

2018 was a challenging year, and throughout the United Kingdom, the drought significantly reduced forage quantity and quality. Thankfully, some farms, including ours at New Dairy, Newport, were able to recoup some forage during the later summer months and early autumn of last year. We did, however, limit our losses by trialling a multi-cut system which produced some good quality silage during the season.

The 1st cut was taken in 2 main cuts on the farm. On 20 April, over 194 acres were cut; this produced 570 tonnes averaging 2.93 tonnes to the acre. The other 1st cut was taken on 15 May, with over 269 acres producing 950 tonnes averaging 3.54 tonnes to the acre.

During the Farming Connect focus site project, our mentor and consultant had to make adjustments to the system along the way. Soil moisture levels during early summer dropped significantly, and due to the extreme weather, grass regrowth was poor. The decision was made to bale 3rd cut on the late heavy ground to reduce harvest costs. The farm managed 4th and 5th cuts during August and September following the welcomed return of some rain.

We were very pleased with the silage analysis from this 1st multi-cut silage and the performance of the cows during early winter has reflected its quality.

- Digestibility value (D value) 72
- Metabolizable energy (ME) 11.6
- Crude protein (CP) 16.7
- Dry matter (DM) 41.8

After feeding the 1st cut silage, the milk yield improved from 30 litres per cow per day to 32 litres per cow per day when it was introduced in early June within the high group. Additionally, manure consistency, body condition and fertility have all improved. Due to the high quality of the silage, we've been able to make some saving on feed costs by reducing the quantity of blend in the ration. Although the system may not suit every farm, we've witnessed some real benefits of the multi-cut approach here at New Dairy. This project, so far, has shown financial and yield improvements from achieving more milk from forage and making the best use of home grown feeds.

# MASTER CLASSES

Are you eager to learn more about key technical subjects within farming, to increase your understanding and improve your farm's performance?

Farming Connect is delivering a series of Master Classes, that are advanced level workshops providing high technical group information and advice.

MasterClass	Date	Location	Contact
MasterSoils	26-27/3/19	Llysfasi, Ruthin	Rhys Davies - 01745 770 037 / 07985 379 880 rhys.davies@menterabusnes.co.uk
MasterLameness	25-26/4/19	Usk College, Usk	Imogen Ward - 07985 379 819 imogen.ward@menterabusnes.co.uk
MasterGrass - Beef & Sheep	15-16/5/19	Glynllifon, Caernarfon	Gwion Parry - 07960 261 226 gwion.parry@menterabusnes.co.uk
MasterClass - Pig Production	25-26/6/19	Glynllifon, Caernarfon	Elin Jones - 01248 660 082 / 07494 478 652 elin.haf.jones@menterabusnes.co.uk
MasterGrass - Beef & Sheep	2-3/7/19	Pencoed College, Bridgend	Elan Davies - 07985 379 890 elan.davies@menterabusnes.co.uk
MasterNutrition - Sheep	14/8/19	Welshpool Livestock Sales, Welshpool	Lisa Roberts - 07399 849 148 lisa.roberts@menterabusnes.co.uk
MasterNutrition - Sheep	15/08/19	Glynllifon, Caernarfon	Gwion Parry - 07960 261 226 gwion.parry@menterabusnes.co.uk
MasterGrass - Dairy	8/9/10	Gelli Aur, Carmarthen	Abby James - 07399 970 988 abigail.james@menterabusnes.co.uk



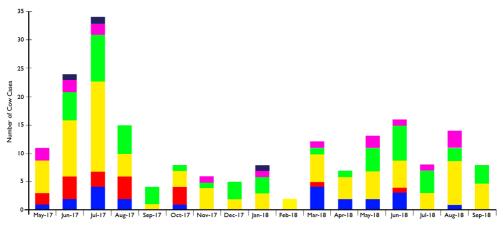


For more information, contact the technical officer listed above, or visit the Farming Connect website.

## Mastitis control plan project update at **Longlands Farm**

At Longlands Farm Dr James Breen has implemented the AHDB Dairy National Mastitis Control Plan as well as the new AHDB Mastitis Control Herd Pattern Analysis Tool. This tool provides a fully automated method of assessing the predominant mastitis infection patterns present on-farm, using somatic cell count (SCC) and clinical mastitis records. The initial assessment and follow up with the plan has taken place, highlighting the biggest risk areas for mastitis within the herd. During the first visit, James analysed many different areas of the farm to get a whole picture for a more personalised approach. Both of the plans allow farmers and vets to assess and prioritise key management areas and potentially detect emerging problems within the dry period and/or lactation period.

#### SCC AND CLINICAL MASTITIS PATTERNS



The monthly numbers of cow mastitis cases are shown coloured by putative origin of the infection

Blue cases are dry period first cases (i.e. a first case within 30 days of calving)

Red cases are dry period recurrences (i.e. a subsequent mastitis case in lactation occurring in a cow that recorded the first case in lactation within 30 days of calving)

Yellow cases are lactation period first case (i.e. a first case >30 days in milk with no previous mastitis cases in that lactation)

Green cases are lactating period recurrences (i.e. a substance mastitis case in lactation occurring in a cow that recorded the first case in lactation 31 days or more after calving)

Pink cases are mastitis events in cows more than 305 days after calving

The clinical mastitis rate was found to be heavily influenced by what happens to dry and milking cows during the summer months. From the data, it is clear that cows tend to develop clinical mastitis within the first 30 days of lactation during the summer. In previous years the new cases in cows after 30 days highlighted environmental factors within the cow house, however, this has significantly improved since the installation of a new positive pressure ventilation system. This information puts the emphasis on improving dry cow and transition management to slow down clinical mastitis rates.

