

THE MAGAZINE FOR FARMING & FORESTRY IN WALES

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Demonstration Network
Growing a protein crop
at Pantyderi

Knowledge Exchange Hub
Diversifying agricultural management
to increase carbon capture



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.

Diversifying agricultural management to increase carbon capture

There are many opportunities for diversification within farming businesses and as we increase our emphasis on reducing our carbon footprint there are potential diversification options for farmers that involve carbon storage, carbon sequestration or carbon off-setting. Dr William Stiles, from the Knowledge Exchange Hub at IBERS, Aberystwyth University introduces some of these options.

Major changes in current land management practice are needed in order to meet the expectations of 'net-zero', where a balance between greenhouse gas emissions produced and the amount removed from

the atmosphere is achieved. This is likely to include increased biomass growth, through greater inclusion of organisms such as trees in agricultural landscapes and through improvements to the management of soil to ensure maximum potential for sequestration (or at least, the retention of existing soil carbon).

Estimations for how the UK landscape will have to change in order to manage climate change objectives indicate that around 22% of land currently employed for agriculture will need to be released for other uses, such as carbon sequestration, habitat restoration and bioenergy production.





Tree planting in the UK is estimated to need to increase to thirty thousand hectares per year between now and 2050 (which is equivalent to 90 - 120 million trees planted per year). As part of this, tree planting will also need to occur on existing crop and grassland, and the presence of hedgerows will need to increase to 181,000 hectares by 2050. In addition, the cultivation of biomass crops, for the purposes of bioenergy production, will need to increase to 23,000 hectares per year by the mid-2020s. Producing fuel in this manner could help to reduce the reliance on fossil fuels, whilst increasing the potential for plant-based carbon capture and storage. Furthermore, this approach allows the capture of CO₂ from the atmosphere, which can then be captured using man-made carbon capture technologies during the combustion process. In this manner, this approach differs from other nature-based approaches, as in this system carbon could be effectively removed from the C-cycle, which is not necessarily the case in the long-term with other interventions.

The Welsh Government's Sustainable Farming and our Land consultation published in 2019, sought views on the proposals for a new Sustainable Farming Scheme for Wales. The consultation proposed a new system of financial support for farmers, linked to the delivery of Sustainable Land Management outcomes. These included improved air and water quality, and more resilient ecosystems, alongside the ongoing production of safe, high quality, sustainable food. This potentially presents an opportunity for farmers and other land managers to alter current focus and shift towards 'farming for carbon', utilising some of the above approaches. Valuing natural capital, the features of nature from which human population derive benefit or value, is a growing system for land management value assessment. As the focus of support shifts towards delivering public goods and natural capital management, altering on-farm management to increase the provision of factors such as carbon storage and sequestration may prove to be a sensible financial action.



EIP WALES

Cydweithio er ffyniant gwledig
Collaborating for rural success

STAYING ONE STEP AHEAD: TACKLING FOOT HEALTH IN DAIRY CATTLE

There is no 'one size fits all' approach when it comes to tackling lameness on farm, but as well as acknowledging that we need a bespoke approach to each individual herd, it is also important to take on board that not all farmers want to receive advice in the same way. With lameness being such a significant concern within the industry due to its impacts on welfare, productivity and public perception, finding out different ways of sharing ideas on how to tackle the issue is crucial.

A group of 24 farmers across south east Wales are taking part in a two year EIP Wales project to assess how two new methods of receiving advice can make a difference on their farms. Working both with their individual vets and veterinary consultant Sara Pedersen of Farm Dynamics, they have all chosen their preferred method of knowledge transfer. To assess how this influences their knowledge, behaviour and ultimately lameness in their herds, all farms taking part will have their herd mobility scored



Farmer Led Action Groups are focused on peer-to-peer learning and the sharing of ideas and solutions.

at the start, middle and end of the project as well as take part in a pre and post-project survey.

The farmers taking part have selected to be involved in one of four different groups:

Group 1: This is the control group who will be monitored throughout the project via mobility scoring but receive no additional input.

Group 2: This group will receive advice through the AHDB Healthy Feet Lite (HFLite) programme which involves working with their own trained vet (Mobility Mentor) to determine the key risk factors for lameness on their farm and then agree a bespoke action plan.

