaining the high proportion of sequestration (87% in total) and with the recent uptake of rotational grazing this will furthermore improve carbon capture in the soil and surface biomass. Moving forward, Huw will incorporate more white clover and legumes into the farm's sward to help reduce fertiliser usage on the farm, but also to avoid the emissions associated from the production of nitrogen fertiliser.

One of the key areas of focus for Huw since becoming a demonstration farmer has been the suckler herd efficiencies. Huw already has a very efficient herd with excellent cow fertility and small cow size but through continual monitoring further improvements can be made:

- Improving fertility reduces calving interval and replacement rate, thus reducing emissions per unit of product.
- Increasing daily liveweight gain (DLWG) increases the efficiency of production, which decreases emissions per kilogramme of meat produced.
- Improved health status reduces deaths and the incidence of disease leading to higher production levels and lower replacement rate.

Huw has reduced the winter housing period at Bryn Farm by increasing the grazing season.

For every 10 day increase in the grazing season there is a 1.7% reduction in greenhouse gasses (GHGs) and profitability is increased.

Another benefit from a shorter housing period is the reduced slurry methane (CH₄) and nitrous oxide (N₂O) emissions from slurry storage in slatted sheds. In regards to slurry management, moving from summer to spring (cool, low sunlight) application and the use of low-emission application methods can significantly reduce emissions.

A 20% shift to spring application can reduce farm GHGs by 1.3% while a shift to a trailing shoe can reduce GHGs by 0.9%.

Generally, a better ratio of output to input reduces carbon footprint and improves economic competitiveness. Decisions widely recognised to cut carbon footprint by improving the output-input ratio include:

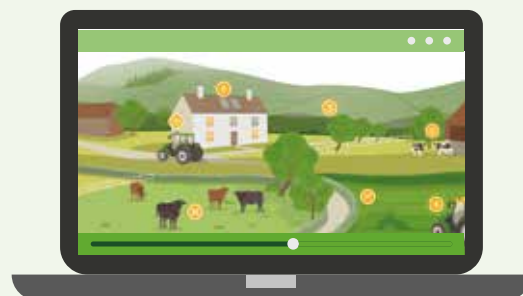
- Genetics - to improve DLWG, fertility and health
- Optimise calving rate: 1 calf/cow
- Improve calf weaning weights
- Reduce age at first calving to 22-26 months
- Rotationally graze cattle
- Winter cover crops
- Short winter housing period
- Spread slurry in spring

These examples are focused on animal production but other ways to reduce GHGs emissions on your farm could be:

- **Hedgerows** can be effective carbon sinks as well as supporting biodiversity. Establishing new and effectively managing existing hedgerows can significantly contribute to lowering GHG's
- Planting **trees** on the farm provide shelter, a carbon sink and other ecological benefits.
- Reduce and prevent **soil damage** and compaction.

Discover ways to increase your farm's profitability and reduce GHG emissions by visiting our online GHG tool on -

**businesswales.gov.wales/
farmingconnect/reducing-ghg-
emissions**



For more information and detailed analysis of the project results at Bryn, please visit gov.wales/farmingconnectourfarms



Focus Site: Forest Coalpit Farm, Abergavenny

Technical Officer: Dafydd Owen

Project Title: What effect do different diets have on pork quality?

Project Introduction:

The quality of pork is very important to Kyle Holford and Lauren Smith, who run their own 20-sow farrow to finish herd of their own breed of 'Welsh Black' (Large Black x Duroc) pigs on pasture and woodlands on their farm in the Brecon Beacons. They butcher and sell their produce directly to customers in pork boxes and also supply award winning restaurants and butchers. However, since the COVID-19 pandemic began, their pork is mainly sold via boxes and butchers.

This project will analyse and compare pork quality from two treatment groups: one group reared on a combination of forage and concentrates and another on concentrates only.

What will be done:

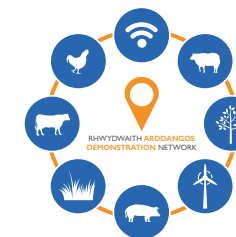
A total of 18 gilts will be split into two groups, three months before their slaughter date.

The mothers of the gilts will be sisters and all gilts will be from the same boar to reduce sire effect.

Each pig will be weighed weekly to monitor daily liveweight gain and to compare performance from different diets. In addition to this, grass consumption will be measured.

