THE MAGAZINE FOR FARMERS & GROWERS IN WALES

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Improve soil health with Farming Connect sampling

2025 Grazing Season

Top Tips to Remenber!

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

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

2025 GRAZING SEASON IS UPON US

TOP TIPS TO REMEMBER

Spring is the favourite time of year for many farmers and after what might have felt like a very long and wet Winter, there is no doubt that seeing stock being turned out to pasture once again as the 2025 grazing season starts will be welcomed by all.

Making the most of grass available this spring by turning cows out to graze earlier can help save money on feed and housing, boosting profitability. With some careful planning, spring grazing can be managed to ensure improved utilisation of grass throughout the season.

CLUST I'R DDAEAR
EAR TO THE GROUND

If you want to get the most out of your grassland this year, how about listening to a previous Ear to the Ground podcast episode with James Daniel of Precision Grazing: **Episode 58 Give rotational grazing a try this Spring.**

Listen on...

- **Farming Connect Website**
- **Apple Podcasts**
- **Spotify**

Top tips to remember through spring:

- ☑ The importance of your grassland measurement walk - time to dust off the cobwebs on your plate meter and get your first grass cover measure ticked off the "to do" list. Funding is available through the Small Grants Efficiency Scheme *www.gov.wales/small-grants-efficiency*
- ☑ Do your best to constantly achieve your target post grazing residual after each grazing to ensure re-growth is of best quality.
- ☑ Graze your drier fields first where possible
- ☑ Now is a good time to soil sample any fields that have not been sampled in the last four years
- ☑ Remember your Control of Agri Pollution workbook will need to be updated annually and will determine if any Nitrogen fertiliser is required depending on soil type and crop requirements. If your Nitrogen plan shows a need for Nitrogen Fertiliser, wait until soil temperatures rise to 5-6˚c for five consecutive days before applying Nitrogen fertiliser. Remember there is a limit of 250kg/ha of nitrogen for the spreading of organic manure to any field for any 12-month period.
- ☑ Dairy farmers can benefit from using on/off grazing as a technique to be flexible in wet weather conditions and using multiple access points to paddocks where possible is key
- ☑ Check in with the *Farming Connect Welsh Pasture Project* to benchmark your spring grazing with other Welsh farmers local to you. Get to know a few of the Welsh Pasture Project farmers on the next few pages.

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Grass data sharing a good benchmarking tool for Welsh dairy farm

Growing high-quality grass and measuring and recording rates of growth accurately during the grazing season allows a Powys dairy farm to produce more than two thirds of the total milk yield from forage.

Lloyd Jones Bright and his father, Mark, milk 200 crossbreds on a grass-based system at 300-acre Groesygarreg, near Berriew, Welshpool.

Ten years ago, they made significant changes to their farming policy.

It had been a high input-high output Holstein herd but they switched to spring-calving Jersey x Friesians, a smaller cow averaging 485kg that enabled grazed grass to be central to that policy shift.

It was a change in mindset instigated by Lloyd when he returned to farm after working as an electrician for four years.

Lloyd Jones Bright - Groesygarreg

A neighbour had been rearing heifers for a farm with a spring block-calving milking herd and Lloyd was

impressed by what he saw when he visited that farm and others with similar operations. "It came down to simplicity and profit," he says, reflecting on why he decided to follow their lead.

Now aged 32, he has been building on that knowledge, including through sharing his grass growth data with the Farming Connect Welsh Pasture Project.

He walks the farm weekly with a rising plate meter and uploads the data to Agrinet.

Plate-metering grass regularly and turning cows onto optimum covers has improved grass use.

As well as helping other farms by sharing his figures, Lloyd says he also gains from others involved in the Welsh Pasture Project.

"It's about benchmarking, making sure that you are at a similar point to everyone else in the grass growth curve, picking up trends, similar to what you might when benchmarking with a discussion group."

Groesygarreg grows an average of 12tDM a year, with a total of 150kg of N/acre applied annually across the farm in three dressings.

Cows are turned out to grass as they calve from the second week of February, entering paddocks at target covers of 2,400 – 2,500kgDM/ha and grazing to a residual of 1,700kg.

"We try to get down to 1,600kg but have found that if we push the cows too hard it impacts on yield so is counterproductive," says Lloyd.

Cows produce an annual average milk yield of 5,000 litres at 4.75% butterfat and 3.68% protein, with 3,720 litres produced from forage.

DATA PLAYS KEY ROLE IN NEW ENTRANT'S AGROECOLOGY FARMING SYSTEM

Using grazing management techniques, a first-generation farmer has improved pasture diversity and the health and resilience of soils on a Welsh livestock farm.

New entrant Huw Evans graduated with a master's degree in civil and environmental engineering but chose to follow a different career path when he returned to the land of his heritage to farm in Wales.

At Llanvetherine Court, Abergavenny, Huw established a herd of Belted Galloway suckler cows and a flock of Badger Face Welsh Mountain ewes, and added Large Black pigs, honey bees and a vineyard to the farming mix.

One set of data Huw has been collecting for the last five years is grass growth, measuring grass weekly and sharing his figures with other farmers through the Welsh Pasture Project.

Although he says it is as important to visually assess how pasture is performing as it is to measure, he sees the project as a valuable service that allows the sharing of information with farmers across Wales.