Group 3: Over the course of the project the farmers in this group will attend 12 Farmer Led Action Group (FLAG) meetings with each member of the group hosting twice. The meetings will have a facilitator present but as the focus is peer to peer learning no advice will be given. Each meeting will look at foot health successes and challenges on the host farm before an action plan being suggested by the group and agreed by the host.

Group 4: This group is a combination of Groups 2 and 3 so farmers in this group will undertake the HFLite with their vet and attend FLAG meetings.



The AHDB Healthy Feet Lite Programme enables the farmer to work with their trained vet (Mobility Mentor) to devise a bespoke action plan for the farm.

The project is now well underway with the HFLite action plans being implemented and the FLAG meetings taking place every 4-6 weeks. The midway mobility scores will be undertaken later this year which will give the first indication of the impact of the project.

“We are not far into the project, however, already we are seeing some farms see huge improvements in foot health through really embracing the advice they have received. For me, the most interesting aspect so far has been seeing how the sharing of experiences and solutions during the Farmer Led Action Groups can really help overcome previous barriers in tackling lameness. I can’t wait to see what happens in the next 18 months,” says Sara Pederson.

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

Pantyderi - Demonstration Site

Demonstration Site: Pantyderi

Technical Officer: Dr Delana Davies

Project Title: Growing a protein crop

Project introduction:

The growing of cereals at Pantyderi provides enough starch energy to grow and finish the 400 cattle on site annually, but a 36% protein concentrate blend is bought in to make up the protein shortfall in the ration. Project work in the first year concentrated on maximising protein level in the silage by taking earlier silage cuts from reseeded swards and incorporating clover into the grass mix.

Rations calculated for the cattle for winter 2020-21 still showed however that protein concentrate inclusions of 1.0 to 1.5kg/head/day were required to bring the protein level of the overall ration up to the 15-16% required to maintain growth targets of 1.3kg/head/day and above. The bought in blend was based on rapeseed meal and maize distillers grains.

With Pantyderi growing 60 hectares (ha) of cereals annually, the introduction of a pulse break crop such as field beans (*Vicia faba*) would fit well into the rotation, being a nitrogen fixing legume which benefits the following cereal crop. No nitrogen fertiliser is required for growing the crop, and the different tap root development of beans may provide benefits to soil structure.

Nutritionally, beans can compete favourably with any imported protein sources; its protein and energy characteristics (29% protein and 13.3MJ/kg ME) are similar to maize distillers meal and, at an appropriate price differential, they can compete favourably with soya. Beans can also be fed to ruminants, pigs, and poultry.

Historically, perceived variability in yield, limited varietal development and restricted specific agronomy information (including disease control) have thrown up issues that needed to be addressed, and this is combined with poorer gross margins compared with other arable crops. However, the opportunity to displace imported soya and maize distillers meal in livestock feeds promotes home grown field beans as a very sustainable and fully traceable option that can increase the resilience of beef production and reduce its carbon footprint.

Project aim:

The aim of the project is to explore the growing of beans as a concentrated protein source that will fit in comfortably with the existing production system and facilities at Pantyderi.

Harvesting a dry bean crop can be problematical in adverse weather conditions, so to facilitate an earlier harvest, the beans will be combined at a higher moisture level (25-45%), passed through a grain crimping machine and treated with a preservative. This means they can be stored in a sheeted clamp, outdoors if necessary, with the barley for feeding the beef cattle already harvested and stored in this way. This system also has the advantage that the product is ready to use with no further processing at the time of feeding required. Harvesting 3-6 weeks earlier also allows an increased autumn cultivation window for following with a winter cereal crop.

However, a problem with crimped beans is that it can be difficult to exclude air and create the anaerobic clamp conditions with the large particle size of beans. A way around



Figure 1. Peas and beans grown together (19 July 2021)

this suggested by the PGRO (Processors and Growers Organisation) is by growing beans and peas together. Peas also provide earlier ground cover than the beans, which helps to smother weeds. Their growth habits are also very complimentary with the beans providing a strong scaffold which helps to keep the peas standing later in the season; they also benefit from the same agronomy approach. Double cropping also tends to synchronise any varietal differences with regarding time to maturity.

Trials have also indicated that mixed crops regularly produce more than the crops grown individually, from around 3.5-3.7 tonnes/ha for either of the single crops to around 5 t/ha when they were grown together.