CONCLUSION

Cell counts have been heavily influenced within the dry cow period during the summer. However, low cell count cows that are dried off have tended to calve back into the herd with a high cell count at a high rate since Easter, suggesting infections were acquired during the dry period. Bacteriology from chronic high cell count cows highlights the importance of Streptococcus uberis, an environmental pathogen classically acquired in loose yard systems that can also result in more persistent infection during lactation. The mastitis 'pattern' is, therefore, one of environmental infections of predominantly dry period origin at this stage.

#### **MASTITIS PLAN**

The mastitis control plan focuses on environmental pathogens with most new infections from the dry period. This plan focuses on the management of the dry period, calving cows, treatment of mastitis and monitoring and capturing data. The aim of this plan is to:

- Control and reduce the rate of NEW high cell count cows at the 1st milk recording from rolling average of 21.0% to <10%
- Control and reduce rate of NEW clinical mastitis cases in cows less than 30 days calved in the next 12 months from an average of > 3 in 12 to < 1 in 12 cows calved

#### The key areas to tackle first are:

- Providing at least 2 sq.m of loafing space to the close-up dry cows
- Alleyways, loafing and feed areas are going to be scraped at least twice daily
- Bedding close-up dry cows daily with clean straw and every other day for far off dry cows with sand
- Administering dry cow therapy hygienically with the use of surgical spirit swab on every teat prior to infusion
- Moving towards selective dry cow therapy over time, using only teat sealant to all low cell count cows
- All staff to check in-line filters after each cow is milked; all clinical cases must be treated

The focus over the next few months will be on the **management** of the dry cows and the dry and calving cow **environment**, with a re-assessment in the New Year.

The plan for the remainder of the project will be to reduce the impact of mastitis and somatic cell count at Longlands Farm

- Reduce mastitis rates from an average of 30 cases per 100 cows to <25 cases per 100 cows
- Reduce somatic cell count dry period infection rate from 21.0% to < 10%
- Improve dry cow somatic cell count cure rate from 69.1% to >85%
- Also reducing overall antibiotic usage to the recommended targets of <20 mg/Population Correction Unit (PCU)

## The Farming Connect Lifelong Learning and Development Programme

- on course to improve your business.

Have you and your business taken advantage of ALL that Farming Connect has to offer?

In addition to the knowledge transfer events offered by Farming Connect, you and your business can also be supported through the Lifelong Learning and Development Programme, giving you access to:

up to 80% funding towards approximately 60 accredited short courses

over 70 interactive and fully funded E-learning courses

a Personal Development Plan (PDP)

your own individual Continuous Professional Development (CPD) learning record

Animal Health and Welfare Programme -fully funded support

IT Skills Programme- fully funded IT support suitable for people of all skill levels

If you wish to apply for up to 80% funding towards an accredited course, the current application window will be open until 17:00 Friday 1st March 2019.

During this time, you will be able to complete or update your PDP and submit an application for funded training support.

Please note: To access the above support, you will need to have registered your individual email address with the Farming Connect Service Centre and logged into BOSS (Business Wales) via the Farming Connect website. For help and support, please contact the Farming Connect Service Centre on: 08456 000 813 or visit www.gov.wales/farmingconnect/

To apply for training in this current application window you will need to contact the Service Centre by 17:00 Monday 25th February 2019.

## **Animal Health and Welfare Short Courses**

Good animal health and welfare practices are key to any livestock business. Parasites, illness and diseases have a detrimental effect on a business, decreasing productivity, increasing losses and impacting upon profit.

Knowing how to treat animal health issues promptly, safely and effectively is an essential skill. Through the Lifelong Learning and Development Programme you can apply for 80% funding towards the following accredited courses. Following successful completion of the courses, you will be awarded an accredited Certificate of Competence which can be used to purchase sheep dip, administer veterinary medicines and meet your Farm Assurance requirements.

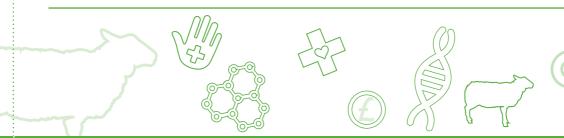
- Mastering Medicines
- Level 2 Award in Safe Use of Veterinary Medicines course

Farm Assurance guidance states that any business purchasing, handling and administering veterinary medicine should have a suitably qualified person in place. These courses aim to increase your knowledge by outlining good practice as well as the legislative requirements for on-farm medicines use.

Aims to increase your understanding regarding the different types of medicines used and how these relate to the common diseases on-farm.

Level 2 Award in Safe Use of Sheep Dip

Sheep scab is highly contagious and an increasing problem for farmers causing stress and discomfort to the sheep. If left untreated, the condition of the animal will be severely affected. It is a growing sheep welfare issue.



If you would like to apply for 80% funding towards these courses or discover what other funded training courses could benefit you and your business, please contact 08456 000 813 or visit the Farming Connect website training pages:

https://businesswales.gov.wales/farmingconnect/skills-and-mentoring

# Personal Development Plan (PDP) Events

If you want to apply for funded training, you will need to complete or update a PDP and submit an application form. There are a number of events and workshops which have been organised by Farming Connect and Training Providers to help you with the process.



FARMING connect cyswllt FFERMIO

08456 000 813

Please see below for more details.

