

2019



# EIP WALES

Cydweithio er ffyniant gwledig  
Collaborating for rural success

## EIP Wales

*Collaborating for rural success*



Introducing fat tail sheep to Wales



Without the right wheat for bread, we're toast!



Farmer  
Q&A:  
Gareth  
Thomas,  
Tregynrig

# MILKING – BUT NOT AS ‘EWE’ MIGHT KNOW IT!



**Many farmers are now looking at alternative enterprises and one of these emerging options is milking sheep.**

A Farming Connect Agrisgôp group in north Wales, formed in 2017, brought together a group of farmers keen to know more about

this ‘niche’ sector with Bethesda cheesemaker Dr Carrie Rimes, who learnt her trade in the fromageries of France before returning home to establish her own award winning sheep cheese company Cosyn Cymru.

**CONTINUED ON PAGE 3**



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





# EIP Wales fact file

## What is EIP Wales?

The role of **EIP Wales** is to introduce innovation and new ideas to farm and forestry businesses. It provides funding of up to £40,000 for groups of farmers and foresters who want to trial innovative techniques and technologies at a practical level within their businesses.

## How long do the projects last and how can the funding be spent?

Projects need to be completed by June 2022. The funding can be used to hire equipment, pay contractor costs, pay specialists to monitor progress and give advice, and pay to have samples analysed.

## How to get started

Groups have access to a fully funded Innovation Broker. This is a consultant who will guide the group through the two-stage application process and then facilitate the project once it is up and running.

## How to contact us

E-mail: [eipwales@menterabusnes.co.uk](mailto:eipwales@menterabusnes.co.uk)

Web: [www.gov.wales/farmingconnect](http://www.gov.wales/farmingconnect)



## An ideal ingredient

According to Dr Rimes, the good news for sheep farmers is that demand currently exceeds supply - not just in Wales but throughout the UK.

Sheep milk, known for its high levels of natural fat and protein, is the ideal ingredient for cheese, yogurt and ice cream. Encouraged by the support and guidance received through Agrisgôp, group member Alan Jones, who farms at Derwen Gam, Chwilog had the confidence to diversify.

Alan began milking 30 of his Lleyn and Friesland sheep, which would previously have been producing lambs for meat.

Today, Alan, helped by son Osian, has a flock of 80 milking ewes. The enterprise has expanded rapidly, and with a waiting list of customers, the family are planning to increase the flock size to 450.

## Demand exceeds supply

Despite the increasing demand for sheep milk, farmers are understandably cautious

of investing time and resources in this new 'niche' market, partly because of the lack of research and knowledge available, which is very limited compared to that associated with the cows' milk sector. EIP Wales is now helping address the issue.

EIP Wales project manager Lynfa Davies, who works for Menter a Busnes, says that the project aims to tackle the current lack of understanding about what represents 'good' in terms of sheep milk production.

"Research has highlighted that the level of bacteria in the milk is a key factor in its quality, and the group has chosen to investigate how the breed of sheep, stage of lactation, and selenium diet supplementation can influence this."

Dr Rimes makes unpasteurised cheese and says that the quality of the milk is all-important.

"Alan's ewes are grass-fed and organic which is already a big bonus."

"The results of this project should help to keep the microbial quality of the milk up to the high standard needed for cheesemaking."



Geraint Hughes (Innovation Broker for the group), Alan Jones and Dr Carrie Rimes



# Introducing fat tail sheep to Wales

In Spring 2020, two farmers, Peter Williams and Bedwyr Jones from North Wales are hoping to break new ground by being the first to introduce a batch of Damara lambs to the UK.

“With major changes afoot, and none more so than within the sheep sector, it’s good to see two individuals using their strengths as experienced shepherds to investigate a possible new premium niche market in the British and European lamb and sheep meat market,” said Geraint Hughes, Innovation Broker for the project.

**P**eter first came across fat tail sheep whilst working on a farm in the Middle East in the 1980s and is determined for Wales to be pioneering in the development of a successful flock here in the UK.

**T**he first step in this project will be to import both Damara embryos and semen from Australia. The group will then investigate the practicalities of rearing both pure Damara and cross breeding them with Romney, Texel cross, and Lleyn cross ewes. The ewes and lambs will be closely monitored to see how well they adapt to the typical milder and wetter Welsh conditions.

**G**eraint Hughes says: “This project has already stirred up interest with an abattoir in Shropshire and a number of butchers in London, Birmingham and Manchester that have a strong customer base within the ethnic communities.”

**T**he project will assess whether the Damara breed could offer farmers a diversification option using flock management skills that they already possess while at the same time investigating potential markets.