Following slaughter, half a loin from each individual pig will be sent for analysis. Each sample collected will be labelled and will be traceable to each individual pig.

For further information on this project, please visit the Farming Connect website; gov.wales/farmingconnectourfarms



Working in conjunction with Caroline Mitchell from FQM Global, the joint project with Menter Moch Cymru will undertake assessments that include:

- Warner Bratzler shear force
- EZ-Drip loss
- CEILAB colour scoring
- NPPC (USDA) colour and marbling score
- NIR assessment (which will provide a fat, protein, and moisture content amongst other values)

Farrowing Arks Trial

Kyle and Lauren have recently bought 10 new "Aardvark" farrowing arks. In addition to the main project, a trial will also take place to compare the efficiency of the new plastic arks with the old, more traditional steel arks. Temperature loggers have been installed to record the internal and external temperature in both types of arks. Piglet mortality and straw usage will be monitored during this trial.



Figure 1. Lauren Smith and Kyle Holford

The Farming Connect Knowledge Exchange Hub

The Farming Connect Knowledge Exchange Hub (KE Hub) is based at IBERS, Aberystwyth University. Our colleagues there are playing an important role in providing farmers with the latest information from scientific research.

Can increasing plant species richness in grassland maintain yield and improve soil carbon storage?

There is plenty of discussion about the role farmers can play in increasing soil carbon levels and contributing to ecosystem services through the provision of diverse habitats. Dr Will Stiles from the Farming Connect Knowledge Exchange Hub in IBERS, Aberystwyth University describes how increasing the number of plant species in productive grasslands can help contribute to this.

Increasing biodiversity in farmland is a major challenge and opportunity for the farming industry, which can offer benefits in terms of reducing environmental impact and improving public perceptions of agriculture.

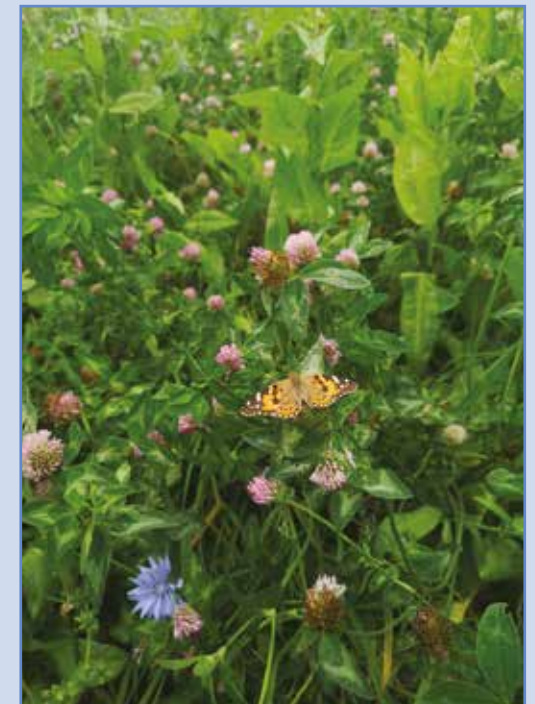
Currently in grassland systems, leys comprising 1-3 species are established in favour of more traditional species rich pastures. Species rich grassland communities typically contain numerous plant species, including grass, sedge and herb species, which in turn support more diverse associated species groups including invertebrates, birds and mammals.

Whilst biodiversity conservation is extremely important, this must be balanced against the needs of farm businesses and the requirements for food production to ensure food security. Establishing species-rich pasture can deliver multiple benefits to the farmer, including reduced input of expensive materials such as fertilisers, and to wider society in the form of increased ecosystem service provision.

This is possible because rates of grassland productivity and species richness have been shown to be positively related. Studies have demonstrated that yield can be higher in species rich grasslands than in species poor, and that this effect can even be sufficient to offset the need for fertiliser. Increases in yield with higher species richness are the result of resource partitioning, both above and below ground, which allows better usage of resources such as light or nutrients. This can allow plants to utilise resources that a neighbouring species is unable to capture (such as when plants with different root depths utilise nutrients at different levels in the soil profile) reducing the impact of competition.

This fact is important in terms of carbon storage. Carbon, in the form of organic matter, is primarily introduced to soil via the growth of plant roots and from root exudates. Fertiliser application can increase plant growth which can increase soil organic matter input through this mechanism, but fertiliser input can also increase the activity of microbial organisms, which can speed up rates of decomposition leading to carbon loss. In a study considering grasslands across a range of management intensities, soils under low-intensity management with high species diversity were shown to have significantly higher carbon content than those managed intensively.