Managing pasture in different ways, through mob grazing, over-wintering on deferred grazing and bale grazing, has lifted grass quality and growth at Llanvetherine Court.

"We are getting better results than when we first came here in 2017, the level of production, and the quality of production, are up," says Huw.

He has never applied synthetic fertiliser or lime, but the farm isn't certified as organic. "Organic doesn't go far enough for me," he says.

"We need to rethink how farming goes beyond just not using certain chemicals.'

When it comes to grass performance, farmers must use their eyes in conjunction with measuring when evaluating their fields from week to week, Huw maintains. "It's about standing there in the field and looking at the quality of grass and, if something isn't perhaps not responding in the way you expected it to, to work out why."

Huw Evans - Llanvetherine Court

Grass the 'backbone' of milk production for Welsh Pasture Project farm

Reseeding up to 15% of the 121ha grazing platform a year with modern grass varieties and clovers is key to producing high quality milk at a Pembrokeshire dairy farm.

For the last two years, Rhys James has been sharing his grass growth data through the Farming Connect Welsh Pasture Project but his interest in grass goes back much further.

When his family bought Duckspool Farm near Wiston, 69ha was promptly reseeded using late heading ryegrass varieties and a white clover mix and a further 24ha was drilled the following year.

Establishing new leys to aid grass growth, quality and milk production is a policy Rhys has carried forward, allowing the farm to produce 13tDM/ha a year.

Grass is measured with a rising plate meter weekly by herd manager, Richard Bevans, from February until the end of November and the data uploaded to Agri-net to provide an accurate picture of covers and growth.

Sharing that data through the Welsh Pasture Project gives other farmers a barometer for their own grass growth figures and is a useful benchmark for Rhys and his team too.

"It's nice to see where your farm sits in terms of the amount of grass grown, it keeps you on your toes," says Rhys, who farms with his parents, Nigel and Linda, and wife, Mererid.

"It is good to have that support network and to benchmark how your farm is performing."

"We can see which fields are falling behind on grass production and when we need to target those with lime, phosphate and potash."

Soil sampling is used to establish indices - testing last year was 100% funded by Farming Connect because Rhys undertook the work as part of a group – it is 80% funded on an individual basis.

"The testing showed that pH was below where we wanted it to be so we have spread 1.5t/acre of lime across the entire farm," he says.

Soils now average pH 6.2 and at index 2-3 for phosphate and potash.

Duckspool extends to 299ha of owned and rented land where a herd of 460 New Zealand Friesians cross Jersey cows is run on a paddock grazing system.

Cows produce an average annual yield of 6,000 litres of milk at 475kg solids to supply the First Milk creamery at Haverfordwest.

The herd calves over an 11-week block from 15 February.

The grazing season starts in mid-February, when the herd is turned out by day only into target opening covers of 2,500kgDM/ha. The herd is fully at grass in early April, grazing to a residual of 1,600kgDM/ha.

Housing is in mid-November with the aim of closing covers at 2,200kgDM/ha.

Grass, says Rhys, is vital to the system.
"Ours is a traditional spring block calving system with cows only getting grass and some concentrates through the grazing season so we need plenty of grass and it has to be good quality."

Concentrate use averages 1.5t/cow/year.

In recent years, maize has also been grown; 24ha was clamped this year as winter feed to be fed alongside grass silage.

But grass is the "backbone" of the system, says Rhys, who was the 2017 winner of the British Grassland Society's grassland competition.

"It is still the main part of the herd diet for many reasons, including cost benefits. It is easily the cheapest feed to grow and scores well on the regenerative side of things too."

Rhys James

Do you wish to join us for 2025?

If you are a frequent grass measurer and keen to benchmark against others or have been motivated by reading the farmers stories on the previous pages and would like peer to peer support to get going with measuring grass, now is the chance for you to join the Welsh Pasture Project!

Farming Connect are looking for new farmers to join the ***Welsh Pasture Project*** for the 2025 grazing season. To be eligible to join, you need to have a plate meter and use AgriNet or Grassland Tools software to record the grass measurements, all of which is available through Welsh Government's Small Grants – Efficiency scheme. Click *here* for more information.

The Welsh Pasture Project provides regular information on regional pasture growth rates and pasture quality to enable livestock farmers to make informed, proactive grazing management decisions. In 2024 it i nvolved 19 dairy and 20 beef and/or sheep farmers who were measuring their pastures and providing feedback on growth trends. Learn more about what the data showed us in 2024 here:

» Welsh Pasture Project 2024 - https://shorturl.at/QO8wc

If you would like to know more or to submit an expression of interest, please contact -

gwenan.evans@mentera.cymru

07985 379 819

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Addressing fertility indicators to improve dairy production efficiencies at Rhyd Y Gofaint

As a rule of thumb, poor fertility costs £25,000 per year in the average performing 100 cow herd (AHDB Dairy) which equates to 3.2 p/litre. Additionally, maximising fertility in the dairy herd will reduce the farm's carbon footprint. There are a range of causes for poor fertility, varying from farm to farm including nutrition, herd size and expansion, calving problems, mineral deficiency and housing conditions. Therefore, herds need to be looked at individually to develop a targeted programme to improve herd fertility.