Date	Time	Location
	18:00 - 20:00	Ysgol y Berwyn, Bala LL23 7RU
11/02/2019	14:00 - 20:00	Menter a Busnes Office, Aberystwyth SY23 3AH
11/02/2017	19:00 – 21:00	NPTC College Group, Neath Campus, Neath SA10 7RF
13/02/2019	18:00 - 20:00	Coleg Llandrillo, Campws Abergele Campus LL28 4HZ
18/02/2019	14:00 - 20:00	Bloomfield House Community Centre, Narberth SA67 7ES
20/02/2019	14:00 - 20:00	University of Wales Trinity Saint David, Lampeter Campus SA48 7ED
20/02/2019	17:30 - 19:30	Coleg Gwent, Usk Campus, Y Rhadyr, Usk NP15 1XJ

The next application window for funding will be held between:

07/01/19 - 01/03/19

If you are registering for the first time in order to apply for training during the above window, please contact Farming Connect before 17:00 25 February 2019 at the latest.



# Our training providers are also running PDP events across Wales. Contact them directly to arrange an appointment.

Date	Time	Location	Training Provider
		Gelli Aur Campus, Llandeilo, Carmarthen	Coleg Sir Gâr
07/01/2019	To be	SA32 8NJ	ŭ
until	confirmed	Dolwen, Abergele, Conwy LL22 8NS	Grŵp Bro Gele
01/03/2019	,	Coed Pwllacca, Brynwern, Builth Wells, Powys LD2 3SE	MWMAC
06/02/19	15:30 - 18:30	Coleg Glynllifon College, Caernarfon LL54 5DU	Grŵp Llandrillo Menai
06/02/19	9:00 - 15:30	The Brick Barn, Dolobran Hall, Meifod SY22 6HX	Training for the Future Ltd
07/02/19	10.00 - 16:00	12 Goat Street, Haverfordwest SA61 IPX	PMR Training
07/02/19	8:30 - 16:00	Tŷ Mawr Road, Gilwern, Abergavenny NP7 0EB	Heads of the Valleys Training Ltd
00/02/10	8:30 - 16:00	Tŷ Mawr Road, Gilwern, Abergavenny NP7 0EB	Heads of the Valleys Training Ltd
08/02/19	9:00 - 17:00	Bridgend College CF31 3UR	Engage Training Ltd
11/02/10	10:00 - 16:00	8 Mansel Street, Carmarthen SA31 IPX	Really Pro Ltd
11/02/19	14:00 - 18:00	Caerlan Farm, Tonypandy CF40 ISN	Simply the Best Training Ltd
13/02/19	8:30 - 16:00	Tŷ Mawr Road, Gilwern, Abergavenny NP7 0EB	Heads of the Valleys Training Ltd
14/02/19	16:00 - 19:00	Machynlleth	Simply the Best Training Ltd
15/02/19	9:30 - 15:30	Brecon Livestock Market LD3 8EX	Jimmy Hughes Services Ltd
15/02/19	8:30 - 16:00	Tŷ Mawr Road, Gilwern, Abergavenny NP7 0EB	Heads of the Valleys Training Ltd
10/02/10	14:00 - 18:00	Caerlan Farm, Tonypandy CF40 ISN	Simply the Best Training Ltd
18/02/19	18:00 - 20:00	Coleg Cambria Llysfasi, Ruthin LL15 2LB	Coleg Cambria Llysfasi
20/02/19	15:30 - 18:30	Glynllifon College, Ffordd Clynnog, Caernarfon LL54 5DU	Grŵp Llandrillo Menai
	10:00 - 16:00	The Starling Cloud, Aberystwyth SY23 3TL	Jimmy Hughes Services Ltd
21/02/19	8:30 - 16:00	Tŷ Mawr Road, Gilwern, Abergavenny NP7 0EB	Heads of the Valleys Training Ltd
22/02/19	8:30 - 16:00	Tŷ Mawr Road, Gilwern, Abergavenny NP7 0EB	Heads of the Valleys Training Ltd
25/02/19	14:00 - 18:00	Caerlan Farm, Tonypandy CF40 ISN	Simply the Best Training Ltd
		Tŷ Mawr Road, Gilwern, Abergavenny NP7 0EB	Heads of the Valleys Training Ltd
	8:30 - 16:00	Tŷ Mawr Road, Gilwern, Abergavenny NP7 0EB	Heads of the Valleys Training Ltd
20/02/10	10.00 - 16:00	12 Goat Street, Haverfordwest SA61 IPX	PMR Training
28/02/19	9:30 - 15:30	Dolswydd Farm, Penybont, Llandrindod Wells LDI 5UB	Jimmy Hughes Services Ltd
01/03/19	8:30 - 16:00	Tŷ Mawr Road, Gilwern, Abergavenny NP7 0EB	Heads of the Valleys Training Ltd

Training Provider	Contact	
Coleg Cambria - Llysfasi	Lesley Innes	01978 267 931
Coleg Sir Gâr	Elizabeth Morgan	01554 748 394
Engage Training Ltd	Kimberley Roberts	01656 302 302 ext 703
Grŵp Bro Gele	Irwedd Griffiths	01492 680 499
Grŵp Llandrillo Menai	Dewi Williams	01286 830 261 ext 8539
Heads of the Valleys Training Ltd	Laura Broome	01873 832 000
Jimmy Hughes Services Ltd	Rachel Hughes	01597 850 080 / 07766 539 389
MWMAC	Victoria Laurie	01597 433 117
NPTC College Group - Newtown Campus	Martin Watkin	01686 614 572
PMR Training	Elinor Roberts	01437 761 321
Really Pro Ltd	Kelly Banks / Amy Banks	08448 707 568
Simply the Best Training Ltd	Julie Thomas	01443 670 267
Training for the Future Ltd	Suzanne Jones	01938 500 900

Farming in partnership with his father and uncle, James Powell farms 180 ha (450 acres) of uplands in Dolygarn, Llanbadarn Fynydd, Powys. Married to Rachel with three sons, James runs 1,000 ewes mostly Aberfield crosses, plus a 50-head suckler herd. A Hybu Cig Cymru (HCC) scholar in 2014, he is very passionate about agriculture and rural affairs.

