DAIRY DASHBOARD

January 2022 – April 2022

FARMING connect
cyswllt FFERMIO

% of all activity in this quarter relevant to the dairy sector

1,786
DAIRY FARMS REGISTERED WITH FARMING CONNECT

Mentoring programme

19 DAIRY FARMERS CURRENTLY BEING MENTORED

Click here to access the full Mentor Directory.

Demonstration Network

Focus on Feet: Reducing lameness in the robotic dairy herd – Graig Olway demonstration site

Unfortunately, Graig Olway was yet again affected by TB and lost 23 cows – many of which were sound, and therefore affected the overall lameness percentage. The year started off with a high lameness percentage (28%) in January. We also believe that the increase was impacted by increased digital dermatitis (DD) cases from less frequent foot bathing due to TB pressure on the cows, as well as less foot bathing over the festive period and TB testing. However, a fortnight later, the percentage reduced to 11%. Graig Olway has invested in a Lely automatic Bob scraper for the heifer shed, which should help reduce DD and keep the shed cleaner.

Although overall lameness levels crept up very slightly, we were still back on the right lines in terms of the proportion of the herd staying sound. Some of the repeat cases are from thin-soled cows, and others from those that had bruising in previous trim visits, which is now coming through again. These are mostly the repeat offenders.

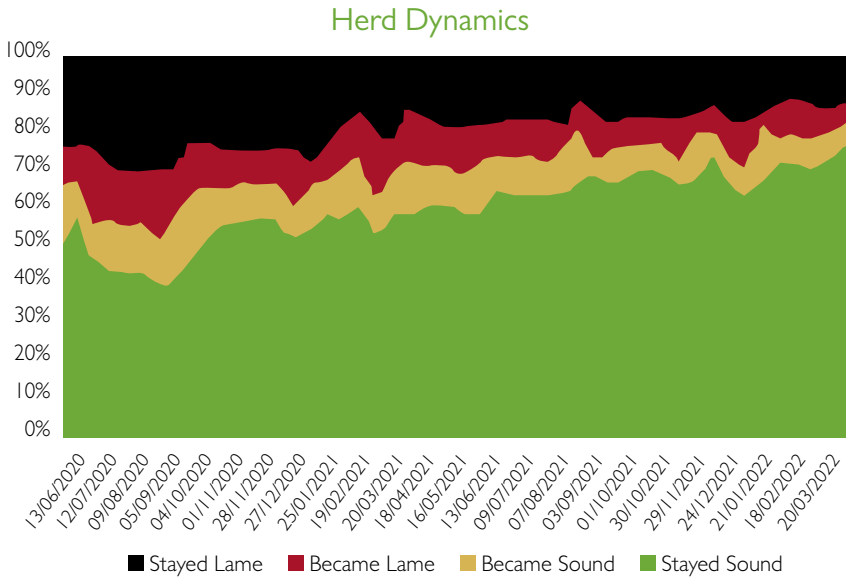


Figure 1. Herd lameness dynamics at Graig Olway.

At the beginning of April, we had our lowest score to date at Graig Olway (17%). Removing a few chronics makes a big difference in the overall percentage. but the new lameness rate continues to be low, which bodes well for future scores too. The proportion of the herd staying lame between scores (Black area above) keeps increasing, which is excellent, and we are seeing good recovery rates from those new lameness cases that have been treated.

It is important to remember that Graig Olway is very strict at mobility scoring, as Sarah is an equine vet and is able to pick up lameness at its earliest stage. Even with strict scoring, we have seen excellent lameness improvements since the start of the project. We look forward to an open event at Graig Olway in July.

Correlation between earthworms and soil health, in addition to evaluating BOKASHI (fermenting organic matter) – Llwynmendy Farm

Soil health is central for sustainable farming. Research has shown that a fresh worm cast can hold as much as five times more accessible nitrogen, seven times more accessible phosphorous and 11 times more accessible potash than the surrounding top soils. Under ideal conditions, a healthy earthworm population can process around 12 tonnes of soil and organic matter in a year. They play a critical role in mixing and aggregating surface leaf litter with soil, as well as improving soil structure and microbial decomposition of organic matter.

