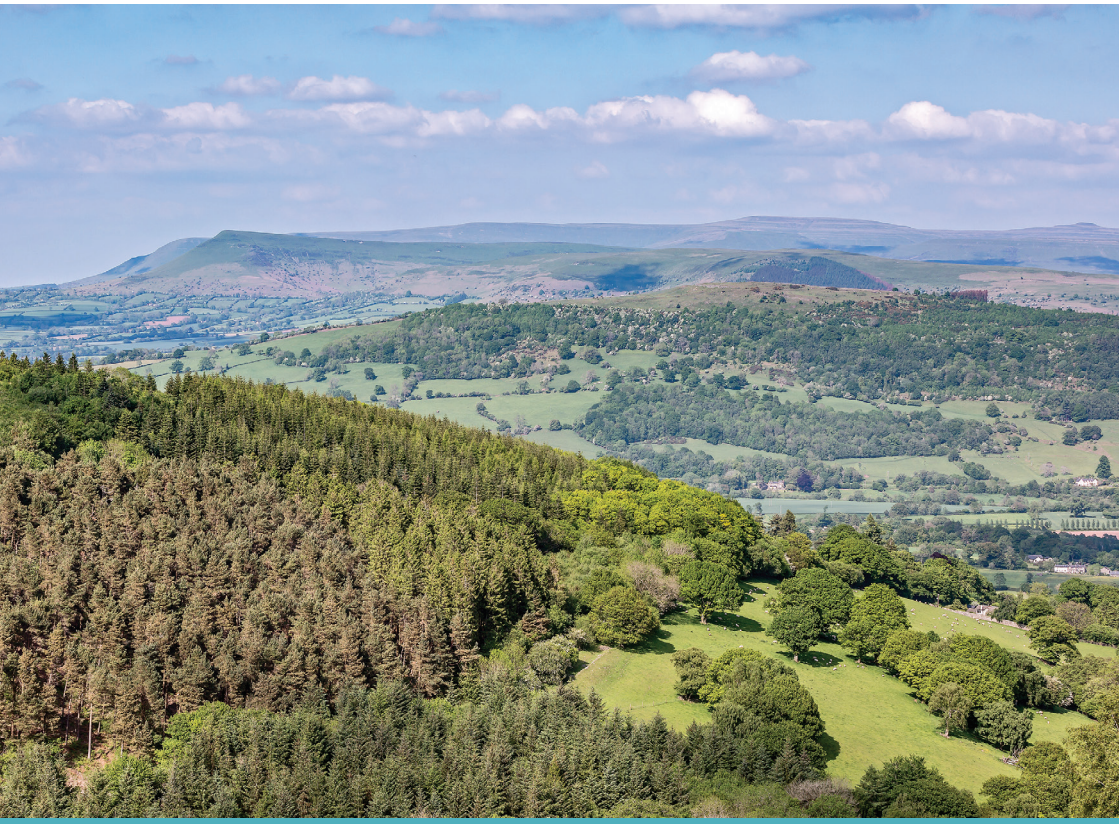
EIPWALES

Cydweithio er ffyniant gwledig
Collaborating for rural success

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

Collaborating for rural success

menter a busnes

Spring 2018

Contents

"Implementing new technologies or approaching management practices in an innovative way will be important for businesses as they meet the challenges ahead. EIP Wales offers a unique opportunity for groups of farmers and foresters to try out new ideas with plenty of support to guide them."

Lynfa Davies

- EIP Project Manager and Knowledge Exchange Manager for Farming Connect

"EIP Wales is a great collaborative effort involving Farming Connect and the Knowledge Exchange Hub at IBERS, Aberystwyth University. By all working together with the groups that are coming forward we are seeing new ideas and technologies that could bring significant benefits for the wider agricultural sector."

Professor E. Wynne Jones OBE FRAgS

- EIP Wales Review Panel Member and Chairman of the Farming Connect Strategic Advisory Board

EIPs - A new approach to innovation

The European Innovation Partnership for Agricultural productivity and Sustainability (EIP-AGRI) was launched by the European Commission in 2012. It aims to foster a competitive and sustainable agriculture and forestry sector that *"achieves more from less."*

Menter a Busnes delivers the EIP Wales scheme on behalf of the Welsh Government, and has received funding through the Welsh Government Rural Communities – Rural Development Programme 2014-2020, which is funded by the European Agricultural Fund for Rural Development and the Welsh Government.

