THE MAGAZINE FOR FARMERS & GROWERS IN WALES

FARMING connect

World-first use of genomics in sheep propelling Welsh flocks into new eras

Our Farms Network
Building the health of the farm from the ground up

Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

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gov.wales/farmingconnect

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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.

OUR FARMS

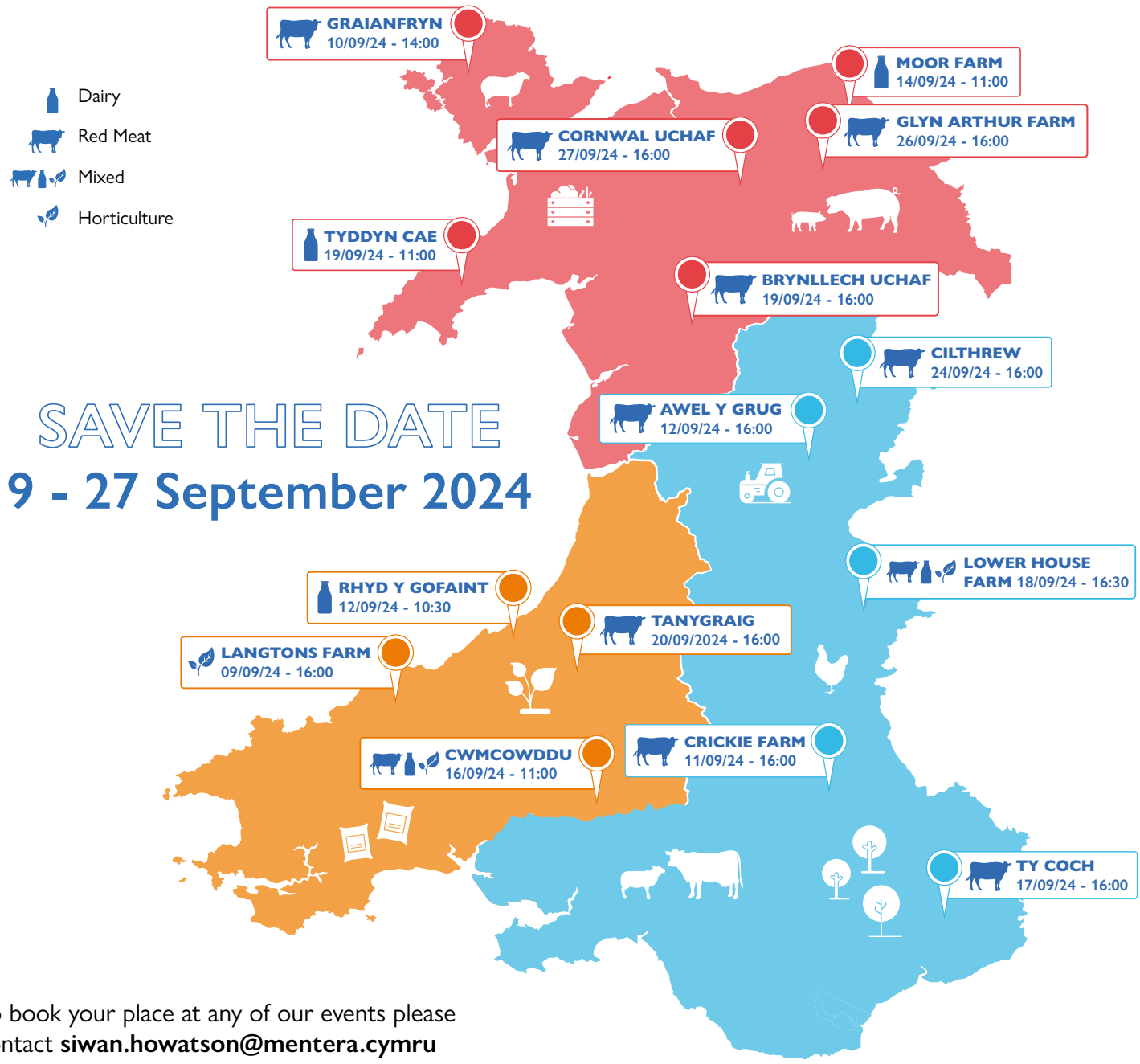
Farm Walks - September 2024

Join Farming Connect for an unique series of farm walks across the Our Farms Network this September.

Join Farming Connect for an unique series of farm walks across the Our Farms Network this September. These walks offer a chance to see the latest innovations in action and delve into the results of on-farm trials firsthand.

Expect to see:

› A range of demonstration farms throughout the network › Explore the findings of on-farm trials focused on improving farm practices › Engage with experienced farmers and industry specialists › Network with fellow farmers and share valuable insights.



SAVE THE DATE

9 - 27 September 2024

To book your place at any of our events please contact **siwan.howatson@mentera.cymru**

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OUR FARMS

DISCUSSION GROUP PROJECTS - INTRODUCTION

Farming Connect 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 three of these projects.

Sheep

PROJECT 1 - Reducing Mastitis in Commercial Sheep Flocks

Sheep mastitis is a serious inflammation of the udder in ewes, most commonly caused by a bacterial infection. It's a major concern for sheep farmers estimated to cost the industry more than £120 million per year.

Reasons for economic loss:

- Premature culling of affected ewes
- Loss of udder function
- Reduced milk yield and quality
- Reduced lamb growth rates

Seventeen farmers, with guidance from Flock Health Ltd, are aiming to gain a better understanding of the factors that affect the incidence of mastitis in commercial flocks and to reduce the rate of culling.

Group members have recorded all mastitis cases in 2023 to set a baseline for more monitoring for the 2024 production year. Farmers are collecting data such as ewe age, body condition score, teat condition, litter size, and weeks post lambing infection.

Farmers taking part in this project have also taken milk samples from a proportion of infected udders for bacterial culture and sensitivity during the 2024 production year. The project will also test the efficiency of a range of antibiotics against mastitis.

The data and samples collected from the farmers will help to identify patterns of mastitis at specific times during the production cycle (pre-lambing, early or late lactation, pre-weaning, post weaning).