Dolygarn has recently become one of Farming Connect's focus sites, and working closely with the expert advice of Farm Consultant lames Daniel of Precision Grazing Ltd, a project to improve grassland management on-farm has been developed. The main aim of this project is to demonstrate the process of converting a traditional set stocking beef and sheep farm to a rotational grazing system, and the associated benefits, to assist in the farm's aim to become an all-grass wintering system.

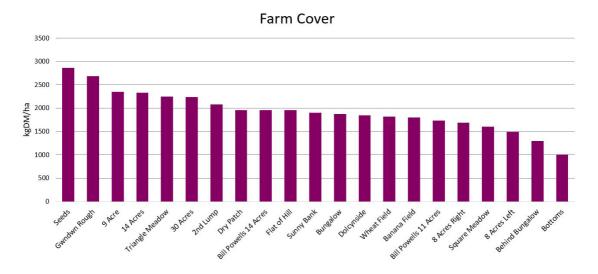
The project will focus on how pasture management and feed budgeting can support important on-farm decision making with regards to the following:

- Stock purchases
- Bulling and tupping dates
- Weaning date
- Applying nitrogen
- Cutting silage
- Feeding supplements
- Housing



Grass measuring using a plate meter has now been underway at Dolygarn since September, with a minimum of monthly grass measurements now being taken over the winter period. These grass measurements, along with current stock numbers on-farm, are all inputted to the Farmax software where the farm's supply can be compared with the demand of the stock.

From this data, we can work out the number of days it would take a certain number of ewes to graze each field. Along with expert advice from James Daniel, collecting and utilising this data has allowed James Powell to plan ahead and make important, informed grazing decisions over the winter period. Below shows the graph of the farm covers in November 2018:



By measuring the average farm cover, and inputting these measurements to the Farmax software, James had an early warning that he would run out of sufficient pasture around mid-January, therefore knowing that supplementary feed would be required to ensure the in-lamb ewes get the sufficient nutrition they need to carry them through until lambing.

# Grazing management top tips from James Daniel, Precision Grazing Ltd, during the in-lamb period:

- 1. Once tups are removed, consider joining the groups together so that you can graze fields quicker
- 2. Aim to graze a field within 7 days in dry weather or 2-4 days in wet
- 3. If ground conditions stay favourable then utilisation will be high (>90%), if it gets wet then utilisation will fall

"If you don't measure it, you can't manage it."



## Reducing antibiotic use on sheep farms at lambing time through best practice management, by improving nutrition and hygiene

This project is making changes to flock management, mainly through improved nutrition and hygiene, to reduce the need for antibiotics and at the same time increase production, while maintaining high standards of animal health and welfare.

#### Activity and findings after 2018 lambing season

#### **Silage Quality**

TARGĒT: DM 30-35% D-value 69-72% ME 11-11.5 MJ/kg DM CP 15-18%

Rations were formulated for each flock based on individual silage analysis

#### **Colostrum Intake**

Generally, lambs were receiving adequate levels of colostrum apart from a couple of lambs

Management processes were assessed to check reasons why these lambs had not received enough

#### **Bedding Sampling**

Samples taken from pre-lambing pen, post lambing pens and pet lamb pens

Farmers could assess levels of bacteria including; Staphylococcus Streptococcus and E.Coli, and adjust pen management if levels were high

#### **Metabolic Profiling**

Undertaken 2-3 weeks pre lambing. Energy levels were good, indicating that rations were correctly formulated. Low albumin levels were found indicating a recent disease challenge. his was investigated and showed various issues including fluke, roundworms and *cryptosporidiosi*:

#### **Outcomes so far:**

Prophylactic use of antibiotics at lambing was reduced The tests and subsequent advice enabled farms to alter management and improve nutrition and health of ewes and lambs

There was a reduced incidence of joint ill and scours

"The project has made me think about the health side of things further. The bedding tests in the main pens and the post lambing pens have been vitally important for me to know what I need to do to reduce *E.Coli* this year. I've learnt that I need to lime more around the wet areas such as the troughs and feeding areas. One of the other things I've learnt is the importance of having enough space for each ewe to feed on silage before lambing, and making sure there's enough fibre in the post lambing pens to get the best colostrum. Moving on, I think we need to improve on these small things that the project has highlighted for me." Gareth Thomas, Tregynrig, Anglesey.





# Developing the Cambrian Mountains Beef Group to manage and expand its short supply chain

Short food supply chains occur when farmers sell their produce directly to consumers or with minimal intermediaries. They are becoming increasingly more popular as consumers want fresh, seasonal produce and want to know where their food comes from.

