DAIRY DASHBOARD

September 2021– December 2021

FARMING connect
cyswllt FFERMIO

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

52%
DAIRY ACTIVITY

1,779
DAIRY FARMS REGISTERED WITH FARMING CONNECT

Demonstration network

Gate Farm: Overseeding strategies, including multi-species

Organic focus site Gate farm have been undertaking a programme of re-seeding with the help of Germinal's Helen Mathieu. A reseeding strategy (including overseeding) was undertaken during summer/ autumn 2021. The significance of the project at Gate Farm is that establishment and management needs to be free of the assistance of artificial fertiliser and any pesticides or herbicides. Various species and varieties have been established to monitor their potential under an organic situation. The perennial ryegrass overseeding appears to have had a certain degree of success, as have some of the clovers. The herbs introduced are sparser, and only appear in areas of the field where the ground cover was below 70%. Brassica establishment was good for an organic farm – which Helen predicts the yields to be approximately 3 tonnes/ha. Each hectare would feed 40 in-calf heifers weighing 400 kgs for approximately nine days. Helen suggests that the field should ideally be strip-grazed and straw placed out in good time, allowing approx. 4 kgs straw per head per day. Minerals should also be supplemented, either by bolus or free access minerals in the field.

Figure 1. Plantain and chicory overseeding at Gate Farm on an open ryegrass sward.

Nantglas: Increasing clamp density and forage quality

Increasing clamp density has been a focus at Nantglas, During a recent open day at the farm, independent silage specialist Dr Dave Davies, of Silage Solutions, said the target density should be 700kg of fresh matter per cubic metre which, depending on the silage dry matter (DM), is equivalent to approximately 220kg of dry matter per cubic metre. At Nantglas, a density of 800kg has been achieved, and even on the edges and on the top (which are considered the vulnerable zones of the clamp), it was 694kg. A compactor had been used to increase DM density and speed up compaction. This, said Dr Davies, had not only resulted in better density and aerobic stability – and therefore fewer losses – but studies had also shown a 10% fuel saving compared to a tractor alone. A homofermentative additive was used, since research data has shown a benefit to animal performance, unlike the use of mixed homo/heterofermentative silage additive products. At feeding out, Dr Davies recommends measuring the density in various parts of the clamp face to test for any weaknesses. This, he said, would probably correspond with poorer quality silage, and possibly heating and aerobic spoilage, which reduce quality and intakes. If this is the case, more attention will be needed when consolidating these areas in future.

Knowledge exchange hub

Technical articles produced by the KE HUB;

- FEASTING LIKE KINGS – HOW TO PREVENT BIRDS FEEDING ON TMRS
- USING SEXED SEMEN AND GENETIC TECHNOLOGIES TO IMPROVE DAIRY AND BEEF HERDS
- SHEEP DAIRY PRODUCTION: UNDERSTANDING BEFORE UPSCALING

EIP Wales

Improving fertility and calving rates of dairy herds in South West Wales through a method of early pregnancy diagnosis using pregnancy-specific protein B (PSPB)

PSPB is a chemical that is produced by a pregnant ruminant animal, and provides a reliable predictor of pregnancy. Four dairy farmers in Carmarthenshire, with a total herd size of about 1,700 animals, have been working with Dr Sotirios Karvountzis of Mendip Vets, Llandeilo, to investigate whether PSPB can be used as an early indicator of pregnancy in dairy cows, within 30 and 120 days post-service. Early recognition of infertility in a dairy herd can lead to timely and appropriate treatments in consultation with the farm's vet.

At the start of the project, the cows were split at random into two groups: pregnancy diagnosis by ultrasound scanning and pregnancy diagnosis by blood sample. The actual calving dates of the animals were used as the benchmark for comparison with the results of both methods.

Each method returned three results: 'positive' for when a pregnancy was detected, 'negative' for when the animal was either not pregnant or it was too early to detect a pregnancy, and finally, 're-check' for when a suspected embryonic death or foetal reabsorption was taking place.

"PSPB was found to be 94% accurate and ultrasound was 95% accurate in predicting the positive result. Also, PSPB was 87% accurate and ultrasound was 86% accurate in predicting the negative result. The difference between these results was not statistically significant," said Dr Karvountzis.

Putting aside costs, there are advantages and disadvantages to both methods of pregnancy diagnosis. Ultrasound scanning is a relatively quick method to get a reliable result. It also allows farmers to identify multiple pregnancies (twins, triplets and so on), the stage of pregnancy (certain equipment will allow accurate ageing within 7-10 days), and, depending on the image and stage of pregnancy, to gender-determine the foetus.

The disadvantage of this method is operator experience, as there is evidence that the scanning result improves with training and with years of practice. The selected animals also have to have their daily routines disrupted, as they are kept in a pen before or after milking, waiting to be examined.

PSPB allows for a trained farmer to collect the samples at any time that suits their schedule, and that of their cows. It can be implemented as part of the weekly management task, similar to foot trimming, minimising the disruption to the animals' routine. Once the PSPB results are returned from the laboratory, those that tested negative can be presented to the vet. The vet can then ascertain why they are unable to conceive and administer appropriate treatments.