"EIP Wales is about making innovative ideas a reality on farms and in woodlands across Wales. I look forward to hearing about the future success and benefits of this project."

Lesley Griffiths AM

- Secretary for Energy, Planning and Rural Affairs

What is EIP Wales?

The aim of EIP Wales is to solve common agricultural and forestry problems by bringing people from practical and scientific backgrounds together.

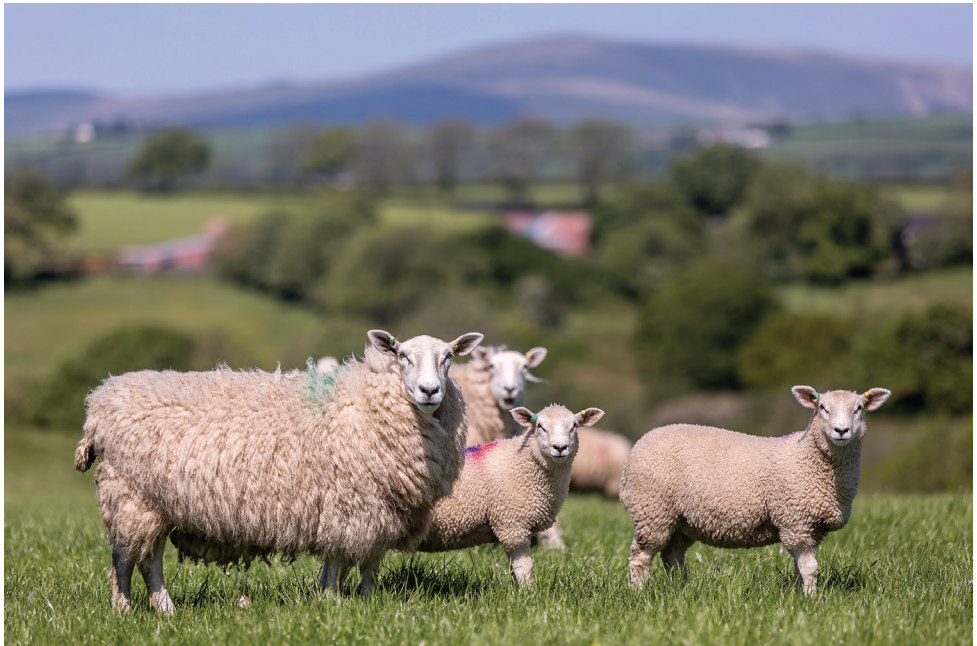
Each project can access up to **£40,000** and can run for a maximum of **3 years**. It's an opportunity for farmers and foresters to put their ideas into practice, test new technologies, products or techniques.

The Requirements

The project must be **innovative** and be looking to tackle **on farm problems** with the results benefitting the wider agricultural and forestry sector. It should be looking to further apply the outcomes of primary research.

Each project group must contain:

- Two farmers or foresters from separate businesses and they will need to be registered with Farming Connect.
- At least one additional member which could be a researcher, advisor, academic, non-governmental organisation or agri / forestry business member.



The EIP Wales Process

Step 1 – The first step is to share your idea with us through the enquiry form on the Farming Connect EIP Wales web page.

Step 2 – We will discuss your idea with you to see if it falls within the scope of EIP Wales.

Step 3 – The Knowledge Exchange Hub at IBERS will undertake background literature searches to see what is already known about your subject area to help inform a potential project.

Step 4 – If your idea is within the scope of EIP Wales, you will have the opportunity to work with an Innovation Broker. An Innovation Broker will help you turn your idea into a project and guide you through the application process, and if your application is successful, facilitate the project throughout its lifetime.

Step 5 – At the end of the project, hopefully a solution to the problem has been found. The results will then be shared with the wider agriculture and forestry sectors across Europe.