In 2015, the Cambrian Mountains Beef Group established a short supply chain with a large catering butcher who supplies hotels and high-end restaurants. The five farming businesses have worked hard to get to this stage and with the help of EIP Wales are developing their group further in order to manage and expand their market in a self-sustainable manner. Through the project, the farmers will develop the skills and knowledge they need to sustain the short supply chain in the long term by taking part in a number of workshops that will look into the following areas:

- Customer relationship management
- Product promotion
- Understanding the requirements of the end user
- Red meat processing and butchery
- Effective engagement in the supply chain
- Managing social media
- Website management

Following the marketing workshop, the group is now looking at developing a meat box scheme. Meat boxes containing a range of cuts (roasting joints, stewing steak, burgers and mince) are gaining popularity with customers who want prime cuts of meat from a known source. The next workshop lined up for the group is a butchery course that will help the members to gain an accredited butchery certificate. By gaining more control over each step of the supply chain, from producing quality animals to a quality cut of beef, these five farming businesses will be able to develop a sustainable supply chain.

With so many farms across Wales producing quality beef and lamb from grass, there's huge potential for farmers to gain more control over the price they get for their produce. Meat produced in Wales is something special and the group members are proud of its quality, nutritional value and great taste. This group will hopefully inspire more farmers and the next generation to work together to develop their own paths to market, increasing the value of what they produce.











# Synchronisation Project proves a success at Fferam Gyd

Although the synchronisation project has now drawn to a close at Fferam Gyd, a Farming Connect focus site in Llanbabo, Anglesey, it's safe to say that Llŷr Hughes will continue to synchronize both his pedigree Limousin and commercial cattle for the foreseeable future.

Since the start of the project, which focused on the potential **benefits** of synchronising cattle to gain a tighter calving pattern as well as increased liveweight gains, Llŷr has gained some **impressive results.** 

Following a plan developed by a breeding specialist, cows in the synchronised group were inseminated twice in June 2017 using semen from Derrygullinane Kingbull, a pedigree Limousin sire renowned for producing calves with superior growth rates. Pregnancy scanning results showed that **77%** of the 55 cows included in the group were in-calf after the first service, which exceeded the original target of **60%**.

The synchronised group began calving on the 12 March 2018 and finished on the 24 March, with 14 cows calving within a 12 hour period. Although this was labour intensive and required plenty of shed space, Llŷr preferred this method in comparison to natural service, which meant the calving period lingered on for longer.

Calves were sold at 7-8 months old as sucklers at the local market in Gaerwen on the 3 October 2018, weighing on average **31kg/calf** heavier compared to last year's crop which averaged at **£820** for both heifers and steers. In 2018, steers averaged at **£920/head** whilst heifers averaged at **£780/head**.

#### Llŷr's top tips for making it work:

- Attention to detail is critical
- Good handling systems are a must, not only for practicality, but for health and safety
- Available space in both buildings and fields in close proximity to the yard is fundamental

 Always turn bulls in after service and monitor closely for repeated heats, in order to ensure the bull can cope



Managing hedgerows is an **integral part** of the farming calendar that provides multiple benefits to the farm. Hedge laying is a routine management operation which has a key role to play in ensuring the long term survival of hedgerows. Periodic laying can **greatly increase** the natural lifespan of hedge plants whilst the process stimulates the growth of new shoots **contributing to the development** of a dense robust hedgerow.

Hedges are a valuable source of food for birds and timing of cutting or trimming can be critical for them, thus leaving the cutting into late winter is advised. Hedge management is best undertaken during the plant's dormant season i.e. between mid October and the end of March. Periods of extended frost should be avoided whilst high winds can make the cut plants unmanageable to work with. The laying of old brittle plants and coppicing, particularly of moribund plants, is best undertaken in February.

To keep the hedge thick and dense, the branches should be layered closely and interwoven which will provide nesting habitats for small birds. The hedge should be full from ground level up, but this is not always possible in older hedges. To fill gaps in the bottom of the hedgerow, enrichment planting with holly will fill the hole and weave itself through the existing hedge as it grows.

Hedge laying is a skilled craft, particularly when it involves the laying of larger plants. Expert advice and instruction should be sought. Through the Farming Connect Lifelong Learning and Development Programme, you can apply for 80% funding towards an accredited Practical Hedge Laying training course that will promote a greater understanding and knowledge of the traditional craft of hedge laying, provide hedgerow management skills and encourage the conservation and positive management of hedgerows. Check out the skills and mentoring page on our website: https://businesswales.gov.wales/farmingconnect/skills-and-mentoring

During management, you might be thinking of felling trees within the existing hedgerow. You should first check at: 'Tree Felling Getting Permission' booklet on the Natural Resources Wales website.

If you're thinking of removing your hedgerow then you are required under the Hedgerows Regulations 1997 to consult the local planning authority before you do so.





## Top tips on profiting from suckler beef at **Farming Connect Demonstration Site**

Welsh suckler beef producers must match cow breed to their farm environment as an important first step to profitable production.

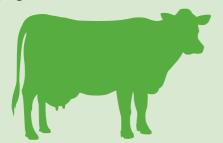


At Newton Farm, a Farming Connect Demonstration Farm, farmers Richard and Helen Roderick and their family are switching from Limousin-cross and Belgian Blue-cross cows to Stabilisers; in 2019 they will calve 94 cows and heifers – heifers calve at two years old.

An initial reason for the change was to move to a self-replacing easy calving herd using a docile maternal breed capable of thriving on forage and an outwintering system.

The herd is suited to grazing grass or fodder beet for most of the year, so the Rodericks have lowered their feed costs.

In 2018, heifers were artificially inseminated and ran with a sweeper bull for nine weeks, while the cows ran with bulls for 76 days. Scanning results have shown 94 out of 96 animals to be in-calf, with at least two carrying twins.



Calving index – a good measure of fertility and compact calving - has reduced from 400 days to 365. In 2018, 73% calved in the first three weeks, with 96% of cows calved in the first six weeks.