These factors, considered together, indicate that increasing the species richness of Welsh grassland could reduce carbon loss from soil whilst maintaining current agricultural yield, and reducing fertiliser requirement and therefore management costs.



The Climate Pledge campaign

The Climate Pledge campaign aims to galvanise action from government, business and communities to tackle the climate emergency.

Welsh Government are asking stakeholders to pledge to take action with them to join the collective response to the climate emergency. You can pledge as an organisation, group or individual.

You can encourage engagement within your workplace or sector and within your local community to identify actions you can collectively take and the support you need from others to deliver them. You can also constructively challenge other public bodies, businesses and civil society organisations to make commitments to make a pledge too.

The types of pledges are not restricted and are meant to be a starting point for action. The pledges will be included as part of Welsh Government's Low Carbon Delivery Plan 2 when it is published in autumn 2021.

To date, Welsh Government have received over 80 pledges which form the seeds of action for the All Wales Plan but their aim is to reach over 100 pledges in 2021. To make a pledge visit www.smartsurvey.co.uk/s/rx0po/

The pledge campaign is just one way Welsh Government are looking to directly engage with stakeholders. For more details you can subscribe to their newsletter via the mailbox Decarbonisationmailbox@gov.wales, or take a look at the latest Engagement Approach for the Low Carbon Delivery Plan 2, which can be found at gov.wales/low-carbon-delivery-plan-2-engagement-plan



TEST AND TARGET SHEEP SCAB IN YOUR FLOCK

Sheep scab is a highly contagious disease which causes serious economic and welfare losses to the Welsh sheep industry every year. A key issue regarding tackling scab is the ease of infection from flock to flock, due to the challenges of biosecurity, which is of particular concern in extensive/upland grazing systems, and communally grazed areas. The best long-term solution to scab treatment is to eradicate the disease from Wales and the rest of Britain. The best chance we have of achieving this is if farmers take a collaborative approach to tackling the disease.

The farmer-led 'Tackling Scab' European Innovation Partnership (EIP) Wales project that's trying to eradicate scab in the area surrounding Talybont and Bontgoch, north Ceredigion, has now been running since early 2019.

Twenty-six farming businesses within the area are working with Ystwyth Vets on the project which involves blood sampling a representative number of sheep from each management group annually. This is accompanied by a questionnaire highlighting management and risk factors in relation to scab on the farms. Farms returning positive results are then offered advice on treatment options with follow up sampling – either skin scraping or blood sampling – to ascertain treatment success. The success of the project is underpinned by farmer engagement and information sharing with neighbours.

Unfortunately, the Covid-19 pandemic halted sampling for the majority of 2020, but testing restarted in the autumn and 11 farms have been tested up to February 2021. The results so far highlight that scab remains a problem, with six farms returning positive results. Three of these farms returned a positive result in a single animal. Importantly, two of these farms had not reported any signs of scab, and no visual signs of scab were noted whilst samples were being taken.

This reinforces the effectiveness of blood sampling at detecting infection early within a flock, and that farmers shouldn't just rely on visual signs. These positive farms were able to get the flocks treated at a much earlier stage of infection spread than they would have normally done.

In addition to sampling randomly selected ewes, the project has blood sampled rams over the winter as they could be scab 'sentinels', providing a useful indication of scab presence in the flock as a result of tupping. This approach will be reviewed during 2021, to assess its effectiveness.

The project aims to undertake blood sampling at all of the engaged farms in early 2021, and continues to encourage those eligible farms within the Talybont and Bontgoch area who have not engaged so far to join the project by getting in touch with **Helen Ovens** - helen.ovens@adas.co.uk or **Dafydd Jones** - vets@ystwythvets.co.uk.

For more information on this project, please visit the Farming Connect website gov.wales/farmingconnect



With the upcoming breeding season at Mountjoy, we posed demonstration farmer Will Hannah some key questions regarding his breeding policy and how the Farming Connect genomic testing project has influenced his bull sire choices.

What does your ideal cow look like and how does she perform?