A free draining field of 8ha was drilled on 22 April in two passes with a full seed rate of

Lynx beans at a rate of 308kg/ha and 75mm deep followed by Karpate peas at a rate of 225kg/ha and 50mm depth. Plant counts on 20 May showed that target establishment had been achieved at 126 plants/sq.metre.

All growing and processing costs will be recorded and cost from seed to feed worked out per tonne. The crop will be incorporated into beef rations for winter 2021-22, formulating rations of equal starch and protein content to the two previous winters, with daily liveweight gains monitored.

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



LoRaWAN update – and what's next?

The Internet of Things (IoT) and specifically Long Range Wide Area Network (LoRaWAN) technology is rapidly expanding in Wales, with sensors increasingly adopted within the agricultural sector as a means of gathering data to provide solutions to improve farm efficiency.

Each demonstration site within Farming Connect's demonstration network have a LoRaWAN gateway installed on-farm, as well as two sensors; an indoor sensor (typically located within a shed) that captures temperature, humidity and light data, and an outdoor sensor that gathers data on soil and air temperature. The dairy demonstration sites are also trialling a liquid level sensor (figure 1) that measures fluid depth (i.e. within slurry stores and water tanks). All data from the sensors are relayed to dashboards, where the information can be analysed and help inform decision-making.

Two demonstration sites, Erw Fawr and Pentre Farm are currently exploring whether a correlation exists between soil temperature and grass growth, using the data gathered from the sensor in figure 2.



Figure 1: Fluid depth sensor installed on tank.

Other sites have incorporated additional LoRaWAN sensors into their projects. Pantyderi demonstration site has deployed soil nitrate sensors within the arable fields and Wern demonstration site has made significant improvements to their poultry shed as a result of installing environmental sensors. Moelogan Fawr demonstration site is trialling an open:close sensor to provide information on the status of a gate on the farm. There are several upcoming projects too, one being a trial using an automated drone to measure grass yield at Pendre demonstration site.

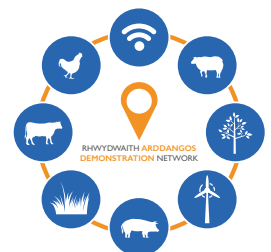
Two European Innovation Partnership (EIP) Wales projects are trialling other LoRaWAN sensors. One project focuses on the role of IoT technology to improve the efficiency of application of slurry, and the second project is adopting sensors to improve farm security.

The adoption of the technology remains fairly new within Farming Connect's demonstration network. Nevertheless, as highlighted here, the scope for further technological developments and deployment of sensors on-farm is enormous.



Figure 2: Outdoor dual temperature sensor.

For further information on demonstration sites projects, please visit the Farming Connect website: gov.wales/farmingconnectourfarms



Erw Fawr - Demonstration Site

Demonstration Site: Erw Fawr, Holyhead, Anglesey

Technical Officer: Rhys Davies

Project Title: CattleEye

Video analytics technology has seen rapid advances in recent years, regularly being used to recognise criminals or to unlock mobile phones. The availability of this technology has created an opportunity in the dairy industry to harness the benefits of a machine learning and video analytics platform. Such a platform can utilise visual data to derive insights about the animal that could, in turn, be used to more efficiently manage livestock health and provide consistent evidence of animal welfare standards. This would represent a big change from existing livestock data collection systems which either rely on farmer observations and manually entering data or, in the case of wearable sensor technology such as cow collars and pedometers, require manual commissioning and maintenance.

CattleEye has developed a cloud based software system to interpret visual imagery of livestock from industry standard CCTV cameras. At Erw Fawr, it has begun to automatically identify cows exiting the milking parlour from their biometrics and colour markings and register twice daily mobility scores (0-3 scale). These are being fed directly to Ceredig, the farmer, via an app who will then take appropriate action through early treatment. Guided by project lead Professor

Georgios Oikonomou from the University of Liverpool, the project hopes to demonstrate that correctly identifying and accurately tracking individual cow lameness levels twice daily will also address increasing processor and consumer demands on animal welfare recording. Results and data from the 6-month project will be made available later in the year.

Project aim:

- Assess the practical application and cow identification accuracy
- Reduce cases and associated costs of score 2 and 3 cows over a 6-month period through earlier foot treatment
- Improve animal welfare information recording



Figure 1. Image taken from the CCTV camera, installed above the cattle race exiting the parlour. This standard web based camera is connected to the internet and live footage will be interpreted by the cloud based CattleEye software.