The heifers averaged 256kg at weaning, at 46% of their mothers' bodyweight while the bulls, which were introduced to creep at four months old, weighed in at 316kgs, 52% of dam bodyweight.

"Maintenance is one of the biggest costs of keeping a cow. If you have a 700kg cow, she will need a lot more maintenance than a 600kg cow," said beef specialist Rhidian Jones who recently spoke at an open event at Newton Farm.

The 2016/17 Welsh Farm Business Survey shows that for the top third performing upland suckler herds, the gross margin per cow is £599 compared to £420 for the average performing herd.

"It is not easy to make money out of suckler cows, but those who are doing it well are making £179 more per cow than the average," according to Mr Jones.

There are several factors that must combine to achieve that, not least the body condition of the cow.

"You don't want cows to be too fit at calving, aim for a body condition score (BCS) of between 2 and 2.5, but you want them on a rising plane of nutrition when they get out to grass. The right sort of cow will put on condition at grass more easily," advised Mr Jones of RJ Livestock Systems.

"You want them in a relatively lean condition to calve but rising to go back to the bull for good conception rates. Mating at BCS 2.5 to 3 gives the best results."

Many suckler producers calve their herds too early for grass growth which means keeping cows and young calves housed, putting calves at risk of disease and incurring higher feed costs compared to animals at grass.

"If cows are housed after calving, they have a shorter period of time to recover condition on good quality grass before going back to the bull," said Mr Jones.

He recommends using Estimated Breeding Values to select animals with good maternal traits, for example, maternal calving ease which is relevant to producers breeding their own replacements.

Milk production figures are important too, Mr Jones added. "A calf will grow quicker on milk than anything else, so having a milky mother is crucial."

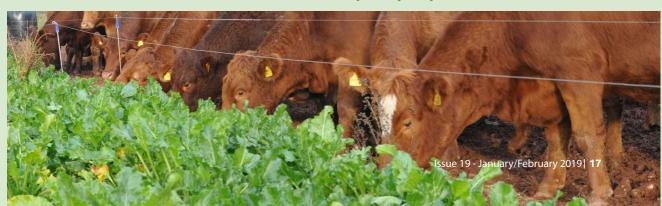


Creep feeding can also have its place, he suggested. "Creep feeding helps the rumen to develop, and calves have high feed conversion rates at that age, so you will get a return on your investment."

The Rodericks keep a check on winter feeding costs by running cows and heifers on 12 acres of fodder beet which costs around 80p/animal/day.

Sarah Hughes, Farming Connect Red Meat Technical Officer (South Wales) said, "We have undertaken a number of projects at Newton Farm including one on suckler herd efficiency, more detailed information on the projects are available on the Farming Connect website.

"Farming Connect works with a network of demonstration farms across Wales, demonstrating and trialling new management techniques and technology, to provide farmers with the knowledge to make informed decisions and, perhaps, implement similar approaches on their own farms, and hopefully improve their businesses."





# **PROSIECT PROJECT**

## **PROGRESS REPORT** PROSIECTSLYRI PROJECT

Power & Water

John Owen, Farm Manager - Coleg Sir Gâr Gelli Aur

This new project will innovatively reduce farm waste and help safeguard the environment and address the agricultural industry's impact on the environment by developing a dewatering and purification system to manage slurry on farms. With the intensification of the dairy industry, slurry management is becoming an increasing issue for farmers and the environment.

This article is a progress update on work carried out at Prosiectslyri Project since the open day held on the 31 August.

Since the open day, we have been concentrating our efforts on evaluating the feedstock (raw slurry) and the centrate (dirty water post mechanical separation) pre and post mechanical separation. The reasoning applied is because the centrate supply to the electro treatment needs to be stable dry matter content (below 3% dry matter).

In practice, what we have found is that there is substantial dry matter variation change in the feedstock from day to day depending on the weather conditions. This was not unexpected, but the variation is greater than we anticipated. We had also expected the mechanical separation process in the decanter centrifuge and the screw press to even out the variation in the feedstock and produce a more stable dry matter in the centrate. None of this is unsurmountable and we are currently pre mixing the feedstock with dirty water in order to get a more stable product. The final configuration might include drawing feedstock from a premix tank rather than directly from the reception pit.

We continue to collect masses of sample data for cross-referencing and evaluation with regular samples sent to Natural Resources Wales (NRW) laboratories in Swansea for validation purposes. As we build the data base, this information will become invaluable for reporting and updating purposes.

Our immediate focus remains on having a fully operational process in place by early in the New Year, generating separated material for us to run our field trials on the most efficient use of the separated material within a grassland system.

Recent Ministerial announcements on changes to regulations on nutrient and slurry management have focused our ambition on providing an alternative option to traditional slurry handling. We are determined that the technology that we are trialling fits the bill as a cost effective option. For more information, visit Farming Connect website www.gov.wales/farmingconnect



# Exploring the use of wood chip mulch for weed control in organic vegetable production

Square Farm near Monmouth is a family-run business including a flourishing farm shop selling home-grown, organically produced foods as well as an expanding range of selected local produce from the Wye Valley and surrounding areas. Over 90 different varieties of vegetables are grown under organic certification which also supply a delivered box vegetable scheme including fresh kale, purple sprouting broccoli and Romanesco broccoli as well as the staples of leeks, carrots and potatoes. A new venture is the planting of asparagus to be grown organically and supported by a successful European Innovation Partnership (EIP) bid. The farm is also a member of an EIP Wales group, evaluating the use of a computerised robotic weeding machine.