Rhyd Y Gofaint runs a herd of 120 friesian/holstein cows calving all-year-round. Deryl and Frances Jones are always looking for ways to be more efficient and sustainable. The main objective of the project at Rhyd Y Gofaint is to improve fertility performance and overall productivity through targeted interventions; presenting measurable improvements, specifically the increase in the 100-day in-calf rate and estimate the economic benefit of this progress.

What has been introduced?

Key fertility metrics are being closely monitored to improve productivity and health. The main metrics being tracked are the 100-day in-calf rate and the 200-day not-in-calf rate, along with submission and conception rates. Deryl and Frances use Uniform Agri to record all cow data, providing real-time, up-to-date information for better decision-making.

New protocols for pre-breeding checks and pregnancy testing have been introduced which include:

- conducting a metricheck at 21-28 days post-calving,
- early PD's at 35-42 days
- 150-day pregnancy diagnosis (PD)
- metabolic profiling

Why these protocols?

Early detection and treatment of uterine infections improves reproductive health and future fertility performance. So far, metrichecking has identified some cows with low-level endometritis that might have been missed otherwise, allowing for earlier treatment. Since metrichecking the cows, Frances has found 5 cases of "subclinical whites" i.e., cows which had no suspicion of being dirty who have been found to be so on examining with the metrichecker. Those cows were administered Kextone boluses, along with 4th cows below BCS 2.5 or above 3.5 at dry off, scanned in-calf to twins and all 4th lactation and above.

The 150-day PD check catches those few cows who lose a pregnancy, but the other benefit is that it focuses on carrying out a crucial body condition score (BCS) in late lactation, allowing adjustment in feeding and/or dry-off date for cows not on track to meet the dry-off target BCS of 3.

Metabolic profiling was carried out for the herd back in January with representatives from herd groupings, assessing the nutritional and health status of the herd. An important asset giving you insight into the protein, energy, and mineral status of your cows. The results at Rhyd Y Gofaint showed excellent trace mineral levels, however, a few questionable energy balance results in mid lactation cows. Therefore, ketone levels have been monitored further to delve deeper into the results, using pin prick blood samples taken 10-20 days post-calving. This has helped identify and treat several cases of subclinical ketosis, likely boosting the affected cows' production, health, and fertility. A key element of early detection of high-risk cows.

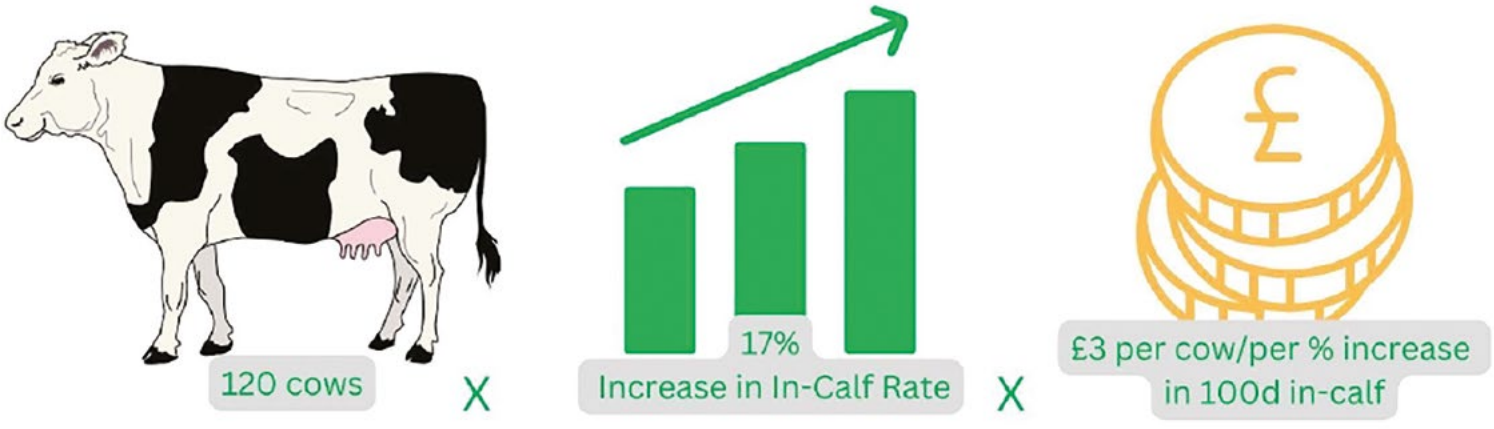
The estimated increase in profit accounts for:

- Increased Milk Production: More cows calving earlier results in more days in milk.
- Reduced Empty Cow Costs: Fewer cows not in-calf reduces losses associated with non-productive animals.
- Improved Feed Efficiency: Adjusting concentrate feed based on body condition scoring optimizes feed costs.
- Greater Flexibility for Voluntary Culling: Improved fertility allows for better herd management decisions.

What are the next steps for Rhyd Y Gofaint?

- Ongoing Monitoring: Continue tracking fertility metrics, including the 200-day not-in-calf rate.
- Expand Interventions: Build on current strategies to further enhance herd health and productivity.
- Long-Term Goal: Achieve consistent fertility improvements, leading to sustained economic benefits and a more productive herd.