"My ideal cow for this farm is deep-bodied, capacious yet small in stature. This enables her to convert large amounts of fresh grass and forage into milk. We'd be aiming for a mature weight of around 520kg. The herd is mainly New Zealand Friesian, giving a slightly higher yield and better bull calf value when compared to a Kiwi cross herd. Last year, the herd average stood at 6,294 litres and 518kg of milk solids (MS) from 1.1 tonnes of concentrates with 4,770 litres from forage. This is the highest our milk from forage has been and I'll be very happy if we can maintain production at these levels."

From where have the genetics of your most profitable and successful cows come from?

"After ranking the cows this year on kgMS/kgLW, the genetics of our most profitable cows are coming from New Zealand bulls supplied through LIC and lately CRV. These bulls have been bred from cows performing on grass-based systems similar to our own. We have had a British Friesian and Montbeliard influence in the past but these aren't as efficient, therefore don't compare as favourably based on kgMS/kgLW."

As a spring calver do you think £SCI (spring calving index) is suitable for your needs?

"In my opinion, the £SCI index doesn't work as it seems to favour quite slender, frail animals as it is quite heavily weighted towards low

maintenance. This doesn't reflect whether the daughters of high £SCI bulls will be successful grazers or forage converters. As I've said, I'm always looking to breed deep bodied cows with genetics proven on grass based systems so I wouldn't use any of the top ten £SCI bulls currently available, which are mainly young genomic US bred Holstein bulls or from housed Danish Jersey herds."

What are the key breeding traits that you look for when selecting for herd replacements?

"I'm looking to breed a cow that can produce as much milk as possible from forage, particularly grazed grass, as we can grow a lot of grass here in Pembrokeshire. To achieve this, good feet are essential as cows are required to walk up to 2km a day to grass. Tidy udders and low somatic cell count (SCC) are also required and good milking speed ensures cows produce quality milk with minimal intervention from us."

To maximise production from grazing (days at grass), we need good fertility in order to get cows calved and back on to spring grass quickly in a tight block. The empty rate this year stands at 8% after a twelve-week block."

How has genomic testing benefited you?

"We genomically tested our calves this year with the aim of being able to select the best and sell any surplus that weren't quite as good. To test how well the genomic data reflected the actual performance, we also tested our in-calf heifers last year, allowing the results to be

compared against their milk recording data from this year. The results showed a strong correlation between results for production and milk solids. But it also showed much less correlation on SCC, possibly reflecting the lack of genomic SCC data for spring calving herds in general."

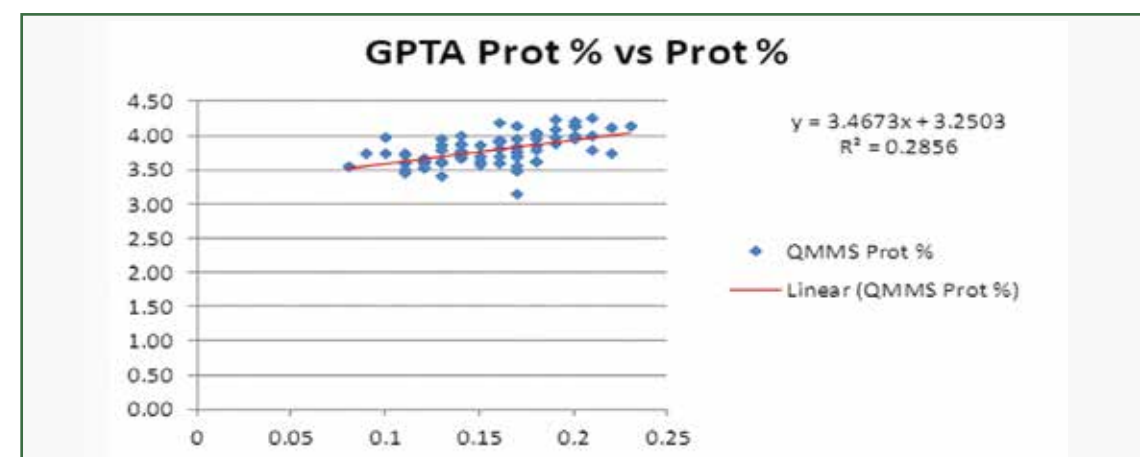
Would you consider it more important to milk record with accurate parentage information and a herd genetic report before going down the genomics testing route?

"If you are looking to get data on your herd, you won't beat milk recording for actual herd performance and, in particular, SCC. However, the results we've had so far suggest there is an opportunity for herds to get a good idea of the potential of their heifers' production from a genetic test alone."