With the ever-present challenge of weed control, a trial was established to assess whether the use of waste wood chip from local tree surgeons could be used to suppress weed growth in organically planted vegetables.

Unlike uniformly textured sawdust and bark mulches, arborist wood chip include bark, wood, and often leaves. The chemical and physical diversity of these materials resists the compaction often found in sawdust and bark mulches and may promote better performance in terms of moisture retention, temperature moderation, weed control, and sustainability. Arborist wood chips are also available free of charge making them an economically practical choice.

Use of wood chip mulch also creates a more diverse environment that houses a range of microbes, insects and other organisms. A biologically diverse soil community is more resistant to environmental disturbance and will in turn support a more diverse and healthy plant population. Wood chip are slow decomposers, as their tissues are rich in lignin, suberin, tannins, and other complex natural compounds.

The mechanisms by which wood chip prevent weed growth are not fully understood, but likely include light reduction (preventing germination of some seeds and reducing photosynthetic ability of buried leaves), allelopathy (inhibiting seed germination), and reduced nitrogen levels at the soil-mulch interface (reducing seedling survival).

A source of local wood chip was easily located with an internet search and was delivered free to the farm. As the farm is organic, it was necessary to confirm the wood chip came from non-sprayed trees.

Mulch was applied on 13 August to recently transplanted purple sprouting broccoli (PSB) and celeriac plants, both long term crops, with PSB being a strong competitor against weeds and celeriac being non-competitive, using alternating plots of:

WOOD CHIP MULCH 50MM DEPTH

CONTROL - NO MULCH

The wood chip was applied by hand from a telehandler bucket for the purposes of this trial; on a larger scale, it could easily be mechanised with a rear discharge manure spreader.



Weed cover and species present, plus crop vigour, were recorded on 4 September and 12 October. Both the celeriac and the PSB mulched plots showed useful suppression of weeds, and in the celeriac crop, the mulch increased the crop vigour slightly as might be expected in a dry season. This confirms the mulched plots did not appear to affect the Carbon-Nitrogen balance when applied to the soil surface.

The weeds grew strongly on the non-competitive celeriac control plots, getting to 73% cover by 12 October with risk of the crop being lost in the weeds. Weed species present were annuals such as chickweed, spear thistle and redshank, plus perennial weeds such as docks, dandelion and couch grass.

Weed control by hoeing would have generated costs of at least £524/ha for hoeing the PSB twice and hoeing the celeriac three times at £786/ha.



Weed cover on untreated celeriac I November.

## **KEY MESSAGES**

The trial showed that wood chip mulch applied to transplanted vegetable crops gave good weed control for a long period and did not appear to compete for nitrogen with the crop. The wood chip visibly increased soil moisture in a dry year, encouraged worm activity and several fungi also colonised the mulched plots.

After completion of harvest, the mulch can be incorporated into the soil with the crop trash and while it might compete for nitrogen with subsequent crops, this could be mitigated by using permitted manures or by growing a leguminous crop as part of the rotation. Eventually, the nitrogen would slowly be released again to benefit following crops.

Mulches are likely to be most cost effective on perennial vegetable crops including rhubarb, asparagus etc. where the soil is not disturbed for several years and may also serve to improve soil structure and drought resilience while reducing soil erosion.



Inspiring the next generation of rural leaders and entrepreneurs

Rural Leadership Programme A joint collaboration with the Royal Welsh Agricultural Society

**Business & Innovation Programme** 

Junior Programme A joint collaboration with Wales YFC

The application window for the 2019 intake of Agri Academy candidates opened on the 22 January and closes on 31 March. This inspirational personal development programme, now approaching its seventh year, has given 200 alumni the confidence, skills and contacts they need to progress their careers.

If you think you have the drive, focus and enthusiasm to benefit from this unique programme of mentoring, training, targeted high-level networking and study visits - all packed into just three intensive three-day bursts – we want you to APPLY NOW!

For more information and to download a copy of the application form, visit the Farming Connect website: www.gov.wales/farmingconnect

# Here's what three previous candidates said about their Agri Academy experience...

#### Branwen Miles, Rural Leadership Programme 2017



Branwen Miles (25) grew up on her family's organic dairy farm in Haverfordwest and read international politics and French at Aberystwyth University. Branwen is now a Project Officer at the European Landowners Organisation in Brussels.

"The Agri Academy is an amazing support network, where ideas and advice is shared willingly and friendships for life are forged – we still have our Whatsapp group!

"When others believe in you, you start to believe in yourself and realise you need to grasp any opportunities which come your way, even if it means raising your head above the parapet sometimes.

"I knew I wanted to work in Brussels, but with Brexit, that opportunity may never have come around again. When it did, the confidence I gained from the Agri Academy is what made me take the plunge!"

#### Jacob Anthony, Business & Innovation Programme 2014

Fifth-generation farmer Jacob Anthony (25) farms on the family farm at Cwm Risca in Tondu, near Bridgend and won the prestigious Farmers Weekly Young Farmer of the Year award in 2018.

Having completed a three-year agriculture diploma at Hartpury College, Jacob returned to the family farm where he has sole responsibility for 1,000 Lleyn cross Texel ewes.

"I firmly believe it's essential to keep on developing your skills and knowledge, because that's the only way you will develop your business and ensure you make the most of every opportunity to improve performance.

"My Agri Academy experience gave me huge confidence, new skills and a new network of like-minded individuals and inspirational mentors.

"I would advise anyone thinking of applying for the Agri Academy to go ahead. It's been a life-changing experience for many of us, which has had enormous personal benefits and helped us develop our business acumen too."