## Damara breed facts

**Type:** A breed of fat tail sheep. There are about 50 different breeds in existence.

**History:** Originating from Eastern Asia, Egypt and Namibia, Damara can be traced back to 3000 BC.

**Characteristics:** A large animal with a long body and legs. They grow short coarse wool that can vary in colour. Most of their body fat is stored in their tails which gives them their distinctive look.

**Strengths:** Strong and hardy. They are renowned for being able to thrive in harsh environments due to their ability to gain weight despite a natural diet that’s nutritionally poor.

**Uses:** They are bred for their meat and fat which is used extensively in Arab and Persian cuisine.

**Meat:** Tender, leaner and juicier than their thin-tailed cousins. It also has a higher Omega-3 to Omega-6 fatty acid ratio and is lower in saturated fats.



Damara ‘fat tail’ ewe and lamb



Name: *David Edge* Farm Name: *Cop House Farm*

Location: *Saltney Ferry, Chester*

Farm: *Organic. 97 Ha owned 200 Ha rented.*

Herd: *Milking 300 proCROSS cows, which are a hybrid of Holstein, Swedish Red and Montbéliarde.*

Product: *Average 7500 litres. Majority of milk is sold under the Calon Wen Organic Co-operative as raw milk, yoghurt and cheese.*

EIP Wales Project: *Pasture for Pollinators*



## What motivated you to join the Pasture for Pollinators EIP Wales project?

As Calon Wen farmers, our cows already graze on organic pastures, and we got thinking about what we could do to make our pasture better for pollinators such as bees. We came up with the idea of incorporating multi species leys into our pastures with the potential to increase both forage production and pollinator populations. As a co-operative, we already work together and that's one thing that attracted us to EIP Wales, which encourages group working across the sector.

## What are you doing in the project?

At first cut silage, we are leaving one headland uncut. We can then compare the pollinator numbers and forage yield on the cut and uncut areas. At the next silage cut, the area that was previously left is mowed, and a different area of headland is left uncut. This ensures the bees have a continuous supply of flowers. By alternating headlands, we can keep the whole field in good agricultural condition. We are also monitoring the silage quality and investigating whether the inclusion of the higher fibre areas that have been allowed to mature can reduce our need to add straw as a fibre source in the ration at feeding.

## Have you learnt anything new by being part of this project?

Since starting the project, I've realised the value of having more diverse leys from a farming and conservation viewpoint, and I've re-seeded other fields with the Cotswold Seeds herbal ley mixture that we have used in the project. The £50 extra per Ha (£20 extra per acre) for the seed mix is more than justified by the extra fibre and essential vitamins for the cows as well as increasing our tolerance to drought, and who can forget, the bees love the stuff! Before the project started, I knew next to nothing about bumblebees and I have been fascinated to learn about them and hope to see even more in variety and numbers this year...and even identify a few if I can!

## In your opinion what's the main message from this project?

We've run this project as farmers which we hope will show others how bumblebee conservation can be practical and beneficial to the farm. I believe that more often than not, wildlife conservation can go hand in hand with productive farming and does not have to take over from the farming itself.