Figure 1. The top performing genomic tested R2 heifer and of type favoured by Will sired by 'Maire Mint Fire-up' who yielded 1.56 kgMS/kgLW during her first lactation

Graph 1. Correlation graph between genomic Predicted Transmitting Ability (GPTA) for protein % against 305 day lactation average protein % for a group of genomically tested first lactation heifers at Mountjoy.



IS TIMOTHY A VIABLE OPTION TO EXTEND THE GROWING SEASON IN UPLAND GRAZING SYSTEMS?

Evidence from Finland shows that farmers had doubled their grassland production in seven years as a result of changing the variety of grass used on the grassland. Finnish farmers now depend on timothy and tall fescue, amongst other grass and clover species, to sustain their herds and flocks.

John Yeomans who farms at Llwyn y Brain, Adfa north of Newtown, wanted to see if he could replicate this on his own land which rises up to 470 metres above sea level. In 2019, an EIP Wales project was developed to examine the inclusion of timothy within leys in an attempt to improve grassland production and utilisation in upland Wales.

The eight trial plots were sown in May 2019 with plots including 0, 10, 25, and 40% timothy (drill and broadcast) in the seed mixture by weight. Sward assessments in May 2020 found the swards to be ryegrass dominant, with timothy plants averaging less than 10% across all the different timothy plots.

The possible reasons behind the failure of the timothy to establish successfully were likely to be a combination of:

- Very wet soil conditions post-establishment may have led to the small seeds rotting at the base.
- Ryegrass competition shading out the young timothy plants.
- High organic matter content soils slowing the liming effect of the ground lime applied at establishment.

The new leys (although short of timothy) performed incredibly well – providing a hugely valuable supply of forage, particularly through the dry period of May/June when the plots (10 hectares (ha) in total) carried over 600 ewes plus lambs. This extra forage supply gained from reseeding is particularly valuable to an upland farm, as the yields are a massive contrast to the 3.2tDM/ha grown on the older permanent pasture that neighbours the plot area which acts as the project's control.

It was felt there was little value to be gained from detailed monitoring of sward quality and animal productivity with such small differences in timothy contents on the different plots. In August 2020 two new plot areas were therefore established with a higher timothy content in the seed mix.

Early indications are that the timothy has established successfully and forms a strong component of the new swards. Weed ingress (chickweed and meadow grass) may present issues for the sward in 2021 but hopefully careful grazing management will help the timothy and other sown grasses to out-compete these weeds. The project team is hopeful that the project can now investigate the yields, quality and animal production from swards with contrasting grass species during the 2021 growing season.

To read more about the project please visit: gov.wales/farmingconnect

Do you want to improve your ICT skills?

Please note: due to the restrictions of Covid 19, all our ICT training is currently provided online with telephone support.

Whatever your skill level, our fully-funded computer training could help you...

- ✓ Manage your business more efficiently
- ✓ Reduce your paperwork
- ✓ Save you time and money

Computer skills for complete beginners

- A study course you can complete at home, at a pace to suit yourself over six weeks
- You will receive a set of six workbooks which will cover the following: Send/receive emails; Microsoft Word; Microsoft Excel spreadsheets; Searching the internet; Social media and Rural Payments Wales online.
- Alternatively choose just the particular topic(s) you require from the above

Computer skills for intermediate learners

This training will build on the computer skills and knowledge you already have.

Intermediate Microsoft Excel

- Provided you already have basic skills, you can learn how simple it is to set up and input data into a Microsoft Excel spreadsheet or 'workbook'.
- Speedy and accurate record-keeping for business and financial management, animal health management and land management.

One-to-one support

You can access up to four hours of one-to-one online or telephone support from one of our specialist ICT tutors, at the level you require. This is an opportunity to focus on any problems or gaps in your knowledge.

ICT online workshops

Learn how to integrate the latest ICT technology into your business.

Topics vary from livestock related technologies to digital marketing tools.

For further information on ICT training, course/workshop dates or to register your interest, visit gov.wales/farmingconnectskillsandtraining or call the Farming Connect Service Centre on **08456 000 813**.



FARMING CONNECT SKILLS APPLICATION WINDOW

Open 9:00 Monday, 3 May to 17:00 Friday, 25 June 2021

The summer is finally in sight after one of the most challenging years ever!

Is this a good time to develop new skills or brush up on existing ones? Could Farming Connect training help you operate more efficiently, more safely or more profitably?