Economic benefit of improved fertility:



HORTICULTURE:

Testing a novel Alyssum-Orius 'trap and kill' IPM strategy for the control of thrips in Welsh 60-day strawberry crops

Bellis Brothers Farm in Holt, Wrexham, have been operating a strawberry pick-your-own enterprise since 1967. In addition to other soft fruit production, the horticulture venture is supported by a successful garden centre and restaurant which helps attract business to the pick-your-own enterprise.

Thrips are one of the most significant pests affecting 60-day strawberry crops, potentially leading to serious fruit damage and crop losses. Damage includes discoloration and bronzing of the fruit which reduces market quality and saleability. Even when chemical controls are applied, Bellis Brothers Farm experience an average loss of 5-10% of its strawberry fruit to thrips in any given year. In 2021, the farm lost a crop worth £23,000 and were therefore keen to find a solution.

Most strawberry crops in Wales are outdoor, 60-day PYO crops, indicating that a crop of strawberries will be ready for picking 60 days after planting. At Bellis' the strawberries are grown in a table-top production system which is beneficial due to built-in irrigation and eliminating the need for crop rotation.

Control of thrips in Welsh 60-day strawberry crops currently relies predominantly upon targeted sprays of the insecticide spinosad (Tracer®). However, this approach is not sustainable as many western flower thrip populations are resistant to spinosad, with the risk of other thrips species developing resistance. In addition, farmers and growers would prefer to reduce their reliance on pesticides and are therefore looking for alternative solutions.

For this project, grower and Farm Manager Adrian Marks and consultants at ADAS trialled an Integrated Pest Management biological control method, using the predator bug, Orius, and the flowering plant, Alyssum, to act as a trap for the pest, the Western Flower Thrip. The Orius are released onto the flowering Alyssum, which is then planted as a companion crop with the strawberry plants. With its high pollen count, flowering Alyssum attracts the thrips away from the strawberry plants, leaving the predator to feed on the pest.

What we did:

The peak period for thrip activity on strawberry crops is between May to July, during planting, flowering and fruiting. On 16th May 2024, the Alyssum plants, populated with the Orius, were transported to the trial site and planted in grow bags at the same time as the table-top strawberry crop. The irrigation drippers were placed in the bags of Alyssum plants in the same way as they were placed in the strawberry bags, so that the Alyssum received the same water and liquid feed as the strawberry plants. There were two on-farm trial assessments, one during the strawberry flowering period and one during fruiting.

Adrian Marks at trial site

Outcomes:

Due to an extended period of warm, dry weather in which thrips thrive, the farmer had detected an increasing number of the pests on the crop. With concerns of losing the crop, and after speaking with the consultants, the farmer opted to apply an emergency application of spinosad two days before the first assessment was due to take place.

The first assessment went ahead despite the change in circumstances. Unfortunately, the application of spinosad had mostly eradicated the pest and the predator, making it impossible to test the establishment of Orius in the strawberry crop or its subsequent control of thrips in this trial. However, the grower reported that prior to the Tracer® spray, Orius had been easily observed in the strawberry flowers in the plots with flowering Alyssum.

Crop at Bellis Brothers Farm

To receive a copy of the technical report for this trial or for further information on other Farming Connect horticulture trials contact hannah.norman@mentera.cymru

Farming Connect sampling highlights opportunities to improve soil health on Welsh farms

Many Welsh farms are missing out on grass yield potential because they fall short on pH and key macronutrients (P, K, Mg), a Farming Connect report of agricultural soils has shown. More than 3,000 soil samples were collected by Farming Connect from grassland fields on livestock farms across Wales in the 12 months to March 2024.

Analysis of these has highlighted the opportunity for many farms to correct soil pH and indices needed for optimal grass production and environmental benefits.

Less than 50% were at pH 6.0 – 7.0, the optimum range for grassland, with the majority (53%) of soil samples below the optimum pH range.

Soil pH is integral to forage productivity as inadequate levels can negatively influence nutrient availability in soils and, as a consequence, forage performance.

Soils within an optimum pH range, will benefit livestock performance and farm economics as well as delivering environmental benefits through maximising resource efficiency as a Sustainable Land Management Outcome.

Reviewing lime and fertiliser applications may therefore be needed as a first step to ensuring pH does not negatively affect fertiliser utilisation while also reducing the risk of nutrient losses via run-off which will improve water quality.

It was a similar picture for phosphorus (P) and potassium (K), again with fewer than half of soil samples at the optimum indexes for these nutrients. In fact, a large proportion of soil samples were categorised as being below the optimum P and K indexes.

For P and K, altering the indices is no quick fix as industry advice is to build up depleted levels, and to run down concentrations of nutrients that are higher than they should be.

A large percentage were higher than the optimum index for magnesium (Mg), which can cause soils to become difficult to work.

Mg concentrations at index 0 were also reported and circumstances in which livestock risk hypomagnesaemia (grass staggers) are principal reasons for correcting levels of this nutrient.

Siwan Howatson, head of technical at Farming Connect, said:

"These results indicate the importance of regular soil testing and targeted nutrient management on farms. Get in touch with your local Development Officer today to learn more about how Farming Connect can support you to improve your soil health which in turn will also achieve the Sustainable Land Management Outcomes; mitigating flood and drought risk as well as maximising carbon sequestration and storage."