Erw Fawr is one of the farms involved with the Welsh Pasture Project. Please visit the Farming Connect website to see their latest growth rates.
gov.wales/farmingconnect



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

Forest Coalpit - Focus Site

Focus Site: Forest Coalpit

Technical Officer: Dafydd Owen

Project Title: Comparing pig arks to improve welfare

Project introduction:

As cold and heat stress can cause health problems, reduced growth rates and poor reproductive performance, it is fundamental that pigs stay within their thermal neutral zone as much as possible to keep them growing quickly, and to keep feed bills to a minimum.

A trial is currently taking place at Forest Coalpit Farm to compare the efficiency of the new 'Aardvark' farrowing arks that Kyle Holford and Lauren Smith have recently purchased. The new plastic arks are UV stable and should prove to be a number of degrees cooler in summer and warmer in the winter compared to traditional pig ark structures.

As part of the trial, three temperature loggers are being used to compare two different types of arks. The first logger has been fixed to the inside of the 'Aardvark's' roof, the second to the

side paneling of the old, more traditional steel ark/shed, and the third has been installed onto a fencing stake that's located close to both arks (to record external temperature).

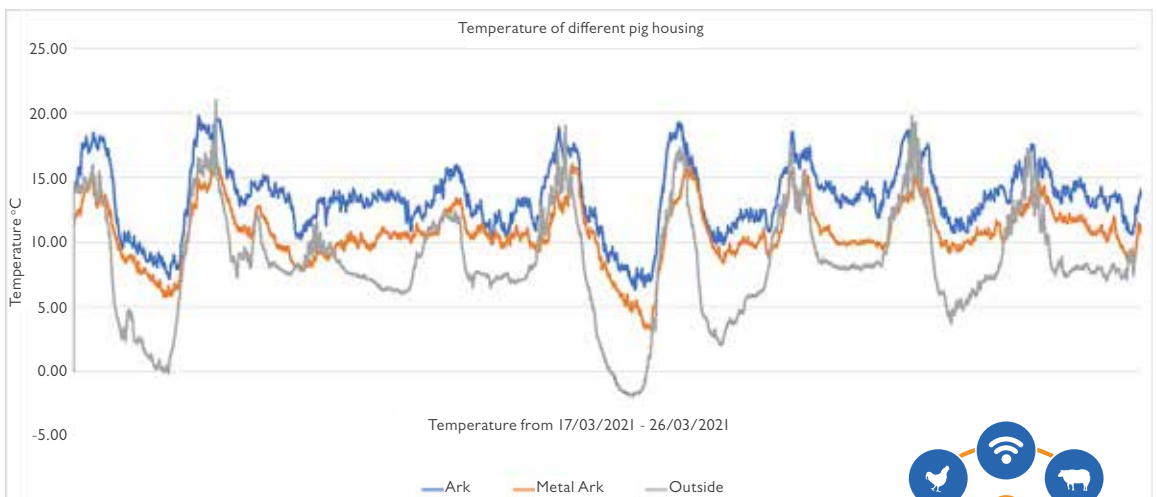
Project update:

The results in Fig.1 show that the temperature inside the 'Aardvark' tends to be warmer during colder periods compared to the steel ark. During the coldest period, when the external temperature falls to -2°C, the steel ark falls to 3°C, but the temperature inside the plastic ark doesn't fall below 6°C.

Kyle Holford believes that changing from the old, more traditional arks to the new 'Aardvarks' has also reduced piglet mortality and straw usage due to its round, more spacious shape.

The next step of the trial is to compare both arks during warmer temperatures.

Figure 1. Temperature sensors (Grey- outside temperature, Blue- Aardvark temperature, Orange- traditional steel ark)



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



CERBYDAU POB TIRWEDD (ATV)

Gall troi cerbyd pob tirwedd achosi marwolaeth neu anafiadau difrifol

ATV

Overturning an 'all terrain vehicle' can cause death or serious injury

HYFFORDDIANT: Mae'n rhaid i bob defnyddiwr fod yn gymwys ac wedi derbyn hyfforddiant

HELMEDAU: Gwisgwch helmed bob amser

TEITHWYR: Peidiwch byth â chario teithwyr

PLANT: Nid oes hawl i blant dan 13 defnyddio cerbydau pob tirwedd. Dylai pobl ifanc dan 16 ddefnyddio cerbydau pob tirwedd (ATV) o faint addas ar ôl derbyn hyfforddiant