MARGED SIMONS

– young farmer, budding entrepreneur; Lantra Young Learner Awards runner-up

Family farm facts: Marged works at her family's 200 acre dairy farm near Narberth where she is responsible for calf-rearing, youngstock and the daily milking of 140 Friesian cows. She hopes to set up a new equine diversification venture shortly. Also passionate about her work with LEAF (Linking Environment and Farming), she enjoys visiting schools to teach children where their food comes from.

Academic background/experience

- BSc Biology, Swansea University

Farming Connect training

- ✓ Safe use of vet and med (veterinary medicines)
- ✓ Level 2 Award Safe use and application of pesticides (PA1 and PA6)
- ✓ Book keeping and VAT
- ✓ Business planning and development
- ✓ Marketing your business

"Studying 'Safe use of vet and med' has given me reassurance that I'm up to speed with best practice and doing all I can to maintain herd health while keeping our use of antibiotics and anthelmintics to a minimum."

"Completing a number of business-related courses has given me invaluable new skills that have given me the confidence to proceed with my new equine diversification venture."

"Every course I've undertaken has been pitched at just the right level and I've gained practical business and technical skills that I use every day."

NB All training courses are delivered with COVID-19 precautions in place. Digital and blended options are available for a number of training courses.

– One application per window from a registered individual – Maximum of two applications per window per registered business – Those applying for training for the first time will be prioritised



GERALLT HUGHES

– young farmer, budding entrepreneur,
Lantra Young Learner Awards winner

Family farm facts: 2,500 acre upland beef and sheep farm at Nantlle, Caernarfon which includes two large hydro generation plants and a new red deer enterprise, recently established by Gerallt.

Academic background/experience

- Coleg Glynllifon (Level 2 Diploma in Agriculture and home-based apprenticeship)

Farming Connect training

- ✓ Grassland species (e-learning)
- ✓ Safe use of sheep dip
- ✓ Chainsaw tree felling up to 380mm
- ✓ First aid

"It's early days, but having been inspired by hearing about a red deer diversification venture at a big beef and sheep enterprise in New Zealand, I knew it could work for us, provided I had the skills and confidence to do it. That's when I realised I had a lot more learning to do and turned to Farming Connect."

"Farming Connect training has given me the confidence to know that I'm up to date with best practice and I'm tackling everyday tasks as efficiently and safely as I can, giving me more job satisfaction and saving the business money."

For information about all Farming Connect training courses and Storfa Sgiliau visit gov.wales/farmingconnectskillsandtraining



Storfa Sgiliau

...the secure, Continuous Professional Development (CPD) recording tool for personal development

Storfa Sgiliau is Farming Connect's secure online data storage tool. Gerallt and Marged are both keen advocates.

"It's a fantastic facility and with all your Farming Connect training updated for you, it couldn't be easier to keep a record of all your achievements and skills."

"You can access and update your qualifications, skills and professional development data in one secure online place which makes it easy to identify any gaps in your skills set and is also useful if you need a cv."

Making the most of the value of trees and hedgerows for the farm business

In recent years, we've experienced a period of major climate change effect, specifically with an increase in warmer temperatures since the late 1980's early 1990's. To mitigate this threat has led to a major focus on the need to reduce greenhouse gas emissions and sequestering of carbon on farms with a Welsh Government target of net zero carbon by 2050. In order to achieve this and contribute to wider society targets, the opportunities ahead to build resilience to the farm business whilst taking advantage of substantial benefits in environmental and financial terms, are and will be wide ranging. Investment and management in soil health, pollution mitigation, water quality, flood mitigation and improving and increasing green infrastructure and biodiversity on farms will be key factors in the ability to absorb extreme effects of climate change and build resilience for the future against issues such as plant, animal and human health and well-being.

Sustainable land management incorporating farm management planning should consider looking at the farm holistically and integrate trees, hedgerows and woodland as an active asset that will provide multi-benefits, both in environmental and economic terms. Historically, management of green infrastructure on farms has always been a long-established form of agroforestry with wood pasture and grazed woodland systems traditionally utilised for food production.

Integrating livestock with trees in pastoral systems, fostering understanding and identifying value and purpose, will benefit the

farm's natural ecosystem. Implementing the extension and improvement of hedgerows and shelterbelts for shelter and shade will provide increased habitat for farmland birds and small mammal populations, thereby improving biodiversity.