Analysis of the data from these commercial flocks will help to identify the key factors involved in development of mastitis and suggest strategies to improve management to reduce ewe culling rate and antibiotic usage.

The project will also contribute to the Sustainable Land Management outcomes including:

- Achieving and promoting high standards of animal health and welfare
- Reducing emissions of greenhouse gases

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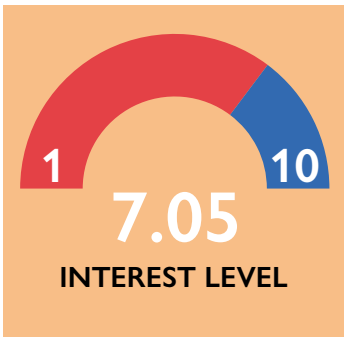
PROJECT 2 - Sheep greenhouse gas emissions (GHG) - What-if?

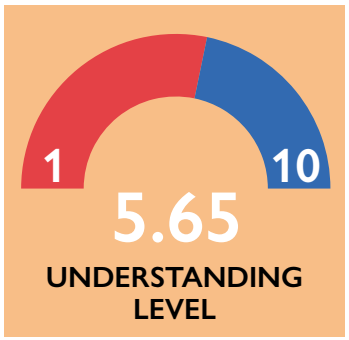
The Welsh Government has set a target to achieve net zero GHG emissions by 2050. Reducing farm GHG emissions is a Sustainable Land Management objective and involves taking a fresh look at the whole system. Making reductions in GHG emissions can be achieved while maintaining and often improving farm profitability.

This project aims to empower Welsh sheep farmers to understand and minimise their flock's green house gas emissions. By utilising the "What-If" tool and collaborating within discussion groups, farmers can gain valuable insights and implement strategies to reduce their environmental footprint.

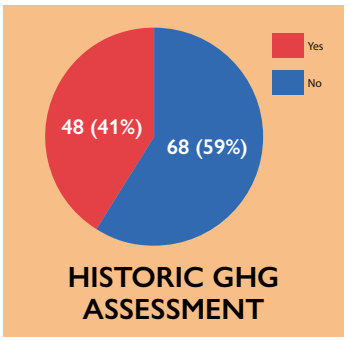
A total of 116 farmers have participated in an entry survey to gain insight into their current interest and understanding of greenhouse gas emissions. Results can be seen below, with 1 scoring low and 10 being high.



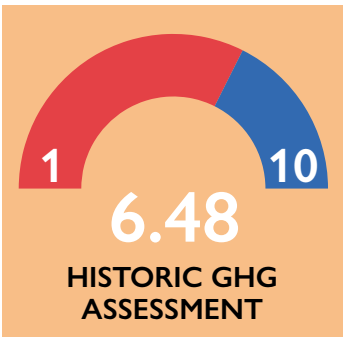
How interested are you in a GHG assessment on your farm?



How well do you understand GHG emissions and the consequence for Welsh farming?



Has the farm carried out a GHG assessment before?



Was this previous GHG assessment an useful exercise?

Nineteen farmers, with guidance from Flock Health Ltd, will be undertaking further data collection and inputting via the Map of Ag "What if" tool via an online app. This online tool allows farmers to:

- Conduct customised analysis by adjusting various parameters specific to their farm.
- Explore different scenarios related to feed types, manure management, grazing practices, stocking densities, fertilisers, and nutrient management.

The "What if" tool will determine whether they can identify activities that can reduce flock GHG emissions in the future. Once they have the information via the online app, farmers will be asked to identify key areas on their farm for GHG emission reduction and set individual SMART goals.

Once data collection and input are complete, participants will reap the following benefits -

- Gain insights into their farm's specific GHG footprint.
- Explore potential emission reduction strategies.
- Set achievable goals for improving their farm's sustainability.
- Contribute to a collaborative effort in minimising the Welsh sheep industry's environmental impact.

PROJECT 3 -
Control and Prevention of Clinical and Sub-Clinical Mastitis

Mastitis, which is inflammation in the udder, is a major concern for dairy farmers as it reduces milk quality and yield, along with causing discomfort and health risks for the cows. AHDB Dairy reported mastitis treatment and control to be one of the largest costs to the GB dairy industry and is a significant factor in dairy cow welfare. Treating each case of mastitis can cost between £250 and £300 on average due to vet costs, reduction in yields and loss of milk, but costs vary for mild and severe cases.

A group of eleven farmers are working with Anna Bowen, The Anderson Centre and James Breen, an industry expert in mastitis control to develop a mastitis plan for their individual herds, with the aim of sharing findings with the wider dairy sector.

Group members will be inputting their data into the AHDB Mastitis Pattern Tool (MPL) where James will interpret the results and recommend evidence-based control strategies specific to each farm.