DIOGELWCH: Sicrhewch eich bod yn cynnal a chadw a gwirio diogelwch y cerbyd yn rheolaidd

LLWYTHI DIOGEL: Sicrhewch fod pob llwyth yn ddiogel ac yn gytbwys

CADWCH AT Y LLWYBRAU

A GYNLLUNIWYD: Peidiwch â chymryd risg ar dir anwastad neu lethrau

TRAINING: All riders must be trained and competent

HELMETS: Always wear a helmet

PASSENGERS: Never carry passengers

CHILDREN: Children under 13 years old are prohibited from riding ATVs. Under 16s should only use appropriate sized ATVs after training

SAFETY CHECKS: Carry out routine, regular maintenance and safety checks

SECURE LOADS: Ensure all loads are secure and evenly balanced

STICK TO PLANNED ROUTES: Don't take risks on uneven or sloping ground



Trees on farms - an economic proposition?

**Geraint Jones, Forestry Technical Officer,
Farming Connect**

Woodland is seen by many as a popular option in addressing issues linked to the climate emergency and biodiversity crisis. Its ability to mitigate some of the effects of climate change makes it a strong contender amongst the nature-based solutions available. Rewarding farmers for environmental gain in the form of payment for public goods could include land use change options in increasing woodland cover on to the farm as an economic proposition. How then can we utilise the trees for a profitable return?

Objectives for tree planting have been advocated for many reasons and have tended to focus on specific and readily quantifiable impacts. We know that trees will contribute to improve landscape aesthetics, conservation, biodiversity, alleviate flood risk, and the multifunctional benefits that trees provide for the farm business from shelter through to alleviating diffuse pollution and improving animal welfare. All are presented as reasons to plant trees on farms for the better but it is rarely considered from the perspective of the farmer. Taking into account the cost of planting areas on the farm, the perceived loss of land can be seen as a disincentive. However, in utilising specific areas on the farm based on the mantra of “the right tree in the right place for the right reason”, the financial gain translated from the multifunctional benefits trees provide can easily outweigh the value of the change in land use. The solution then, is to consider planting trees because you need or want trees on the farm for all or any of the

above reasons. Then, manage those trees for timber and a profitable return.

Timber prices are currently performing well and it's also opened up a market for farmers to cash in on timber and, as an example, the opportunity to clear dysfunctional conifer shelterbelts and redesign and restock with a more diverse range of species that's fit for purpose to meet the farmer's objective in farming their assets as well as the land.

Integrating trees into the farm business is and will be an important part of economic activity, boosting productivity on-farm can primarily be a means to support profit from other avenues such as the sale of wood products e.g. fuelwood, or for use as a resource on the farm for fencing, building or cladding as an example or even fruit production. Even if the trees are not to be harvested, they will function as a necessary part of the other production systems on the farm and provide related benefits for animal productivity and crop yields and managing the health of water and soil. Even where an economic figure is less tangible and derived from indirect multifunctional benefits of trees, such as for amenity, it can still contribute to the profit margin. The concept here relates to agroforestry and is seen as a key element in increasing tree cover on farms as part of the building blocks of a functioning farm building resilience to climate change and increasing productivity. Related to this is the view that improving the environmental performance is good for the farm and, in turn, good for profit and that everything on the farm needs to be actively managed.



Finally, carbon emissions are high on the agenda and creating new woodlands can contribute to a low carbon economy and help individual businesses lower their carbon footprint through marketing surplus carbon units. Farmers have an active asset in trees, woodlands and hedgerows that can be valued for ecosystem service provision in managing a mechanism that extracts carbon dioxide from the atmosphere to sequester carbon.

In conclusion, managing farm woodland as an active asset and increasing woodland

cover on the farm is really positive for the business and could open up avenues for diversification opportunities. Knowing just what important resources we have on our farms is essential going forward. Farming Connect can support farmers to actively manage the resource by tailoring their management practices to provide significant benefit to the quality of their produce, with a view to improving their environmental and economic status whilst also benefitting the environment and contributing to a circular economy.

Fact Sheet – Storage of Silage

The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021 have been introduced to reduce losses of pollutants from agriculture to the environment by setting rules for certain farming practices.