#### Fflur Roberts, Junior Programme 2017



Fflur Roberts (18) grew up on the family hill farm in Llangadfan. Fflur is currently in her final year of her Level 3 Extended Diploma at the NPTC Group of Colleges' Newtown School of Agriculture campus at Bronlas and hopes to go to university next.

"I could never have believed just how inspiring and rewarding the Agri Academy programme would prove, or how valuable the contacts I made would be.

"Before joining, I was limited by my own lack of knowledge and had very modest aspirations for the future, so I would urge anyone thinking of applying to grab this fantastic opportunity."

"I'll take any chance that comes my way. I want to gain more experience and I'm eager to learn from others. I'm in the right mindset thanks to the Agri Academy."

## **Events Timetable**

Making Tax Digital	
08/02/19	Ty'n y Cornel Hotel, Tal y Llyn,
19:00 - 21:00	Tywyn LL36 9AJ
08/02/19	Ffostrasol Arms, Llandysul,
19:00 - 21:00	Ceredigion SA44 4SY
11/02/19	Lamphey Court Hotel, Lamphey
19:00 - 21:00	SA71 5NT
11/02/19	Elephant and Castle Hotel,
19:00 - 21:00	Newtown SY I 6 2BQ
12/02/19	Glasdir, Plas yn Dre, Llanrwst
19:00 - 21:00	LL26 0DF
12/02/19	Hogshead Pub, Great Tredam,
19:00 - 21:00	Abergavenny NP7 8TA
13/02/19	Brecon Castle Hotel, Brecon
19:00 - 21:00	LD3 9BD
14/02/19	Wrexham Glyndŵr University,
9:00 - 17:00	Wrexham LLI I 2HS
14/02/19	Llwyngwair Manor, Newport,
19:00 - 21:00	Pembrokeshire SA42 0LX
19/02/19	Ruthin Castle Hotel, Castle Street,
19:00 - 21:00	Ruthin LL15 2NU
19/02/19	Llandovery Rugby Club,
19:00 - 21:00	Llandovery SA20 0BA
19/02/19	St Mary's Golf Club, Pencoed,
19:00 - 21:00	Bridgend CF35 5EA
21/02/19	Ivy Bush Hotel, Carmarthen,
19:00 - 21:00	Carmarthenshire SA3 I ILG

Service Centre - 08456 000 813 farmingconnect@menterabusnes.co.uk

ax Digitai		Sustainable Farming Roadsnow		
2/19 -21:00	Ty'n y Cornel Hotel, Tal y Llyn, Tywyn LL36 9AJ	11/02/19 19:30 - 21:30	Theatr Brycheiniog, Brecon LD3 7EW	
2/19 -21:00	Ffostrasol Arms, Llandysul, Ceredigion SA44 4SY	12/02/19 19:30 - 21:30	University of Wales Trinity Saint David, Lampeter SA48 7ED	
2/19 -21:00	Lamphey Court Hotel, Lamphey SA71 5NT	26/02/19 9:00 - 17:00	Glen yr Afon Hotel, Usk NPI5 ISY	
2/19 - 21:00	Elephant and Castle Hotel, Newtown SY 16 2BQ	28/02/19 19:00 - 21:00	Old Food Hall, RWAS Showground LD2 3WY	
2/19 - 21:00	Glasdir, Plas yn Dre, Llanrwst LL26 0DF		Centre - 08456 000 813 nnect@menterabusnes.co.uk	
2/19	Hogshead Pub, Great Tredam, Abergavenny NP7 8TA	applying must	igible for the grant, the business t be registered with Farming	
2/19 -21:00	Brecon Castle Hotel, Brecon LD3 9BD	Connect prior to a member of the business booking a place in advance of attending a Farming Connect Farming for the Future event.		
2/19	Wrexham Glyndŵr University,			

Responsible use of medicines (beef, sheep and dairy)			
13/02/19 19:00 - 21:00	Cobra Rugby Club, Meifod SY22 6DA		
Lisa Roberts - 07399 849 148 lisa.roberts@menterabusnes.co.uk			

How to integrate renewable energy into farm profitability without the feed in tariff subsidy			
	19/02/19 11:00 - 14:30	Trebared Farm, Cardigan SA43 IPH	
Abby James - 07399 970 988 abigail.james@menterabusnes.co.uk			

Developing the beef supply chain			
12/02/19 19:30 - 21:30	Gower Golf Club, Gowerton, Swansea SA4 3HS		
	Davies - 07985 379 890 vies@menterabusnes.co.uk		
Responsible use of medicines (beef, dairy, pigs and sheep)			
12/02/19 19:30 - 21:00	Holt Lodge, Wrexham LL13 9SW		
Rhys Davies - 07985 379 880 rhys.davies@menterabusnes.co.uk			
Reducing Lambing	Losses		
12/02/19 19:30 - 21:30	The Metropole Hotel, Llandrindod Wells, LDI 5DY		

Elan Davies - 07985 379 890 elan.davies@menterabusnes.co.uk

Surgeries (09:00 - 17:00)				
Marketing and Diversification Surgery	06/02/19	Llanrwst		
Planning Surgery	06/02/19	Llanelli		
IT Surgery	12/02/19	Merthyr Tydfil		
Marketing and Diversification Surgery	12/02/19	Welshpool		
IT Surgery	20/02/19	Newtown		
IT Surgery	27/02/19	Narberth		
Helen Lewis - 01970 631 425 helen.lewis@menterabusnes.co.uk				