Their activity results in:

- Improved nutrient availability
- Improved soil structure
- Improved drainage
- Improved productivity

For the Llwynmendy focus site, we are in the early stages of a project that will assess soil health of all grazing fields at the farm by using a Soil Health Matrix (shown below):

Soil Score Card			
Farm			
Land Use			
Field			
Soil Type	Sandy	Coarse Loamy	Fine Loamy
	Coarse Silty	Fine Silty	Clayey
Date			
Soil Moisture	Dry	Slightly Moist	Moist
	Very Moist	Wet	
Weather	Dry	Wet	
	Cold	Warm	
Indicators	Score	Weighting	Ranking
Texture	0	3	0
Structure	0	3	0
Porosity	0	3	0
Mottles	0	2	0
Colour	0	2	0
Worms	0	3	0
Smell	0	2	0
Pot Root Depth	0	3	0
Surface Ponding	0	3	0
Surface Releif	0	1	0
		Total	0
Poor	<20		
Moderate	20-35		
Good	>50		
Maximum	**20**		

Figure 2. Soil score card.

The second part of the project will be fermenting organic matter. The process is called Bokashi (Japanese for 'fermented organic matter'), and is a similar process to ensiling forage crops. Traditional composting is an aerobic process that generates heat, which means that energy and valuable nutrients are lost. Alongside this, composting also emits a significant amount of carbon. Composting loses 62% of its total mass to volatilisation and 58% of its organic matter – of which 50% is carbon. Therefore, 10t of organic matter would lose 3t of carbon. In comparison, only 3% of carbon is lost during the bokashi process.

The overarching aim of the project at Llwynmendy will be to determine the soil health in context of worm numbers and soil organic matter. Key objectives identified are as follows:

- Determine the overall soil health of all fields
- Detect whether there is any correlation between worm numbers, grass growth and Nitrogen application.
- Detecting ways of improving worm numbers
- Evaluating the benefits of Bokashi

Nantglas demonstration site: Improving block calving fertility

The first quarter of the year is a particularly busy time for farmer Iwan. He is the only person on the farm to manage spring calving and scanning of the autumn calvers. Scanning proved successful this year, with only two empty out of 105 scanned (98% in-calf). Unfortunately, the heifers weren't as successful; out of the 22 scanned, four were empty. Iwan has identified the performance of the bull he uses to sweep up on the heifers as a potential reason, and will be buying a replacement before the next service.

When the spring calvers were scanned in the autumn, a total of 106 of the herd were scanned with eight empties, and only one first lactation empty. This showed that the improved heifer management is proving its worth. On 16 March, 63 cows had calved, which equates to around 60% calved in two weeks. This was on track to meet the project target of 90% calved in the first six weeks of calving, compared to 70% before Iwan started the Farming Connect project. There were four milk fever cases at the time, which Iwan believes is a result of cows being over-conditioned. He decided to let the cows graze outdoors in the day and housed at night, which helped reduce milk fever cases.

Cows are unfortunately starting to show signs of pica again: eating rubble. Nigel Howells has taken fresh grass samples and soil samples to understand what minerals are available in the grass, and if there are defects which can be linked to the cows' desire to eat rubble and develop milk fever. With Nantglas having a heavy soil structure, work is still required to understand if minerals are getting locked up more in the soil. Nigel Howells is keen to tackle the issue at Nantglas and other farms affected by pica due to the lack of research and knowledge.

You can see more details on pica issues last year at Nantglas, and sample results here.

Discussion Groups

37 DAIRY DISCUSSION GROUP MEETINGS held with **316** ATTENDEES

Case Study

A dairy discussion group from Pembrokeshire were joined by Katie Harrower from Fenton Vets to focus on fertility and the various elements linked to this subject.