The regulations replaced the existing Silage, Slurry and Agricultural Fuel Oil (SSAFO) standards for silage making, storage of silage effluent and for silage storage systems on 1 April 2021, which apply to all farms. In practice, the requirements have not changed, but they are now also a cross compliance requirement.

Silage safety zones

- Silage stored in silos must not be made or stored within 10 metres of any waterbody.
- Baled silage must be sealed in an impermeable membrane or bagged and not made, stored, opened or unwrapped within 10 metres of any waterbody.
- Field silage (silage stored on open land) must not be made or stored within 50 metres of a 'protected water supply course'. You must also notify Natural Resources Wales (NRW) 14 days before the field site is used.

Managing silage effluent

- Care must be taken to collect and store silage effluent without causing pollution.
- Silage effluent can be used for feeding to livestock or, following dilution, may be spread onto agricultural land as a fertiliser. The silage effluent will also be subject to the regulations on storage and spreading of organic manures that have high available nitrogen.

Silage storage construction requirements

- You do not need to store baled silage (wrapped or bagged) on a specially constructed base, but you must ensure that if it is stored directly on the ground it does not leak effluent into water.
- You must ensure any silage storage system meets the construction requirements of the regulations.
- NRW can serve a notice requiring action to be taken to improve existing installations where it considers that there is a significant risk of pollution.

Constructing or modifying a silage store

- If you need to build a new store or silo, or substantially enlarge or reconstruct an existing store, a minimum of 14 days' notice must be issued to NRW in writing before construction begins.

Detailed guidance can be found at gov.wales/land-management

Fact Sheet – Slurry Storage Capacity

From 1 August 2024 you must ensure your slurry storage systems meet the requirements of The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021.

Storage capacity

- You must have sufficient storage capacity to store the slurry produced during the storage period and to comply with the other requirements of the regulations not to spread slurry if there is a significant risk of pollution.
- The store must also have sufficient capacity for any rainwater or washings entering the store during the storage period.

The storage period

- Sufficient storage must be provided:
- 6 months for pig and poultry manure (1 October to 1 April)
- 5 months for all other manure and slurry types (1 October to 1 March)

Calculating the volume of slurry produced during the storage period

- The volume of the manure produced by the animals on the holding must be calculated in accordance with standard figures in Annex 2 of the Welsh Government guidance document.
- There may be little change from the current Silage Slurry and Agricultural Fuel Oil (SSAFO) requirements depending on the method used to calculate your storage needs, subject to your ability to meet the other requirements of the regulations to not spread when there is a significant risk of pollution.
- The store must also have the capacity to store any rainfall, which enters the store (either directly or indirectly) during the storage period.
- Average rainfall data (1 October to 1 March) is available via the Welsh Government DataMapWales mapping portal based upon the Met Office's 1981 – 2010 averaging period.
- Your storage calculation must be updated to reflect any changes on the holding, such as increased livestock numbers, to ensure you have sufficient storage.

Notice of construction

- If you identify that you need to build a new store, or substantially enlarge or reconstruct an existing store, a minimum of 14 days' notice must be issued to Natural Resources Wales (NRW) in writing before construction begins.
- Planning early will provide you with more time to identify if you need to take any action, seek advice and, where necessary, obtain planning permission.

Detailed guidance can be found at gov.wales/land-management

Fact Sheet – Nutrient Management Plans

From 1 January 2023, the spreading of fertilisers will require a Nutrient Management Plan to meet the requirements of The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021.

A Nutrient Management Plan (NMP) is an important tool in managing the application of fertilisers for efficient crop growth and to reduce the risks of pollution.

Maximum nitrogen limits by crop type

- The total nitrogen applied to a crop from organic manures and manufactured fertilisers must not exceed the crop limits set out in the regulations, taking into account the soil nitrogen supply.

Nitrogen limits for the spreading of manures

- Across the whole holding, you must not exceed a limit of 170kg of nitrogen per hectare from all livestock manure, including directly deposited by the animal or by spreading within any calendar year (starting 1 January).
- A limit of 250kg per individual hectare is applied to the spreading of organic manure for any 12 month rolling period.

Other considerations

- The planned spreading of manures may affect your manure or slurry storage requirements.
- You will need to consider the features identified in your risk map and how it affects the land available to you for the spreading of organic manures.
- You may consider exporting any excess manures from your holding, or importing additional manures if you have identified any nutrient deficits. The import or export of manures must be recorded.