The data that will be captured for analysis include -

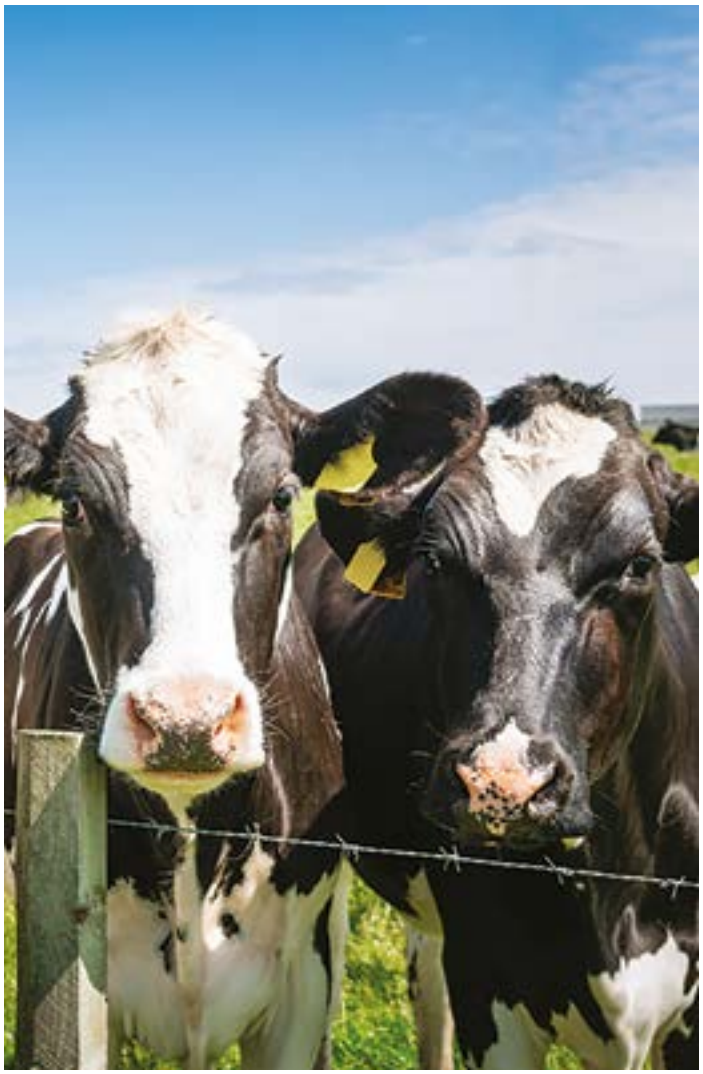
- Mastitis incidence
- Bulk somatic cell count (SCC)
- Mastitis origin (dry cow vs lactation)
- Mastitis in first-lactation heifers
- Dry period cure and new infection rates (SCC)

Through the project, farmers will be sending milk samples away for bacterial and antibiotic sensitivity sampling to ensure correct antibiotics are being administered and to check for sensitivity to penicillin.

Six months into the project the group will review their data, identify areas for change and implement further recommendations. By working together, the group members can share experiences, identify common causes within their herds, and develop a more effective plan to tackle mastitis.

The project will also contribute to the Sustainable Land Management outcomes including:

- Achieving and promoting high standards of animal health and welfare
- Reducing emissions of greenhouse gases



Dairy cows

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Farming Connect:
OUR FARMS NETWORK

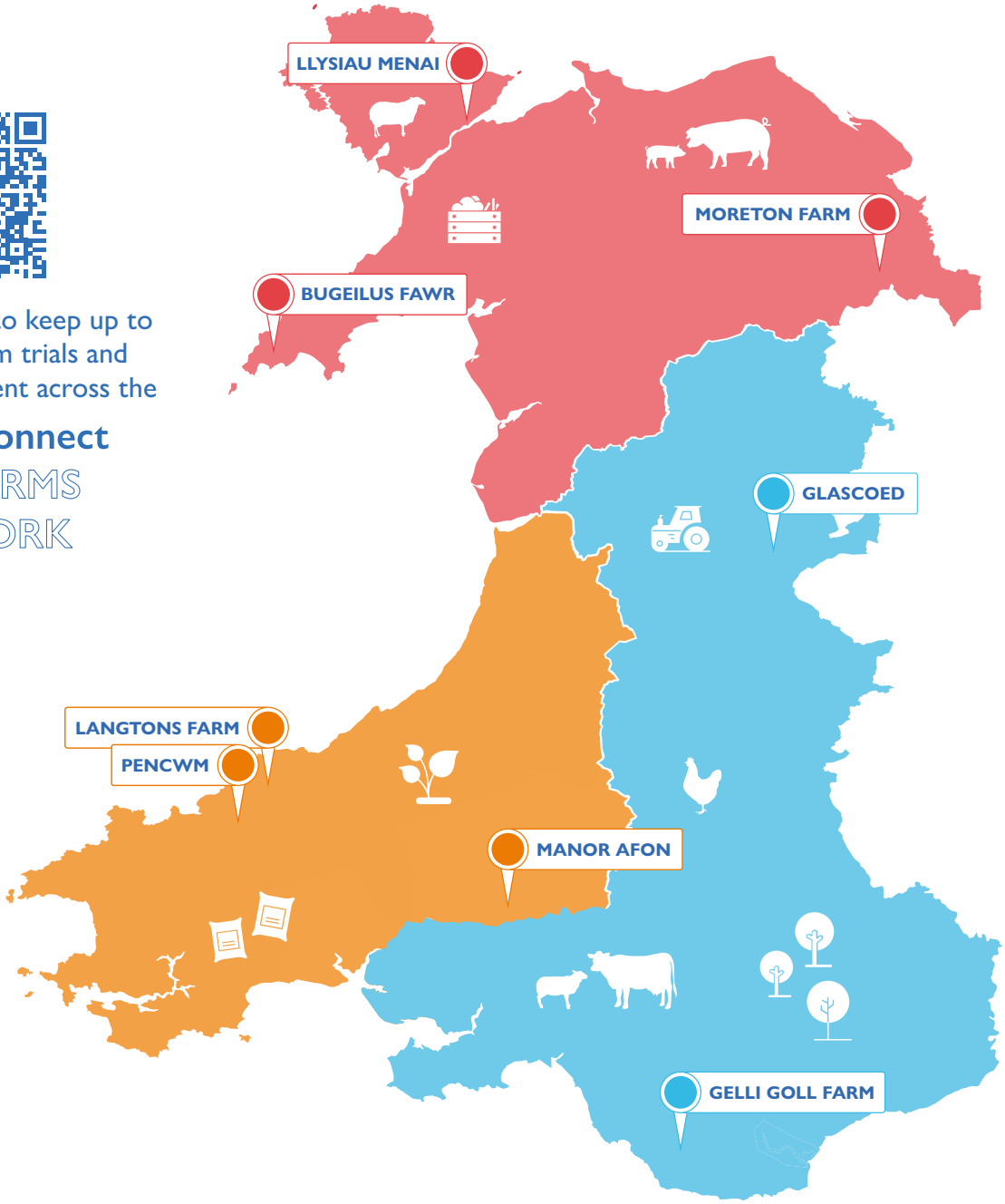
The Farming Connect Our Farms Network continues to expand as nine new farms across Wales join the Network to run on-farm trials and projects to share the results with the wider industry.