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Innovative Projects

EIP Wales is eager to fund **45 projects** in Wales by 2023. The projects approved so far are tackling a variety of problems within the agricultural sector.

The main focus of projects:

- Technical solutions to increasing productivity or resource efficiency
- Ecosystem services
- Soil functionality
- Water management
- Integrated supply chain solutions
- Benchmarking and managerial innovation for producers
- Development of new food quality and livestock health care schemes

"I've got to be honest, I didn't expect to see so many different ideas being submitted as part of the project. Since starting the job, I've learnt a lot about new technologies that could hold significant benefits at a farm scale."

Owain Rowlands
- EIP Wales Project Officer for Menter a Busnes

Potato blight control using components of indigenous non-food waste plants

Potato blight can hit farm profits hard as the disease can lead to complete crop failure. Recent estimates show that the control of the common disease can cost the industry a staggering £70m across the UK in a bad blight year.

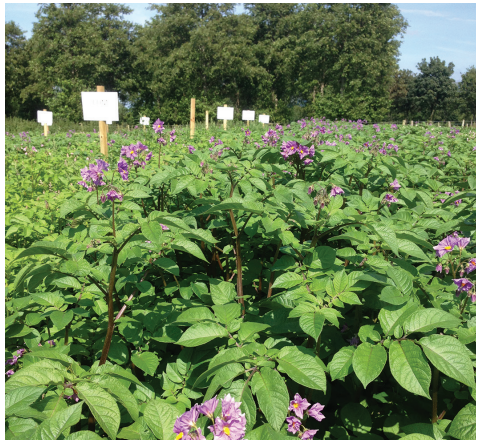
This project is aiding the development of a natural biopesticide by using a chemical compound *(Saponin)* sourced from common Ivy.

"This trial could result in a brand-new market opportunity, to grow common ivy commercially, and to use its natural saponin to help organic growers reduce blight infestation."

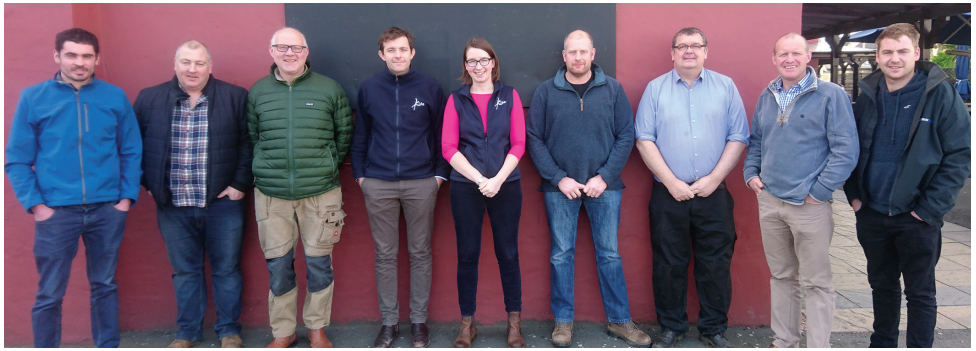
The generated biopesticide will aim to provide an effective, natural and potentially low-cost, alternative fungicide for potato blight.

"This will reduce crop wastage through decimation of crops through potato blight, and as a direct result allow increased potato sales, improved turnover and improved profitability."

The project is being led by representatives from Sarvari Research Trust and Emerald Crop Science and Naturiol Ltd. and trial plots are located on two farms, Ty'n yr Helyg near Llanrhystyd and Henfaes farm at Bangor University.



Assessing the potential of genomic testing dairy heifers to increase genetic gains and financial returns



Through EIP Wales, eight North Wales farmers are aiming to maximise farm profits by accelerating the breeding progress of their dairy herds.

The reliability of traits being inherited from the traditional pedigree index is **35%**. By using genomic testing to measure DNA for production, type, fertility and health traits this can increase the reliability to **70%**.

"Bringing this modern innovation to farm scale will be very valuable to the industry by accelerating herd progression, boosting farm competitiveness and sustainability."