Nutrient management planning

- Welsh Government's Guidance for Farmers and Land Managers provide templates for Nutrient Management Plans, however, you can maintain your own records provided the criteria of the regulations are met, making any necessary additions or adjustments as required.
- Copies of Nutrient Management Plans must be stored for a minimum of 5 years and must be made available for inspection if requested.
- Exemptions from certain nutrient management planning requirements are provided for farms with low nutrient inputs.

Welsh Government's Guidance for Farmers and Land Managers can be found at gov.wales/land-management

Fact Sheet – Risk Maps

The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021 require all farms to maintain a risk map, to help prevent pollution incidents. You must maintain a risk map of your holding from 1 January 2023.

The risk map must show:

- each field, with its area in hectares;
- all surface waters;
- any boreholes, springs or wells on the *holding* or within 50 metres of the *holding* boundary;
- areas with *sandy* or *shallow* soils;
- land with a slope of more than 12° (equivalent to 20% or 1 in 5);
- land within 10 metres of surface waters;
- land within 50 metres of a borehole, spring or well;
- land drains (other than sealed impermeable pipes);
- sites suitable for temporary field heaps, if this method of storing manure is to be used; and
- *land that has a low run-off risk*, if such land is to be used when calculating *slurry* storage requirements.

What the risk map can also show (optional)

The risk maps can also be used to identify features where it would not be appropriate to spread organic manure, but are not a requirement of the regulations including:

- any areas where you may not be allowed to *spread* for reasons such as a tenancy agreement, or a designation (e.g. Site of Special Scientific Interest);
- areas categorised as a "wildlife habitat" under an agri-environment agreement (e.g. Glastir), plus any other areas where an agreement prohibits *spreading* (e.g. low input land);
- areas where the surface is rocky or uneven so that equipment cannot be used effectively or safely;
- fields or part fields which in the last 12 months have been pipe drained, mole drained or sub-soiled over drains;
- areas of woodland or orchards.

Updating and maintaining records of your risk map

You must update the risk map with any changes and you must keep all copies of your risk map, for a minimum of 5 years.

Detailed guidance on how to create your risk map can be found at gov.wales/land-management



Farming Connect's pioneering and innovative personal development programme is back!
This year, 24 new faces will join the programme's list of over 260 alumni.

Introducing the **Junior Programme class of 2021**



*Anwen Hardwick
Gwystre*



*Charlie Baldwin
Lower Chapel*



*Tudur Evans
Llangadfan*



*Lottie Wilson
Hayscastle*



*Hefin Owen
Carmel*



*Llyr Thomas
Caio*



*Holy Page
Pentre*



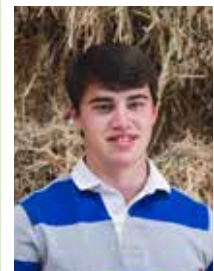
*Dylan Nutting
Aberhafesp*



*Lea Davies
Bwlch-y-ffridd*



*Aled Davies
Nantglyn*



*Rhys Griffiths
Porthyrhyd*



Introducing the **Business and Innovation class of 2021**



*Angharad Thomas
Dryslwyn*



*Bryn Perry
Welsh Hook*



*Beth Davies
Lawrenny*



*Hari Roberts
Llanefydd*



*Fiona Hunt
Hardwick*



*Ifan Owen
Llanddoged*



*Iwan George
Eglwysrwrw*



*Ellie Bevan
Chirbury*



*Sean Jeffreys
Ffairfach*



*Scott Robinson
Parc-y-Bryn*



*Marged Gruffudd
Llanarth*



*Ernie Richards
Clyro*



*Owain John
Maesybont*

Get to know more about the person behind the smile!
Read their biographies on the Agri Academy page on the
Farming Connect website gov.wales/farmingconnect

Farming Connect skills funding. Apply now to...

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...plan ahead now

The skills funding application window is open between
6 September 2021 - 29 October 2021



- All training courses subsidised by up to **80%** for registered individuals
 - More than **70 courses** available, categorised under 'Business', 'Land' and 'Livestock'
- Network of **approved training providers** located throughout Wales
 - 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



Full list of courses and/or support on how to apply, contact your local development officer or the Farming Connect Service Centre on **08456 000 813**.
Further information available on the Farming Connect website.

www.gov.wales/farmingconnect