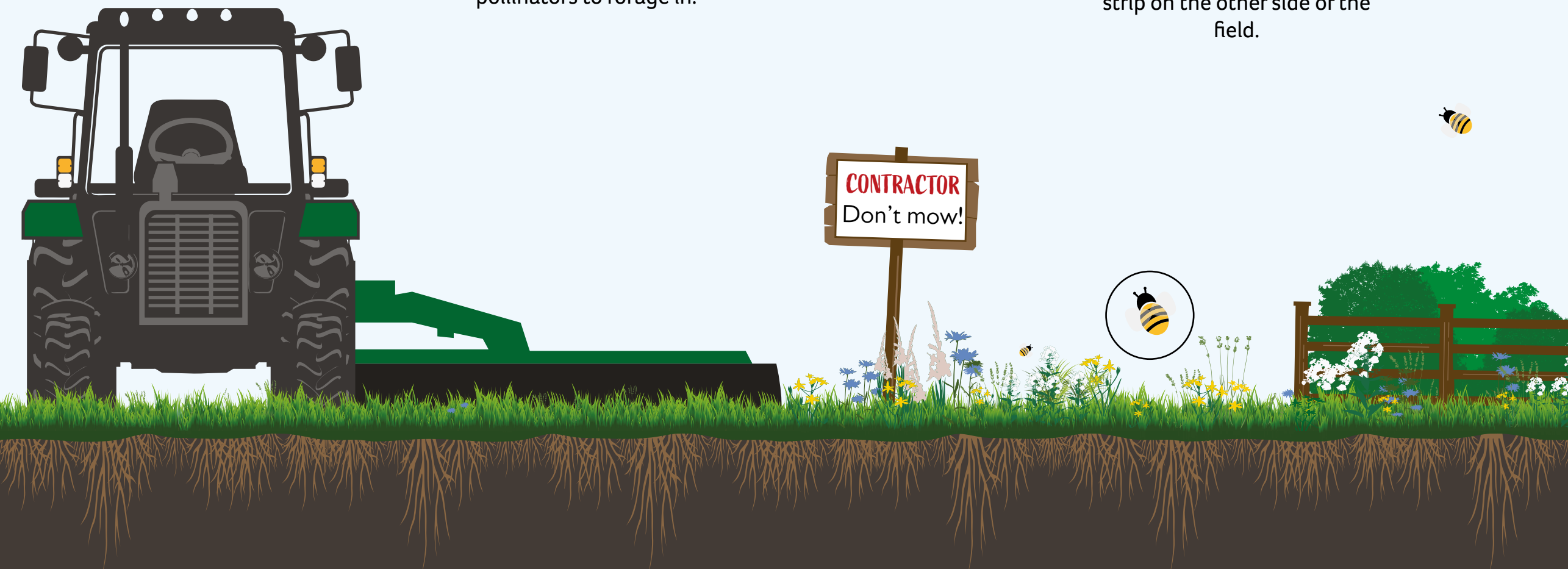
## Bee friendly silage harvesting

### Silage harvesting:

Leaving a 2-4 metre strip of forage uncut along the sides of fields provides flowers for bumblebees and other pollinators to forage in.

### With each cut:

Harvest the previously uncut margin but leave another uncut strip on the other side of the field.

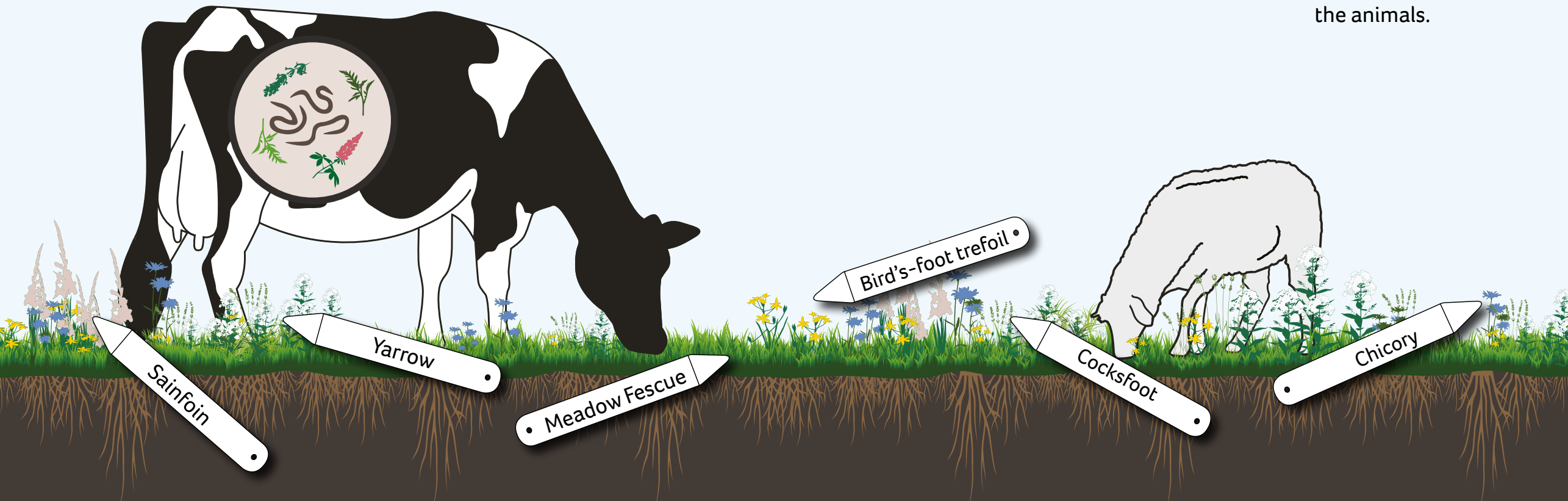


Leaving uncut areas that contain mature flowers provides valuable nectar and pollen for a wide range of insects including bees. Beneficial insects will predate pests such as aphids, pollinate crops such as clover or the apples in the orchard and provide a food source for birds and small mammals.