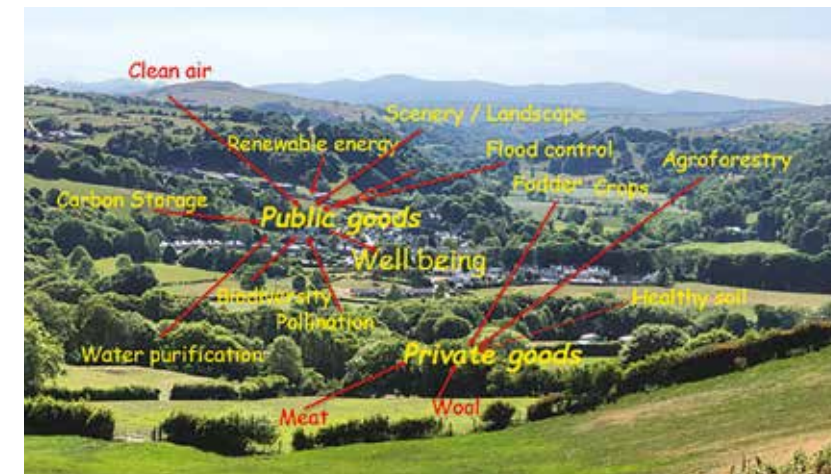
Habitat connectivity should be an objective in the planning stage and the increase in tree cover on farms forges a clear connection between food production and implementing nature-based solutions. How many woodland birds use wool in their nests? It might be a small benefit but it's an example of how interlinked and intricate the benefits of food production and the farm's environment is to wildlife and nature on a wider scale.

Considering boundary management as an integral element of day-to-day farm management provides substantial benefits supporting both the farm business and provision for public good. Linear hedgerows that are fit for purpose with related characteristics such as good structural integrity and rich field edge habitats should be a target objective. Restoration and establishment of new hedgerows and shelterbelts along with hedgerow trees, adjacent watercourse enhancement to secure riparian protection in the form of buffer zones with trees, can result in a substantial network of green infrastructure. Increasing the width, length and quality of the habitat network that also translates in benefits such as shelter, animal welfare, biosecurity and pasture growth, all contribute to increased productivity. All this can contribute greatly to

the Welsh Government target for tree planting and building on existing green infrastructure on farms whilst identifying pockets of marginal and awkward, unused areas means that tree cover can be positively increased without impeding on food production by planting up larger field areas.

Public interest in food production systems has increased and future support for agriculture

will focus on nature-based solutions and activities that will maintain, restore and enhance biodiversity, wildlife, landscape, water quality, soil health and sequestering of carbon. Trees on farm will play a major part hand in hand with food production systems that will reap the benefits resulting in improving environmental and economic performance of the business.



An example of the provision of public and private goods that green infrastructure provides for the wider society in a farming landscape.

It's important to understand the regulatory and financial support that's available for trees, hedgerows and woodland when planning your project. Farming Connect can provide tailored support to provide independent, confidential and bespoke advice when planning your project to meet your objectives.

KEY ACTIONS

1. Consider planting trees in awkward, unused areas,
2. Are there areas of your farm that would benefit from shelterbelts?
3. Protect watercourses by creating buffer zones with trees.
4. Contact your local Farming Connect development officer to see what support is available.

STOPIO'N DDIOGEL SAFE STOP

Cyn gadael y cerbyd neu ganiatáu
i unrhyw un ddod at y peiriant
neu gwblhau gwaith:

Before leaving the vehicle cab or
allowing anyone to approach or
undertake work on the machine:

1. GOSODWCH Y
BRÊC LLAW



1. ENGAGE YOUR
HANDBRAKE

2. RHOWCH Y
RHEOLYDDION
YN NIWTRAL



2. PUT CONTROLS
IN NEUTRAL

3. DIFFODDWCH
YR INJAN



3. SWITCH OFF
YOUR ENGINE

4. TYNNWCH
EICH ALLWEDD
O'R CERBYD



4. REMOVE YOUR
KEY FROM THE
VEHICLE

MAE "STOPIO'N
DDIOGEL"
YN ARBED
BYWYDAU A
BYWOLIAETH

PARTNERIAETH
DIOGELWCH
FFERM CYMRU
/////////
WALES
FARM SAFETY
PARTNERSHIP

"SAFE STOP"
SAVES LIVES AND
LIVELIHOODS