There are however, some disadvantages. The collection of a blood sample falls under the remit of the Veterinary Surgeons Act. Therefore, the person who harvests those samples has to be trained by their own vet in the procedure. Secondly, although PSPB predicts a pregnancy result relatively accurately, it cannot ascertain the length of the pregnancy (and therefore works best with a known service date), twinning rate or be used for gender determination.

Figure 2: From left: Dr Sotirios Karvountzis, Rhys Watkins with brother Hywel Watkins and their mother Janet Watkins of Pantglas farm, Llanfynydd, Llandeilo.

Webinars

1 DAIRY THEMED WEBINARS held with **11** VIEWERS

Examples of webinars held include:

Milking parlour efficiency & dynamic milk testing & milk quality

Farm events

6 DEMONSTRATION NETWORK EVENTS held with **207** ATTENDEES

Slurry storage solutions at Graig Olway

Foliar fertiliser and robotic milking – a look at increasing dairy farm efficiency at Trawscoed Farm

How artificial intelligence technology can help reduce cases of on farm lameness at Erw Fawr

Undersowing maize for environmental and economic benefit at Arnolds Hill Farm

Discussion groups

20 DAIRY DISCUSSION GROUP MEETINGS held with **153** ATTENDEES

Case Study

A north Wales dairy group were keen to explore their options in light of the soaring cost of nitrogen fertiliser. Most members run traditional family dairy farms that house the cows over winter, but are reliant on nitrogen application early in the season for turnout onto grass in Spring. They invited Chris Duller to visit the group, at one of the members' farms in the Conwy Valley.

Chris started the discussion with an overview of the 170 Kg of N/ha limitations introduced with the Control of Agri Pollution legislation, concentrating on its impact for dairy farms. He stressed the importance for the members of planning ahead, in terms of their dairy herd numbers. As calculations will be done retrospectively, if the level is above the 170 Kg N/ha, then it's too late!

To demonstrate, the host farmer had completed a stock input sheet created by Chris and shared with the group. The sheet allowed them to look at different scenarios – such as reducing dairy cattle numbers, reducing youngstock numbers, outsourcing replacement heifer rearing – to find the perfect situation to comply with this regulation.

This calculation gives the benefit of creating an awareness of N deposited in faeces from the dairy herd, replacements and youngstock, and within slurry and FYM on farm. This provides an idea of input before inorganic N fertiliser is sourced and applied.

The discussion proceeded to inorganic fertiliser prices.

Discussion of alternatives/counteractive actions focused on:

- Clover leys
- Rotational grazing
- Getting an NMP

The key message was to 'bank' first (ordering a supply of N now to ensure delivery, and applying first and second application early). Members were also warned not to cut corners early in the year, or milk production will be affected when at its highest price in p/ltr. They were advised that summer is the time to cut down by a quarter, so as not to affect dairy performance and profitability.

Group members were reminded that Farming Connect are offering fully funded manure sampling as part of their on-farm clinics; the analysis and resultant report will give farmers an idea of the nutrient value of manure and slurry on their farm.

Strategic awareness events

63 Events held with 25 attendees

Key topics included:

- Telling the farming story – how industry influencers are growing in importance
- Agricultural pollution workshop
- Securing your farm business for future generations: is a joint venture an option?

Surgeries

20 SURGERIES HELD

Key topics included:

- Marketing and diversification
- Legal
- Carbon footprinting
- Planning
- Business

Businesses from the dairy sector attended all of these surgeries. Some dairy businesses used this surgery to look at how to use a carbon toolkit to measure the carbon footprint of their farm.

Mentoring programme

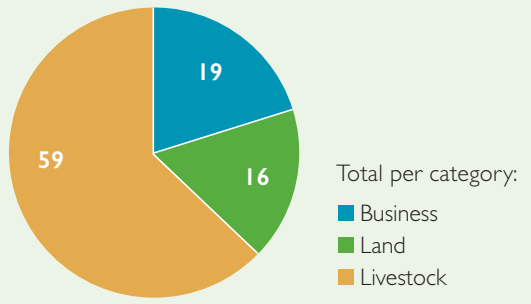
139 DAIRY FARMERS CURRENTLY BEING MENTORED

Click here to visit the mentoring programme.

Training

During this period, **94** instances of face-to-face training were delivered to the dairy sector.

Individuals trained by category:



Course Name	Business	Land	Livestock	Grand Total
DIY AI			19	19
Cattle Foot Trimming			18	18
Calf Management, Health and Housing (for both beef and dairy sectors)			9	9
Sit-Astride ATVs including loads and trailed equipment		6		6
Level 2 Award in the safe use of pesticides (PA1) & safe application of pesticides using vehicle mounted boom sprayer equipment (PA2)		5		5
Emergency first aid at work	5			5
Book-keeping	53			3
Rough terrain telescopic lift truck		3		3
Cattle mobility scoring			3	3

E-learning

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

- CLIMATE CHANGE AND LAND MANAGEMENT
- CLIMATE CHANGE AND LIVESTOCK
- DISBUDDING CALVES
- TRACE ELEMENTS IN CATTLE

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