## Benefits of multi species leys

Tannins in herbs can help to control parasitic worms naturally which will reduce the farmer's dependency on anthelmintic medicines.

Deep rooting plants draw up more nutrients providing important vitamins and minerals to the animals.



Deep rooting herbs can help reduce soil compaction, increase oxygen levels in the soil and improve drainage

Legume plants fix valuable nitrogen into the soil which can reduce the need for fertilisers



WITHOUT THE RIGHT  
**wheat for bread,**  
WE'RE TOAST



**Q&A** with the Welsh Grain Forum (WGF) on the Organic Ancient Cereal Supply-chain EIP

**1** GRAIN WAS ONCE GROWN WIDELY OVER WALES ON A SMALL SCALE FOR PRODUCING BREAD. DO YOU THINK THERE'S A PLACE IN THE CURRENT MARKET FOR WELSH GRAIN, OR ANCIENT VARIETIES OF GRAIN FOR BREAD MAKING?

There is unquestionably a place in the market for Welsh grain, ancient cereals and heritage varieties. Provenance is becoming increasingly important to consumers, and therefore Welsh grain is certainly in demand. Ancient cereals (e.g. Einkorn and

Spelt) and heritage varieties/ landraces (e.g. April Bearded and Hen Gymro), have small but growing niche markets, including artisan bakeries and high-end restaurants.

**2** WHY IS THERE AN INCREASING DEMAND FOR THESE ANCIENT VARIETIES OF GRAIN?

Although there are many claims made for the nutritional benefits of ancient grains, many are not substantiated by evidence. What is unquestionably true is that they tend to be more disease resistant,

Their extensive root systems, compared to modern varieties, allow them to access nutrients more efficiently, and from deeper within the soil profile. This allows them to be grown on less fertile soil and with fewer inputs, potentially increase levels of certain nutrients in the grain and compete against weeds. Bread from ancient cereals are widely thought to have better, richer flavours compared to many modern varieties.

**3** COULD GROWING GRAIN SPECIFICALLY FOR FLOUR PRODUCTION BE A DIVERSIFICATION OPTION FOR OTHER FARMERS ACROSS WALES?

Yes, but like all emerging markets, the supply chain needs to be managed carefully. The market is growing, but still very small in absolute terms, and therefore, large numbers of growers entering the market simultaneously would flood the market very quickly. There is limited stoneground milling capacity in Wales and this needs to grow alongside grain production and the market, and the supply of seed is very tight for many varieties at the moment and would need to be developed. So, there are opportunities, but there is a lot of supply chain development to be done.

**4** ARE THERE ANY CHALLENGES TO FARMERS WHO WANT TO START GROWING AND SELLING GRAIN SUITABLE FOR FLOUR PRODUCTION?

At present (for reasons already explained), small scale operations tend to be more appropriate and this brings its own challenges, especially around primary processing. For example, many drying and cleaning machines require large volumes to work efficiently, and this can be difficult when you are dealing with 5-10 tonne quantities. There are some differences growing ancient vs modern varieties and milling vs feed varieties, and the EIP Wales project is looking at some of these issues – specifically seed rates and undersowing.

**5** ONE OF THE AIMS OF THE WGF IS TO 'REVITALISE GRAIN IN WALES'. IS BEING PART OF THIS EIP PROJECT HELPING YOU TO ACHIEVE THIS AIM, AND IF SO, HOW?

Very much so. By addressing some key agronomic questions the project will improve the efficiency of production and the baking, taste and nutritional test will help us test the claims we make for products based on ancient cereals.

# Reducing antibiotic use on sheep farms at



**Farmer Q&A:** Gareth Thomas, Tregynrig is one of the eight farmers from Anglesey in this project.

## Tell us about yourself and your farm.

My name's Gareth Thomas, I'm 23 years old and farm beef and sheep on our family farm on Anglesey. I'm a member of the Wales Federation of Young Farmers, and was very fortunate to be chosen as a member for the Farming Connect Agri Academy Business and Innovation Programme in 2017, as well as being chosen for the Next Generation Policy Group for NFU Wales.

## What motivated you to join the EIP Wales project on reducing antibiotics?

I believe very strongly in the aim of this project. It's a very opportune subject in my opinion, as our over dependency on antibiotics in the past, both within agriculture and the health sector, has created a situation where if we do not reduce our dependency, they will not work in either people or animals.

## How have you found being part of the project and working with a group of farmers?

My experience of working with this group has been fantastic as everyone's been open, willing to give an opinion and share interesting ideas.