Farming Connect soil clinics provided the opportunity for registered businesses to have soils analysed.

Sampling and analysis were also carried out on the Farming Connect Our Farms Network Farms.

The samples were compared to accepted industry standards, as set out in the AHDB Nutrient Management Guide RB209, last updated in June 2023.

They were categorised by region - North East, North West, Powys, South East and the South West, and this showed that region did have an influence on the level of some nutrients, notably Mg.

YOUR FARM DEPENDS ON YOU: STAY SAFE

An ATV accident can change your life forever

ATVs can be incredibly dangerous. Accidents involving these vehicles can have severe consequences, often leading to life-altering injuries or even fatalities.

To minimise the risk of ATV accidents, it's essential to:

- **Wear appropriate safety gear:** Helmets, protective clothing, and boots can help reduce the severity of injuries.
- **Receive proper training:** Understanding how to operate an ATV safely is crucial.
- **Follow manufacturer's guidelines:** Adhere to the ATV's weight and age restrictions.
- **Ride responsibly:** Avoid dangerous terrain, excessive speed, and riding under the influence of alcohol or drugs.

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WALES FARM SAFETY PARTNERSHIP

Working together to make farming safer

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Funded by **Welsh Government**

SOME THOUGHTS FROM FARM HEALTH AND SAFETY MENTOR, BRIAN REES

As we start the new year all farmers should be asking themselves the question, how can we make our farms safer in 2025? Once again, transport equipment accidents featured highly in 2024 with quad ATV's topping the list. I believe that everyone who rides a quad on the farm knows that they should be wearing a helmet, but just can't be bothered. We must remember that a helmet greatly reduces the level of injury, but is only effective as the accident is happening. It's the competence of the rider and the mechanical condition and settings of the ATV which are important in reducing accidents.

Other transport equipment involved in accidents are tractors and telescopic handlers. We see again that the causes of accidents are often related to the competence of the operator and the mechanical condition of the machine. One interesting fact relating to telescopic handlers which could have reduced stability related accidents is that in 2012 it became a legal requirement for all new telescopic handlers to be fitted with a hydraulic lock-out device. This disengaged the hydraulic if the machine became overloaded. As anticipated, this safety device was very unpopular with farmers when it was first introduced. Over the years it has become accepted and I believe has reduced the number of stability related accidents on farms. It will be interesting to monitor the number of entanglement accidents following the introduction of the PTO disengagement system, that happens with a tractor when the operator leaves the seat.

When we start thinking about safety in farming, we must ask ourselves why some of these accidents happen? I have a few thoughts!

Firstly, farmers are very dedicated and determined people and when they see a job that needs doing, getting that job done will be the only thing on their mind. They are likely to go straight in without thinking about other factors in the areas that may affect their safety e.g. seeing a calf that is a few hours old that hasn't sucked. The only thing on the farmer's mind will be getting milk into that calf's stomach. There is often no thought of what the cow may think or they have not made sure there's a good gate between the farmer and the cow during the handling of the calf.

Another example would be someone wanting to spread fertiliser on a steep slope. Suddenly the first dry day for weeks arrives and the only thing on the farmer's mind is spreading fertiliser, with often no thought of – have we got time to put the twin wheels on? When did we last check the tyre pressure on the tractor? Or asking should I be wearing a seat belt? Sadly, these are the situations that do cause accidents.

Other accidents that happen on farms may not be to the regular farm staff, it may well be to contractors or neighbours coming on to the farm. What farmers must know and understand is that once these people are working on a farm, the farmer or the controller of the site can be held responsible for any accidents that happen to them. Other industries such as construction or forestry have well used systems in place where contractors have to produce evidence to prove that all health and safety factors have been addressed; all equipment is up to standard and staff are all competent and experienced to do the job. This is commonly known as a 'method statement'.

Brian Rees - Farm Health & Safety Mentor

Once this documentation is in place it shows that the controller of the site has done all that is 'reasonably practicable' to ensure the safety of all workers on site. Over the years these unfortunate accidents have happened without completing these checks, and farmers have been held responsible.

As farmers we must consider health and safety to be a crucial part of our farm management. One very common problem we have in farming is that we all think that a farm accident will never happen to us!

Farming Connect offers a large range of health and safety related training courses, all funded up to 80% including:

- *Sit-astride ATV's including Loads and Trailed Equipment*
- *Sit-in ATV Conventional Steered*

For more details please contact **03456 000 813**.

Up to 15 hours of Mentoring is available to all Farming Connect registered members, with a wide range of topics within farming and horticulture being covered by our 90 Mentors across Wales.

To view the online mentor directory and apply, visit **gov.wales/farmingconnect**

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GENETEG GENETICS

"Genetics has the potential answer to each problem in the Sheep Industry"

This was one of the key take home messages from the biennial Sheep Breeders Round Table (SBRT) conference which took place in November 2024. The SBRT is a technical conference for sheep breeders, farmers, academics, consultants and industry representatives, with this year's theme concentrating on 'breeding sheep for a greener future'.

The SBRT conference is an industry initiative, with collaboration from all levy boards including AHDB, Hybu Cig Cymru (HCC), Quality Meat Scotland (QMS) and AgriSearch combined with support from the National Sheep Association (NSA).