The new additions to the network include beef, sheep, dairy, poultry, mixed and horticulture farms, who will run on-farm trials and projects focusing on building soil health, crops for out wintering cattle more sustainably, diversifying horticulture businesses for wholesale distribution, the role of integrated pest management (IPM) in horticulture, grassland and arable systems and woodland management on dairy farms.

Stay tuned to learn more about these farms who will be opening their doors to you over the next year to share best practice and new ideas on the back of their on-farm projects and trials results.

Use the QR code to keep up to date with on-farm trials and projects development across the

Farming Connect
OUR FARMS NETWORK



LANGTON'S FARM

Extending the season of tomato production for wholesale distribution ›

Katherine and David Langton have recently moved to a 70-acre farm on the West Coast of Ceredigion to diversify into a number of horticulture ventures including field scale production and fruit orchards. The farm in Cardigan will build on their existing 4-acre market garden business which currently produces agroecologically grown fruit and vegetables for a box scheme, as well as wholesale production to local retailers and outlets.

'Food in Schools' pilot 2023

In 2023 the Langton's were part of the 'Food in Schools' pilot, a wider stakeholder project exploring how to increase the volume of locally and sustainably produced food into the public sector supply chain in Wales. Key partners in the project include Food Sense Wales, Lantra, Castell Howell Foods and a number of local authorities and food partnerships. The Langton's were successful in growing a range of crops for Welsh schools and therefore wish to build on this for the coming season.

With support from Farming Connect, the 2024 season will see the farmers trial upscaling their tomato production and extending the season to meet the demands of the intended market as part of the Our Farms Network.

PROJECT AIMS:

- Identify varieties of tomato that are fit for purpose for local public procurement
- Trial different planting dates to extend production into the Autumn
- Create a reliable supply of produce for wholesale distribution into Welsh schools
- Explore different growing methods to meet the food production standards
- Increase yields from previous years

› SUCCESSIONAL PLANTING

The project will use staggered planting dates in April, May and June to produce a reliable supply throughout the Summer and to push production as far into the season as possible to align with the Autumn school term. Late season temperatures will partly determine the success of the crop and other considerations will need to be addressed, including risk of blight.

› VARIETIES

A set of production standards have been drafted for the 'Veg in Schools' project which all farmers have to adhere to. Therefore, in this trial, specific varieties have been selected to meet the requirements of the school caterers and the wholesale distributors who supply into the public procurement system. Crop specific properties have also been considered, such as blight resistance in later fruiting plants. The varieties chosen are Sakura (cherry), Rondobella (salad), Pozzano (plum) Vivagrande (beef) and Crimson Crush (salad – blight resistant). Tomatoes produced in the Summer, particularly the plum variety will be used in sauces, with fresh tomatoes going into the schools in the Autumn term.

Katherine Langton with some of the farm's tomatoes

› GROWING METHODS

David and Katherine will use the lower and lean trellising system for production, with plants growing up a string hooked to the crop bars of the polytunnel. As they mature, the plants are systematically lowered, allowing vines to grow longer in the restricted space, and therefore producing more fruit. This method helps regulate air flow, reduces disease and limits potential pest damage. A lower and lean system also makes harvesting more accessible as the plants mature. Two lower and lean methods will be trialled; a simple hook and string system and the *Qlipr* system which, although more costly to purchase, can be more efficient and can give more control in leaning heavier plants.

› OPPORTUNITIES FOR FARMERS

Identifying a secure buyer is essential for every horticulture business. For farmers and growers who can produce at scale, public procurement and the wholesale supply chain is a significant avenue worth exploring as an alternative route to market. With only 2% of land in Wales under horticulture production and a growing demand for locally produced fruit and veg across the country, diversifying into horticulture is a great opportunity for farmers considering new ventures for their business.

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LOCATION:
Ceredigion

FARMER(S):
Katherine and David Langton

FARM:
Sector: Horticulture
Farm size: 70-acre
Ventures:
Field scale production
Fruit orchards

GLYN ARTHUR FARM

Woodland management planning at Glyn Arthur Farm ›

Glyn Arthur is located in the Clwydian hills Area Of Outstanding Natural Beauty (AONB) about 7km east of Denbigh. The land extends over two sheltered parallel river valleys which run North East to South West and lie between 100m and 450m above sea level.

The extent and nature of the woodland has developed in phases over several centuries at Glyn Arthur. There are areas of alder carr (wet woodland), ancient semi-natural woodland, historic parkland which is a priority habitat and numerous mature lone broadleaf trees, mainly oak, beech, ash & sycamore which contribute to the notable matrix of woodland and trees on the farm.

Other woodland compartments include approximately 7.44 ha mixed conifer plantations made up of larch, Douglas fir with some Western red cedar, Sitka and Norway spruce. These were planted in the 1960's and intended for timber production but also planted as a nurse crop to help establish additional broadleaf planting.

The woodlands have not been actively managed for some time other than stock exclusion.

A woodland baseline assessment has been undertaken at Glyn Arthur providing an overview of current status with a view to planning future management opportunities. The Woodland assessment has forged discussion to engage with sustainable land management options to improve green infrastructure on the farm to increase and improve carbon sequestration, biodiversity, water quality and incur revenue utilising the multifunctional benefits that trees provide. With this in mind a project to identify improving woodland condition and bring the woodland back into an active asset for the farm will be undertaken this summer.

The woodlands at Glyn Arthur are an interesting and valuable mix of native woodlands of high conservation and biodiversity value with some good timber quality conifers. The management plan will target improvement to achieve the most from both these opportunities. The first step would be to define management objectives to promote a future vision which will include the farmer's objectives. This will contribute to recommended management prescriptions and silvicultural practice method and related costs against possible grant funding opportunities and timber revenue. It will also identify capacity to deliver the work program by the farmer or, if it's not practical, to employ local contractors.

The plan at Glyn Arthur will involve field work and ground truthing possible options to meet objectives with prescriptions to be undertaken in an action plan. This will provide the basis to make arrangements with trusted contractors to undertake the woodland operations prescribed.

Panorama of central landscaped area of Glyn Arthur

The timber produced from felling will be sold but an added value element will be investigated with provision of Douglas fir and Larch for milling purposes on farm to provide a valuable resource of material for fencing and cladding depending on requirements. The sale of timber will focus on the local supply chain and there is high demand from local small-scale mills for Douglas Fir, Western red cedar and Oak.