Katie mainly focused on the transition period, which is known as the three weeks pre-calving and three weeks post-calving period. The host farm had previously had issues with milk fever cases and had decided to introduce magnesium flakes into the water troughs this year, which has shown a reduction in cases. Another change that has been implemented on-farm is that 10-12 days before calving, the cows are fed 2kg of pre-calving cake. This has given the cows more energy during and post-calving, and the host farmer noted that the cows are much happier in themselves and resume normal behaviour soon after calving.

Katie noted that cows are most susceptible to disease the first three weeks after calving; in fact, 85% of all issues arise in this period, and cause problems getting cows back into calf.

Between calving and serving, it is vital to keep energy up. Dry Matter Intake (DMO) needs to be kept up to keep them in the habit of rumen fill, as during late pregnancy, the calf takes up rumen space, so it will need to stretch again to ensure the cow optimises diet intake.

One member had seen a farm introduce warm water in troughs, and had increased milk production by 500 litres. Katie had no issue with this concept if they were wanting to try.

Things that can cause issues:

- Bad calving
- Poor dry cow management – adequate feed space is essential (75-90cms)
- Stress in moving groups
- Incorrect diet
- Lameness
- Feed availability

A bad transitional period can lead to:

- Not cleansing
- Bruising/discomfort
- Displaced Abomasum

Knowledge Exchange Hub

Technical articles produced by the KE HUB:

- CRYPTOSPORIDIUM AND LIVESTOCK AS ZOONOTIC RISKS
- METHODS OF PREGNANCY DETECTION IN DAIRY CATTLE
- LAMENESS AND LEARNING: KNOWLEDGE EXCHANGE IN ANIMAL WELFARE
- THE IMPORTANCE OF CALF PRE-WEANING NUTRITION
- THE EFFECT OF PRODUCTION SYSTEM ON THE OMEGA-3 AND OMEGA-6 FATTY ACID PROFILES OF MILK

Webinars

4 DAIRY THEMED WEBINARS held with **101** VIEWERS

Examples of webinars held include:

- How can Welsh dairy farms benefit from small-scale anaerobic digestion?
- Undersowing maize for environmental and economic benefit
- The year for a successful grazing and nutrient management (dairy): panel discussion

EIP Wales

Managing dairy ewes to produce a better outcome for cheese production

The group behind the project wanted to better understand the impact of the following variables on the bacteriology and composition of sheep milk:

- Stage of lactation.
- Breed, with a focus on pure Friesland, pure Lleyn and Friesland cross Lleyn ewes.
- Selenium diet supplementation for ewes

Results

- Alan Jones, who farms in Chwilog near Pwllheli, explains: *"Through this project, we have learned that the Lleyn ewe performs well in terms of milk solids, length of lactation and offers the option of keeping a suckling lamb for a short period of time if required to manage supply. As expected, she doesn't produce the high yields a Friesland will, and for every two Friesland ewes, I will need at least three Lleyn ewes to provide me with the same quantity."*
- Ewes with a high SCC score yielded significantly less milk in year 1, and more interestingly, a lower percentage of total solids.
- *"With guidance from Dr Yoav Alony-Gilboa of Friars Moor Vets in Dorset, the specialist involved in the project, we have implemented new protocols to bring our SCC score down to improve our flock performance,"* explained Alan. "*This included extreme actions such as removing high scoring ewes from the milking flock, and more operational adaptations such as better methods for teat wiping and improving knowledge of how to monitor and maintain good udder health."*
- When compared to the control group of ewes, the group did not find any significant data to suggest selenium supplementation could impact the yield or quality of milk.

Strategic Awareness Events

12 Events Held with 255 attendees

Key topics included.

How can you make economic gains by reducing cell count and bactoscan?