The conference is a platform for showcasing how we can become more resilient and be amongst the best sheep producers in the world.

Twenty individuals from the Farming Connect Welsh Sheep Genetics Programme (WSGP) took the opportunity to attend the conference as part of a four-day study tour to the Midlands, England. Farming Connect played a key role in the Friday afternoon session of the SBRT conference, with Elan Davies (Head of Genetics) chairing the second session, 'breeding sheep in a sheep producing country'.

Dr Janet Roden, Geneticist with Innovis and Tim Tyne, a farmer from the Llŷn Peninsula both gave presentations at the Friday afternoon SBRT session. Janet presented the genomic and phenotypic advances in the Hill and Maternal Breeding programmes as part of the WSGP.

Tim is one of the founding members of the producer group ProHill, and he's also part of the WSGP. He gave an overview of the changing face of genetic improvement in the Welsh Hill Sheep Sector, and the role programmes like ProHill and WSGP have played in driving that improvement forward. The importance of good genetics, and the vital role genetic improvement plays in driving the sheep industry forward was highlighted throughout the conference.

As well as attending the SBRT conference, three farm visits were organised ahead of the conference for the WSGP farmers. The first stop was with Robyn Hulme, EasyRams. EasyRams is one of the UK's largest performance recorded ram producers. The business was established 15 years ago to import, breed and sell 100% pure NZ Rams, building on annual genetic gain being paramount to the business' core values.

JCB Farms Ltd at Cote Farm was the next stop. Matt Hayden, assistant farm manager, took farmers on a 'tractor and trailer' guided tour around the 4000-acre estate, of which 1200 is woodland. They run 2500 Lleyn ewes (of which 200 form the nucleus performance recorded flock), aiming to improve scanning percentage through performance recording and improved genetics.

Our final farm visit was with Simon Thompson, Culland Hall Farm. Simon runs a closed flock of performance recorded, grass-based, MV accredited Lleyn sheep since 2003. He sells performance recorded rams directly from the farm, utilising a rigorous performance recorded regime focusing on average daily growth rates, maternal and health traits, of which breeding sheep with a natural resistance to worms is one of Simon's main breeding objectives. Laura Eyles, of AHDB Signet also joined us at Culland Hall Farm, and gave an overview of the 'Breed for Ch4nge' project, helping the UK sheep industry breed more sustainable sheep to help reach greenhouse gases targets.

All three farms were completely different in terms of breeding aims, size and scale; but had one main theme in common - that performance recording and genetic improvement played a key role in the success of their businesses.

Easy Rams - Culland Hall Farm

SBRT Conference

Looking to improve your knowledge and understanding of Genetic Improvement in Livestock?

Learn more about this topic from the comfort of your own home with our free online E-learning modules.

For more information on the Welsh Sheep Genetics Programme, please visit the Farming Connect website

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GARDDWRIAETH HORTICULTURE

HIGH YIELD QUALITY PASTURE IS KING…

why soil and grassland management matters

Are you doing all you can to ensure your grassland performance gives you the returns you need? Do you analyse the soil, take sward measurements? If your livestock are not consistently reaching optimum levels of performance and productivity; if you haven't taken steps to mitigate changing weather conditions or if you are unsure about current regulations, it is time to take action!

When managed correctly, high-quality grass and forage …

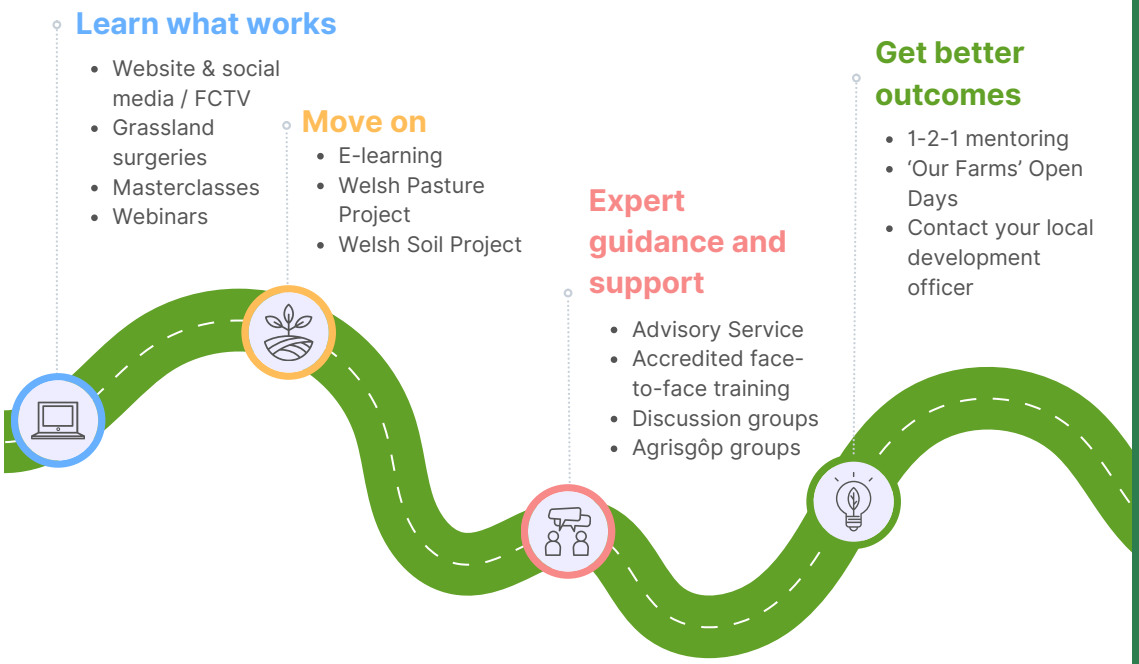
- provides high-value feed for livestock, reducing need for bought-in feeds
- reduces the use of nitrogen fertiliser, limiting nitrate pollution
- helps sequester carbon in the soil
- leads to consistently **higher profits**.