The management plan will look to transition the woodland to focus on Continuous cover forestry principles as the silvicultural practice to take forward for the farm. This will allow a realistic program of works that can be accommodated within the farming calendar and provide a source of timber revenue on a yearly or two-yearly regime to feed into the local supply chain.

The project will contribute to the Sustainable Land Management outcomes including:

- Clean air
- Clean water
- Maximise carbon storage
- Mitigate flood & drought risk
- Protected natural landscapes
- Reduced GHG emissions
- Resilient ecosystems

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OUR FARMS

LOCATION:
Llandyrnog, Denbigh

FARMER(S):
Robert Williams and Sarah Hammond

FARM:
Sector: Red Meat
Farm size (ha): 160
Livestock numbers: 650 ewes and 200 ewe lambs

BUILDING THE HEALTH OF THE FARM FROM THE GROUND UP

Huw Foulkes at Pentrefelin Farm, Llandyrnog, Denbighshire has developed a small 'micro dairy' selling milk and meat direct to his customers and building a relationship with them based on the health, welfare and environmental impact of his enterprise. He milks dual purpose Red Poll cows which are fed on home-grown forage and milked once a day. The calves are kept on the cows during the day and separated at night to allow Huw to milk them in the morning.

The system at Pentrefelin is built around soil health and Huw is taking back management of the land that was previously rented for growing maize by adopting a regenerative approach of mob grazing on a rotational basis with long rest periods in between grazing.

This approach will build resilience in his system reducing his reliance on fertiliser inputs, reducing greenhouse gas emissions and increasing carbon storage. The improved soil structure will help mitigate against flooding or drought and help to build the biodiversity levels below ground which will support biodiversity above ground.

The project at Pentrefelin is developing a baseline assessment of the soils. Three fields are being monitored

- **Field 1** – managed regeneratively for 1 year and includes an agroforestry system. Three lines of fruit trees have been planted and fenced off which creates an infrastructure to facilitate rotational grazing.
- **Field 2** – managed regeneratively for 3 years and grazed on a rotational basis.
- **Field 3** – managed regeneratively for 6 years and grazed on a rotational basis.

The Soil Mentor App is being used to record the information collected which includes

- **VESS** – Visual Assessment of Soil Structure
- **Bare earth percentage**
- **Rooting depth**
- **Nodulation of legumes** – a measure of the small nodules that appear on the roots of legumes (e.g. clover) and provide an indication of how well the plants are fixing nitrogen.
- **Rhizosheaths** – these are coatings of soil particles that cling to the plant roots. They are an indication of biological activity in the rooting zone.
- **Earthworm numbers**
- **Other soil insects** e.g. wireworms, chafer grubs. These are pest species that feed on plant roots.
- **Slake test** – this test scores how well the soil structure holds together
- **Infiltration rates** – this provides a score of how quickly water can penetrate the top soil structure.

In addition, samples are being analysed under the microscope to assess the levels of bacteria, fungi and other microorganisms that provide an indication of soil health. And finally, Pentrefelin is part of the **Welsh Soil Project** which is quantifying the amount of carbon stored in a range of soils across Wales.

Earthworms and other soil insects

Infiltration rate

VESS

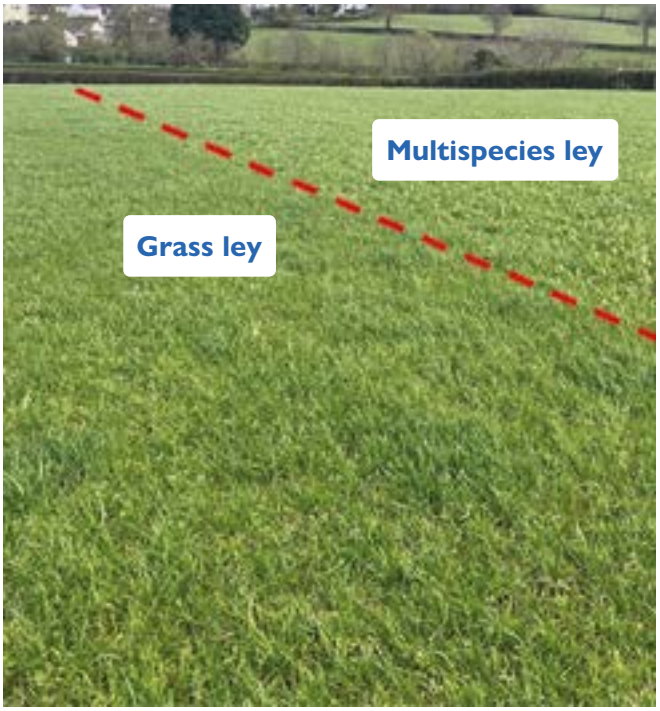
As can be seen, there is a comprehensive suite of information being gathered to inform Huw about how well his management is contributing to developing healthy, productive soils. This information will be helpful if Huw enters the Sustainable Farming Scheme as the proposed actions include monitoring soil health. However, collecting information on this scale requires time and effort from the farmer. It is also possible that specialist input will be required to interpret the results. With this in mind, another set of data has been collected using a commercial soil testing laboratory that is able to provide analysis of pH, soil nutrient indices, organic matter, soil texture class (sand, silt or clay) and microbial activity. Obtaining this data is much simpler as all that's required is a soil sample from each field that is sent to the laboratory. Results from both approaches will be compared.

PROJECT UPDATE -
Are multi-species swards as diverse as Welsh farms?

RECAP - PROJECT AIM

This replicated Pan-Wales field trial aims to compare the productivity and environmental impacts of a multispecies (often referred to as herbal ley) reseed in comparison with a conventional grass sward. The project also offers an opportunity to investigate the impact of varying site conditions (i.e. differing farms on a range of soil types) on the leys' success.

Figure 1 shows a project field on one of the participating farms in the Spring. The divide between both treatments (multispecies and conventional grass ley) within the field is visible and highlighted by the dashed line.