Independent vet/milking technologist Tom Greenham and Kite's Neil Blackburn joined Farming Connect for a meeting to discuss ideas surrounding reducing bactoscans and cell counts/mastitis. The latest research and advances in milking protocols and technologies for farmers to improve were presented and discussed, whilst ideas that have worked on-farm were shared, too.

Following the meeting, farmers had the opportunity to have a 100% funded 1:1 visit from Tom Greenham to look at specific issues and ideas on members' farms, including reviewing the milking process, assessing the effectiveness of the plant cleaning, troubleshoot cell count/mastitis issues, including looking at the housing and bedding options.

Milking for all it's worth

This meeting provided an overview of results from the 'Milking for all it's worth' project. These findings included the production and financial gain for farmers who participated in the project.

All individuals that attended also had an opportunity to ask questions to specialists Tom Greenham, Advanced Milking and Neil Blackburn, Kite Consulting.

An overview of the next steps for the project going forward was also provided.

Surgeries

27 SURGERIES HELD

Key topics included:

1 Accountancy	4 Planning	1 Business
7 Marketing and diversification	3 Carbon footprinting	5 Legal
1 Information technology	1 Staff management	

A business wanted a marketing and diversification surgery to look into making cheese with the milk that they produce on their farm. This would be the first step, and following this, they would consider having a business surgery to help and guide them with their business plan.

Management Exchange

Jamie McCoy

Jamie McCoy will visit the Netherlands and Austria. Jamie is determined to improve the profitability of the business, while improving its environmental and community legacy, and will be looking into short supply chains in these countries..

"We need to add value to milk, meat, vegetables, fibre such as wood and wool and tourism opportunities. Therefore, I aim to learn more about short supply chains, which operate from the farm gate, to keep ahead of the European curve and meet the ever-changing needs of farmers and consumers."

First-generation farmer Sophia Morgan-Swinhoe will be visiting Ireland to learn how to develop cheese that reflects the farm, its identity and location. Her aim is to *"develop, process and market a unique aged Welsh cheese which showcases the herd health and biodiversity of my farm"*, she says.

"By visiting some of the leading farmhouse cheesemakers in Ireland, I will learn how they express the identity of their farms through their produce."

Animal Health & Welfare Workshops (relevant to dairy)

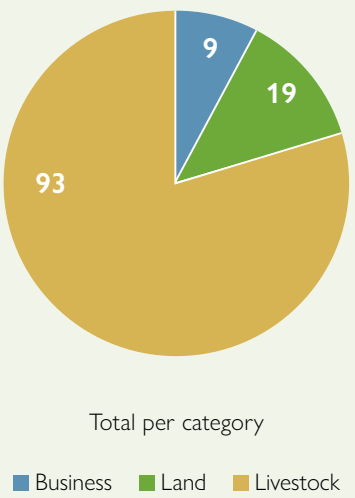
17 WORKSHOPS held with **190** ATTENDEES

- Antibiotic resistance
- Rearing healthy calves and maximising profit
- Reducing lameness in dairy cattle
- Reducing mastitis in dairy cattle
- Youngstock Health

Training

During this period, **121** instances of face-to-face training were delivered to the dairy sector.

Individuals trained by category



Most Popular Courses by Category in the dairy sector:	Number of individuals trained:
DIY AI	44
Safe Use and Application of Slurry	5
Working safely in Agriculture / Horticulture	2
Emergency First Aid at Work	2
Business planning and development	2

E-learning

Some of the e-learning courses completed within this period:

- FARM SAFETY – WORKING SAFELY WITH LIVESTOCK
- GRASSLAND SPECIES
- IMPROVING SOIL HEALTH
- SELECTIVE DRY COW THERAPY

Click here to visit the website.

Cronfa Amaethyddol Ewrop ar gyfer Datblygu Gwledig: Ewrop yn Buddsoddi mewn Ardaloedd Gwledig
European Agricultural Fund for Rural Development: Europe Investing in Rural Areas
Llywodraeth Cymru Welsh Government