From milk yields to liveweight gains, from stock performance to profitability, the farmers who make timely on-farm grassland management decisions get better results.

Farming Connect can help you find answers to all your soil and grassland management questions. Whether you are an experienced farmer or new entrant, Farming Connect provides a wide range of **fully funded or subsidised** face-to-face and online support services, events and training options at a level that suits you. **Simply select and apply for the package you need.**

Soil and Grassland Management

… achieve optimum yields and quality forage



Choose your own pathway from the available services shown and learn how to increase & improve the quality of your yield.

«««

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Farming Connect can help you…

- ☑ understand the basics of soil fertility, its components, effective sward measurement and management best practice
- ☑ understand why your fields will perform better when you implement crop rotation systems, use green manure, composting and minimum tillage
- ☑ improve soil fertility, prevent pests and diseases, enhance plant nutrient availability

Learn about soil and grassland management in your own time and at your own pace.

Fully funded e-learning modules include…

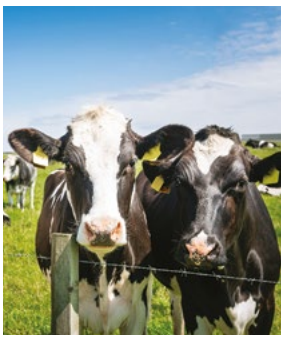
› Building and maintaining soil fertility
› Building soil carbon
› Foliar feed - feeding leaves not soil
› Grassland management (including multi-species swards and mixed grazing)
› Grassland species
› Grazing management
› Grazing systems
› Improving soil health
› Nutrient Management Planning
› Soil health
› Soil sampling and analysis
› Weed control

Short accredited face-to-face training courses, subsidised by up to 80%, include…

› BASIS Foundation in Agronomy (Agriculture)
› BASIS FACTS (Fertiliser Advisors Certification and Training Scheme)
› Grassland Systems
› Conservation Grazing

For further information visit the *grassland section* on the Farming Connect website or for more guidance, contact your *local development officer*.

All continuing professional development activities and training you complete will be uploaded to your personal online *Storfa Sgiliau* record.



Water efficient irrigation options

Wales Climate Week - A national 5-day virtual conference took place 11 to 15 November 2024. Professionals from across sectors gathered to explore the theme of 'adapting to our changing climate'.

The Horticultural industry in Wales was represented on day one, in a discussion led by our Horticulture Manager, Sarah Gould: 'Session 3 Developing a climate resilience plan for Welsh horticulture businesses'

Sarah was joined by Iain Cox of Eco Studio and Growers Ric Kenwood of Clare Austin Hardy Plants, and Lyndall Merry of Bryn Celyn Veg. This session explored the steps that horticulture businesses can take to build climate resilience.

As a result of climate change and the rising costs of inputs, many growers are looking to make their business more efficient – including improving water usage efficiency. One of the main ways to do this is in the irrigation system. Installing or switching to a more water efficient irrigation method can substantially reduce the cost of water, improve yields, plant water usage efficiency and reduce waste.

DRIP IRRIGATION – THE MOST WATER EFFICIENT SYSTEM

Drip irrigation (also known as trickle irrigation) is widely recognised as the most water-efficient irrigation method. Studies comparing furrow vs. drip irrigation found an increase in potato yield of 26-28%, whilst sprinkler vs. drip reported an increase in water usage efficiency of 27%. Comparing furrow and drip irrigation on tomatoes in the field, an increase in yield of 20% was reported.

There are two types of drip irrigation:

SURFACE

Surface drip irrigation is water efficient, but sub-surface systems are even more efficient. Subsurface drip irrigation improves the water savings of surface drip by up to 30%, but they require more initial capital to install and sometimes specialised installation equipment.

DRIP IRRIGATION

ADVANTAGES	DISADVANTAGES
Reduces water usage compared to other systems	Initial costs can be high
Improves water usage efficiency	Installation requires manual labour (esp. subsurface systems)
Potential to reduce runoff and pollution	Requires specialist machinery (subsurface systems)
May reduce weed occurrence	Regular and sometimes costly maintenance
Negates water loss to the wind	Not suited to large-scale systems due to cost
May reduce fungal disease on vegetation	
Pairs well with fertigation and smart systems	