A project field on one of the participating farms. The dotted line demonstrates the field divide of both treatments.

GRAZED FIELD SITES

The majority of the farms involved will be implementing a controlled grazing trial with weaned lambs assigned to two groups (to graze the multispecies ley and conventional grass ley, respectively) based on their live weight and gender at the outset. The groups will rotationally graze each treatment, with the paddock sizes determined according to the field size, sward growth and availability of stock.

The measurements include:

- Live weight of the lambs on specific dates to measure live weight gain (at the beginning, middle and end of the grazing period)
- Health screen check - trace element analysis from a proportion of the lambs from each treatment after ample grazing time to allow for acclimatisation to the diet
- Faecal egg count (FEC) to monitor worm burden from a proportion of the lambs grazing each treatment
- Sward quality by taking fresh forage samples for analysis from random areas within each paddock (that are stock-excluded). Samples will be cut to mimic lamb grazing
- Sward composition and persistence - monitored throughout the grazing period to a) assess the species that have successfully germinated (in comparison with the seed mixture composition) and b) assess changes in species composition as the treatments are grazed

MULTISPECIES SILAGE PRODUCTION

One dairy farm participating in the project will focus on multispecies silage production, and specifically, its yield and quality. All multispecies leys vary in their botanical composition and stages of maturity, which will influence their wilting rate and success. On this farm, various wilting periods will be compared. Both the multispecies and conventional grass sward will be cut for silage and allowed to wilt for 48 hours before conserving. Forage samples will be taken from both treatments (multispecies ley and conventional grass ley) post-wilting to be analysed for their chemical composition. The forage will be chopped to a desired length, treated with inoculant and ensiled.

These steps will be mimicked as an 'in vitro' experiment, away from the field. In order to compare different wilting times, forage samples removed from the field on the day of cutting will be allowed to wilt for a) 24 hours, and b) 48 hours, prior to chemical analysis and being treated with an inoculant. These samples will be weighed and ensiled in sealed jars in a dark environment for a period of 90 days. After 90 days, the samples will be re-weighed to determine dry matter loss and analysed for their chemical composition and fermentation parameters as follows:

Chemical composition -

- Dry matter
- Crude protein
- Water soluble carbohydrates
- Neutral detergent fibre

Fermentation parameters measured via wet chemistry technique -

- pH
- Lactic acid
- Total volatile fatty acids (VFAs) - acetate, butyrate, propionate
- Ammonia-N
- Ethanol

For more information and to follow the trial's results, please visit the *project page* on the Farming Connect website.

Multispecies ley

TRY-OUT FUND

Eighteen Try Out Fund (TOF) projects have been awarded to farmers and growers across Wales to address specific local problems or opportunities with the aim of improving efficiency and profitability within agricultural business whilst protecting the environment aligning with the Suitable Land Management Outcomes.

These three projects have received up to £5000 of funding to try-out their ideas and bring them to life. For information on all 18 projects please visit the Farming Connect website.

Upland dairy farm trialling herbal ley mixes established with direct drilling

A Welsh upland dairy farming business is aiming to accelerate its move away from a reliance on nitrogen fertiliser for growing grass by growing herbal ley mixes.

Taking on the long-term tenancy of 48ha Maes Dulas Farm, Machynlleth, was a prompt for Sophia Morgan-Swinhoe and Sam Wren-Lewis to take a fresh look at how they produced feed for their Jersey cow and goat herds.

Grass leys at the farm were historically established with perennial ryegrass varieties, but with an ambition to reduce dependency on nitrogen fertiliser, to reduce their cost of production and for the long-term benefit of the soil and the environment, the couple are trialling diverse mixes.

Although the benefits of herbal leys for fixing nitrogen and improving soil health are well documented, what is less understood is their establishment in existing perennial ryegrass leys in upland land through direct drilling - and the varieties that are best suited to that method to ensure that the leys remain productive.

Three one-hectare plots of different seed mixes are being established at Maes Dulas Farm this spring and a perennial ryegrass plot will act as a control.

One mix is a multi-species sward that focuses on promoting nitrogen fixation, to maintain yield productivity without synthetic nitrogen fertiliser, and another has an emphasis on deep rooting varieties to increase soil health and carbon sequestration, as well as other benefits such as the soil's water retention and drought resistance.

The third is a combination of both.

The performance of all plots will be measured at the end of the 2024 grazing season.

"We're excited to see how a range of diverse species can help regenerate previously nitrogen dependent pastures," says Sam.

Sophia Morgan-Swinhoe

TRY-OUT FUND

‘Try Out Fund’ dairy farmer aims to increase soil biology

A dairy farmer is introducing hundreds of species of beneficial bacteria, fungi, protozoa and nematodes into his farm soils in a bid to create the healthy ecosystem he needs to support grass production without inputs.

Sam Carey recently converted the former beef and sheep farm at Mathafarn, Llanwrin to support low/no input spring calving dairy production with emphasis on soil health and taking a regenerative approach.

Sam sees his soils as his biggest asset and is introducing an innovative approach that could further increase soil biology.

With support from the Farming Connect Try Out Fund he is trialling the effectiveness of a product incorporating beneficial bacteria, fungi, protozoa and nematodes which have been grown using compost as an incubator.

“I am very grateful for the Try Out Fund, it is enabling us to push boundaries, try alternative methods and test the unknown,” he says.

Six fields at Mathafarn have been divided in two with the product applied to one half and with no intervention in the other.

A different application rate will be used across the trial plots to determine which has the biggest influence. Long term aim is to eliminate chemical inputs, reducing threat to watercourses and also to improve soil infiltration rates to minimise runoff.

Grass growth will be monitored through the 2024 growing season and the mineral status of swards will be analysed. Soil infiltration changes are being examined too and soil tests carried out to assess soil biology changes.

Sam, a Farming Connect mentor, has long taken an interest in soil and soil health but an online soil health course run by internationally recognised soil microbiology expert Dr Elaine Ingram was his catalyst to submitting an application to the Farming Connect Try Out Fund.

The project will conclude in February 2025 when the results will be shared with other farmers.