The project will fund the genomic testing of 410 predominantly Holstein-Friesian heifers to assess their genetic potential. The eight farms have listed the traits they're aiming to improve within their herd and progress towards these will be assessed over their first lactation.

The aims of the project:

- Produce a decision tree for using genomics
- Determine the correlation between genomic PTA's and actual performance
- Gain a better understanding of the herd's genetic profile, direction of travel and impact of breeding decisions for each participating farm.
- Produce a cost benefit analysis of genomic testing for each farm scenario.

"Through the small investment in genomic testing, breeding plans can be restructured to get the best output from the most valuable resource on the dairy farm, the herd."

All breeding females of a specific age will be tested. DNA samples will be taken from the heifers before sending off for a genetic profiling in time for first breeding at 13-15 months of age.

Alternative forage systems for marginal land

Intensification of farming practice has resulted in the decline of species-rich, permanent pasture into fields of one or two grass species. Species-rich grasslands were once common across the UK and supported pastoral agriculture, healthy functioning soil, and diverse flora and fauna.

This spring, three upland farms in the South Wales Valleys will be reseeding 4-5 ha of marginal upland with a multi species ley alongside a conventional ryegrass/white clover ley to compare outputs from the two systems as part of a 3-year EIP project.

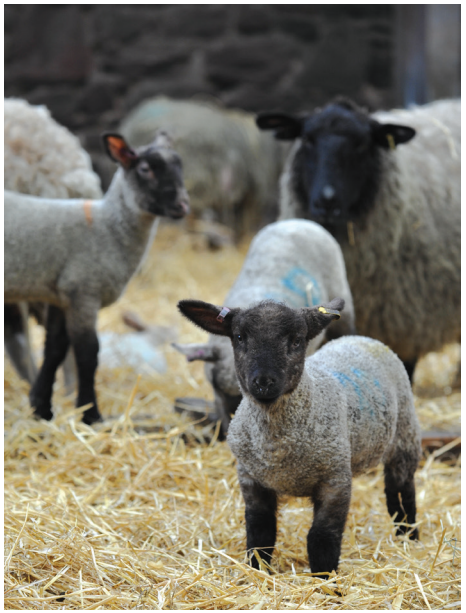
Project Design

- Fields will be sprayed with glyphosate to destroy the existing grass before being cultivated.
- 50% of the fields will be sown with a multi species lay containing 5 grass species, 3 legumes and 3 herb species, and 50% will be sown with ryegrass and white clover mix at 14kg/acre.
- An assessment in year 1 will be made on how well the seeds establish and how they outcompete the undesirable weed grasses and broadleaved weeds.
- In year 1, 2 and 3 the project will monitor forage production and quality, stock performance and invertebrate populations in the new leys.

Welsh landscapes vary significantly in soil quality and fertility, therefore understanding the effectiveness of different sward compositions will allow a more efficient, targeted approach to sowing grass on marginal land.

If increased floral diversity can also reduce lamb finishing times and/or improve animal health, a true multi-species grassland could offer the potential to manage marginal land in Wales for both production and general biodiversity.

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



The global burden of antimicrobial resistant infections is growing and poses a serious threat to human and animal health. This project is further developing the research that changes in flock management, mainly through improved nutrition and hygiene, can reduce the need for antibiotics and at the same time increase production, while maintaining high standards of animal health and welfare.

It also provides a safe and healthy food supply when there are concerns that food producing animals may contribute to the development of human antibiotic resistance.

There is potential for global targets to be put in place to reduce antibiotic use *(per kg/animal weight)* in treated livestock, to an agreed level for each country. There is also likely to be restrictions on usage in livestock of those antibiotics that are critically important for human health. Taking measures now to reduce antibiotic use will make it easier to manage when these targets are applied.

Project Aims

- Promote responsible use of antibiotics to maintain the effectiveness of drugs and control costs.
- Increase farmer confidence in ration formulation and management practices, reducing prophylactic use of antibiotics at lambing time while maintaining and improving health and welfare.
- Improve nutrition and management practices in order to improve vigour, reduce mortality and reduce investment in finishing.
- Empower the next generation of farmers to adopt alternatives to the use of antibiotics, helping them become more resilient.

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