FERTIGATION

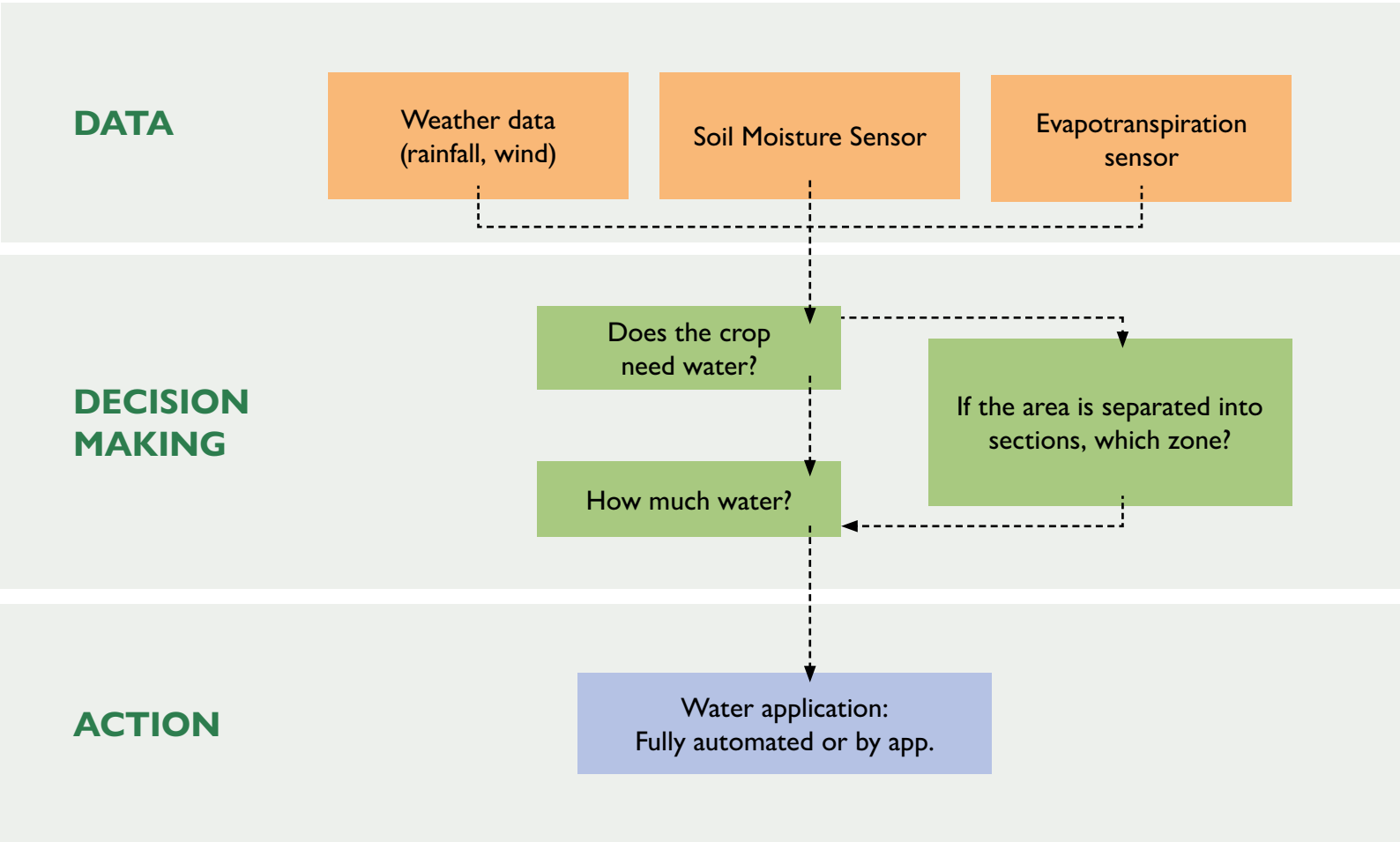
Fertigation is the addition of liquid or water-soluble fertiliser to the irrigation system.

Used with drip irrigation, fertigation is highly efficient and has the potential to reduce fertiliser usage. Using drip fertigation over conventional methods has shown up to 39% increase in yield of tomatoes and 28% improvement in water use efficiency.

The specific amount of fertiliser and what could be saved will vary depending on the plant, farming system, soil type and characteristics.

SMART IRRIGATION

Smart irrigation systems use sensors to enable more efficient and accurate irrigation and fertiliser application.



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Smart systems come in many forms and can use a number of different sensors, including:

- **Soil moisture** – buried in the root zone.
- **Evapotranspiration** – estimates water loss from the plant based on historical patterns or real-time weather data.
- **Rain and freeze** – stops irrigation if rain starts or temperatures are freezing.
- **Wind** – interrupts irrigation in high wind to avoid waste.
- **Weather data** – meteorological data from a publicly available source.

A fully automated system will then have a decision-making process about whether the crop needs water, how much and in which areas before starting irrigation. Others might be controlled by the grower using an app.

All studies comparing smart systems to farmer-operated systems report improvements in water usage efficiency, overall water use, nutrient usage and/or yield.

STUDIES REPORT:

Irrigating tomatoes in the field based on real time data (rather than historical) increased yield by up to 35% and reduced water usage by up to 22%.

Glasshouse grown tomatoes under drip irrigation controlled by soil moisture sensors reduced water usage by 63% whilst still maintaining good soil moisture content. Fruit yield increased by up to 17% which was due to improved nutrient usage by the plant.

USEFUL RESOURCES

- Scientific article: Smart fertigation in tomatoes
- Drip irrigation systems
- AHDB: How to manage fertigation well