Sam Carey

TRY-OUT FUND

Transition milk trial targets calf health at Pembrokeshire dairy farm

A Pembrokeshire spring-calving dairy farm is introducing a new feeding system for newborn calves in what is thought to be the first trial of its kind in a large-scale herd.

Will and Alex Prichard are feeding enriched pasteurised transition milk to calves in their first 10 days of life rather than abruptly transitioning them to whole milk or milk powder.

Research has shown that feeding transition milk to young calves vastly improves their digestive system's ability to digest milk, with those benefits sustained to keep them healthy and thriving as they grow.

The Prichard's, who produce milk from 500 spring calvers, were keen to trial this feeding system in their own herd at Escalwen, Letterston, in the hope of improving calf health and wellbeing.

Although the health benefits from enriched pasteurised transition milk have previously been demonstrated in all-year round calving herds in the USA and Canada, it is believed it is the first time it has been trialled in a large-scale block calving herd.

Even after a few hours the animal loses its ability to absorb antibodies – there is a dramatic reduction within 10 hours of birth and, by 20 hours, that capacity has all but gone.

To establish the effectiveness of the transition milk product, calves born at Escalwen this spring are being blood tested for antibody levels. The transition milk is also being tested for its immunoglobulin (IgG) status before and after it has been pasteurised.

If it needs enriching this is being done to raise the BRIX value to a minimum of 12.5%. It is then fed to calves during their first 10 days of life.

An optical refractometer is being used to measure milk BRIX as it gives an instant result but by the end of the study all batches of transition milk will have been tested for IgG using Radial Immunodiffusion Assay at the University of Edinburgh.

Vet Dr Ryan Davies, director of Veterinary Technical Consulting Ltd, who is providing expert input into the project, says this will enable the accuracy of milk BRIX to be determined to quantify IgG status.

"We will then assess this against the health status of the calves," he says.

Mortality from neonatal calf diseases such as diarrhoea, pneumonia and navel and joint ill is being monitored and antibiotic use too, as well as daily liveweight gains, with calves weighed at birth, at 30-35 days and at weaning.

The Try Out project hopes to understand more about how dairy farmers with large block calving herds can consistently produce animals that are healthy, productive and have a good quality of life through optimising calf health with preventative healthcare.

More productive animals mean less carbon emissions, higher standards of animal welfare and a reduction in antibiotic usage.

"Having the ability to acquire extra resources at the busiest time of our year has allowed us to monitor the results of our actions in a more scientific fashion," says Will.

"Funding large scale testing is telling us so much about what is happening in our own herd environment and most importantly what behaviours and protocols are driving tangible improvements in herd health and antibiotic reduction."

They had already made big gains in improving calf health before this project got underway.

The five-year average for morbidity in their pre-weaned calves from 2018-2022 was 45%, in line with the national average of 47% - in 2023 it was reduced to 17%.

Use of the Highest Priority Critically Important Antibiotics was reduced from 1.98mg/ population corrected unit (PCU) in 2022 to zero the following year.

Alex Prichard

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SGILIAU A HYFFORDDIANT
SKILLS AND TRAINING

Flexible online training to support farmers move towards sustainable farming

Farming Connect has launched a new set of online modules based around practices that maintain the productivity and health of farmland and livestock in a sustainable way, to help Welsh farmers as they make the transition to the Sustainable Farming Scheme (SFS).

The accredited suite of modules will give farmers an overview of the future direction of agriculture in Wales. These modules give an insight into how to reduce, reuse and recycle inputs, nutrients and waste and will cover several topics on farmland and livestock.

Some of the modules covered include:

- **Nutrient management planning: understand the value of soil and slurry testing and how to complete a nutrient management plan.**
- **Improving soil fertility and increasing yields through crop rotation, use of green manure, composting, and minimum tillage.**
- **Antibiotic resistance: provides guidance on reducing antibiotic use and preventing the spread of antibiotic resistance from farm to farm.**
- **Anthelmintic resistance: to give farmers the tools to understand how to protect their animals whilst minimising the risk of resistance developing.**
- **Chemicals used for controlling pests and weeds will come under the spotlight too with a module covering Integrated Pest Management (IPM) approaches that avoid the use of synthetic pesticides or herbicides.**
- **Grassland Management: to understand how to make better use of grass in their systems, maximise feed quality to improve livestock growth rates.**
- **Reducing Ammonia Emissions: looking at strategies to reduce on farm emissions.**

When participants have completed all seven modules, they will be awarded a Lantra Awards certificate that will be automatically saved in their Storfa Sgiliau account; a record will be available to view or download at any time.

These modules are accessible at any time and can be completed where and when best suits the participant.

To access:

› Log into your BOSS account
› Contact your local Farming Connect Development Officer

Agricultural Minimum Wage changes in Wales from 1st April 2024

All employed agricultural, horticultural and forestry workers in Wales (including workers employed by gang masters and employment agencies) are entitled to be paid at least the Agricultural Minimum Wage.

The Agricultural Wages (Wales) Order 2024 replaces the 2023 Order which means that as from 1st April 2024:

- There will be increased minimum pay rates for all grades of worker.
- All allowances (which include dog allowances) will be increased by 8.5%.
- The overtime rate is now payable at 1.5 times the agricultural worker's actual hourly rate, rather than the applicable agricultural minimum wage hourly rate.

The age bands in grades A and B under the Order have also been amended to reflect changes made in relation to the National Living Wage which is now payable for workers aged 21 and over.

The wage rate increases were recommended by the Agricultural Advisory Panel for Wales (AAP), an independent body chaired by Dr Nerys Llewelyn Jones. The panel, which has been operational since 2016, is made up of representatives from the Farmers' Union of Wales, National Farmers Union Cymru, Unite the Union, and three independent members.

During the last eight months, the AAP members negotiated the changes to pay and terms and conditions under the Order and consulted industry stakeholders on its draft proposals before advising Welsh Ministers on the Panel's recommendations for new minimum wage arrangements and terms and conditions of employment for all agricultural, horticultural and forestry workers in Wales. The Panel members drew on their expertise and consideration of the economic conditions within the industry at the time of the consultation, as well as external factors such as the National Minimum Wage changes.