## Have you learnt anything new by being part of this project?

One of the most important things I've learnt is that foot health is vital to ensure the best performance from the flock and by sorting this, other problems such as joint ill are reduced. This has motivated me to create a two and five-year plan to improve the health of our sheep's feet and to have a system that works for us at home.

This year, I will start as a board member of the 'Animal and Environment Antimicrobial Resistance Delivery Group

for Wales,' where we will be discussing and developing an action plan to decrease the use of antibiotics and improve their efficiency. As part of this role, I will be able to encourage more farmers to make use of what we have learnt in this project.

## Have you changed any of your farming practices due to this project?

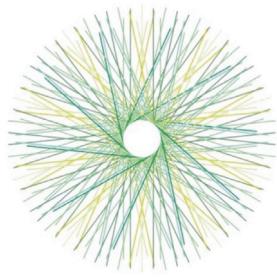
As part of this project, we have reduced our antibiotic usage whilst lambing. This year, the emphasis was put on reducing bacteria levels in the sheep shed and in the pre-lambing pens. In addition to this, we have concentrated on reducing and improving our use of drenches against fluke and worms. We use Faecal Egg Counting (FEC) regularly to test if a drench is needed, as well as discovering which drench is most effective, instead of drenching to cover everything.

## What are the messages from this project that you would like to share with other farmers?

- Ensuring that each ewe has about 40 to 50 cm of head space around the feeder is an effective way to make sure they're getting enough feed.
- FEC is a huge help to discover the correct and most effective treatment. It improves performance and will eventually save you money.
- 'Avoid, Treat, Quarantine, Cull, Vaccinate.' This 5 point plan to reduce lameness in sheep is vital to develop and improve the performance of the whole flock.
- Liming was found to be an effective method of maintaining cleanliness in the lambing shed.
- Using inspection gloves to pull lambs is the cheapest but most effective way of reducing the spread of diseases and bacteria.







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AGRICULTURE & INNOVATION



## Interesting EIP news from further afield

### Sprinkler systems as protection against frost damage

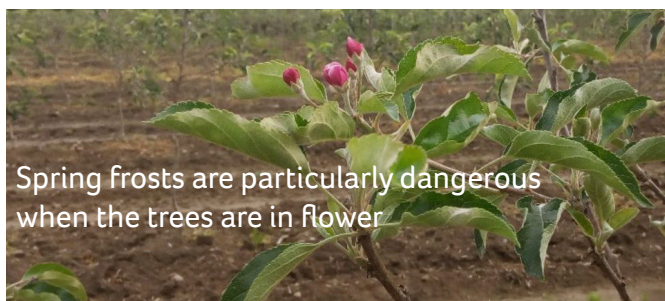
Orchards and other fruit and vegetables are becoming ever more susceptible to the impacts of climate change. Earlier spring growth and longer, milder autumns have extended the growing season, but premature flowering may be vulnerable to spring frosts.

In the Grójec area of Poland, farmer Piotr Domasiewicz decided to trial a sprinkler system to protect his fruit from spring frosts. He has one of the biggest apple orchards in the area, covering 16 Ha. He says: “In the past I tried other systems such as artificial fogs and wind machines, but they did not suit our type of crop nor the shape of the parcels of land. Nets reduced the apple colouring, and heat candles were costly and not very effective.”

“The sprinklers that I’m using in this project can rotate 360°, with a spraying radius up to 13m. First, I tested the system on a 2 Ha area. Luckily, the profits from the first season were sufficient enough for me to reinvest in more sprinklers. Now, sprinklers cover 10 Ha of my farm - the areas most prone to frost damage. The other area is on a higher slope and therefore, doesn’t need protection as the cold air tends to flow downwards.”

To efficiently prevent frost damage, the sprinklers have to start working at just the right moment. Piotr says: “As soon as the temperature drops to 0°C, I start the sprinklers. To protect the fruit from frost at a temperature of -3°C to -5°C, I use 40 m<sup>3</sup> of water per hour per hectare. Sprinkling must continue until the ice cover on the plants is completely dissolved. To prevent the plant tissue temperature from dropping too low between pulses of water, the water should be applied continuously. The sprinklers are very effective for frost protection in temperatures from 0°C to -4°C, but I have also used this method for a temperature of -8°C.”

Piotr finds the system highly effective and it proved economically, very beneficial: “Sprinklers are multipurpose and can also be used for irrigation or fertigation. I would definitely recommend this method to other fruit farmers despite the high initial installation cost. If your farm is in an area prone to spring frost, it’s worth considering.”



Spring frosts are particularly dangerous when the trees are in flower