Welcoming the new Order, Dr. Nerys Llewelyn Jones said:

"The new arrangements ensure that all agricultural workers receive fair, regularly reviewed wages, allowances and terms of employment, further contributing to the Welsh Government's health and wellbeing agenda by safeguarding household incomes, especially within rural communities.

"The Order will help ensure that careers in agriculture, horticulture and forestry are considered viable and sustainable choices for both current and potential employees, and by setting out clear guidelines for employers, the Welsh Government's new Order will do much to encourage the development and retention of an appropriately skilled workforce in Wales.

"It will also ensure that employers treat all employees appropriately, including farm workers and apprentices working within the sector.

"It is a criminal offence not to pay all agricultural workers at least the Agricultural Minimum Wage and all employers must comply with the requirements set out in the 2024 Order," said Dr. Jones.

The minimum rates of pay and allowances and all other minimum terms and conditions to which agricultural workers, including those who work within the horticulture and forestry sectors, are entitled to by law are set out in the Agricultural Wages (Wales) Order 2024. More detailed information and guidance is available at -

www.gov.wales/agricultural-advisory-panel-wales

www.gov.wales/agricultural-wages-minimum-rates-pay

World-first use of genomics in sheep propelling Welsh flocks into new eras

Farming Connect and Welsh sheep farmers are at the forefront of new technologies, as its Welsh Sheep Genetics Programme is the first to implement genomic breeding values on a global level.

The Welsh Sheep Genetics Programme (WSGP) delivered through Farming Connect, is working with 100 flocks pan Wales and collects primary flock performance data, using this data to improve the productivity and the profitability of flocks. Data collected also feeds into three different projects that underpin the genetics programme.

Following on from a feasibility study completed by the WSGP's predecessor, the Hybu Cig Cymru Hill Ram Scheme, genomic breeding values (GEBVs) were rolled out to WSGP participating flocks in June 2023.

Working in collaboration with Innovis, SRUC and AHDB-Signet has allowed access to additional genotypes which has widened the impact and potential of the project. Genomic data will be used to enhance the breeding values of hill and upland breeds included in the programme.

The objective is to increase the accuracy of performance figures, especially in traits which take longer to be expressed, such as ewe longevity. It is also a brilliant tool to predict the genetic merit of maternal breeds early in their lifetime, and when looking at traits with a low genetic component, such as lamb survival.

The genomic approach will involve using data gathered from DNA parentage assignment and breeding values produced by AHDB-Signet to produce genomic predictors which are more accurate and reliable.

Changes have also been made to the way the hill index is expressed. Originally developed by geneticist Janet Roden, the index will now be expressed in terms representing the economic merit of a ram's daughter. For example, a ram with a hill index of +£15.00 will breed daughters expected to be +£7.50 more profitable annually in comparison to a ram which has a hill index of £0.

This approach will make it easier for ram buyers to predict the financial impact of purchasing recorded sires on their flocks. By harnessing the power of genetics and combining it with good management and careful decision making, Welsh sheep farmers can enhance the profitability, and sustainability of their flocks for years to come.

Apply now to develop your skills and develop your business…

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The last date to submit funding applications for training is the 30th of November 2024 – don't miss out on the support available!

Farming Connect offer a large range of land focused courses many of which are 80% funded.

Whether you are looking to work more safely using specialist equipment such as chainsaws and excavators or wanting to find out more about how to manage and make the most of the natural resources on your land we have a large number of courses available to help you improve existing skills and learn new ones.

LAND - 80 % funded courses include:
Fencing and gate installation
Dry stone walling
Peatland management
Woodland management
Control of invasive species
Drone use and techniques in agriculture
Health & Safety Awareness of Forestry and Woodland Operations for Landowners
BASIS Agronomy and FACTS courses
Pest control
Practical hedge laying
Pond maintenance
Grassland systems

LAND - Machinery and Equipment 40 % funded courses include:
Range of chainsaw courses
Brushcutter and woodchipper
Range of safe use and application of pesticide courses
Tractor, telehandler and ATV courses
360-degree excavator course






For a full list of all funded training courses available through the Farming Connect programme please visit:

https://businesswales.gov.wales/farmingconnect/business/skills-and-training/training-courses

Please note that you will need to complete a Personal Development Plan and may have to complete a short e-learning module as part of your application.

If you need further information or guidance on how to apply, please contact **03456 000 813** or **www.gov.wales/farmingconnect/contact-us**

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GARDDWRIAETH HORTICULTURE

ONSITE COMPOSTING

- the effects on Nutrients, Soil Health and Crop Production

Using compost in your soil management strategy can significantly heighten the levels of organic matter and water holding capacity, ensuring a slow and steady release of nutrients to crops, leading to long term yield increases.

PRODUCING COMPOST

Home-made compost improves soil texture and increases soil diversity.

Proper management (of ingredients and stack management) is crucial to produce high-quality compost. Poorly made compost can pose a pollution hazard, deplete valuable nutrients, and introduce weeds and diseases to the farm.

Compost has the potential to improve the health of almost all relevant soil properties and can be particularly useful for high value vegetables, fruit and protected crops.

NUTRIENT MANAGEMENT PLAN

A Nutrient Management Plan helps to get the correct nutrition and a soil analysis should be carried out every three years to monitor soil fertility and progress. This analysis should cover pH, Phosphorous, Potassium, Magnesium and if desired % of organic matter.

When grass and straw are combined to create compost, it can contain potassium levels that are twice as high as those found in chicken manure. To preserve the potassium content and prevent leaching, it is recommended to use covers over the stack.

Manure contains higher levels of readily available nutrients, particularly nitrogen, and an organic component that is more prone to decomposition. This attribute renders it more beneficial in nourishing crops with a relatively high demand for nutrients.

Current legislation aims to control inputs on farms and evidence of compliance with these regulations will be an increasing part of farming going forward.

Find out more from this e-learning module:

On site composting for your horticultural enterprise on BOSS!

Experts will be located in the Horticulture village during the Royal Welsh Show (RWAS) and can talk to you about your composting challenges.