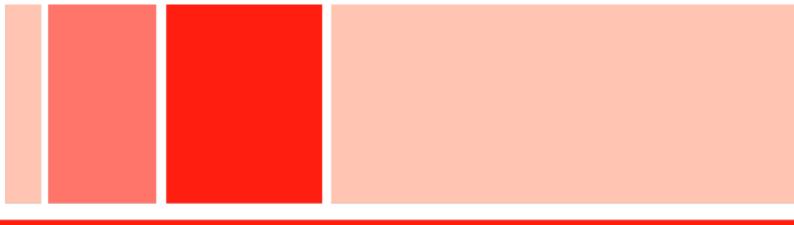






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European Innovation Partnership Wales Evaluation Phase 2: Interim Evaluation Report



Mae'r ddogfen yma hefyd ar gael yn Gymraeg.

This document is also available in Welsh.

European Innovation Partnership Wales Evaluation Phase 2: Interim Evaluation Report

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Views expressed in this report are those of the researcher and not necessarily those of the Welsh Government

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Glossary

Acronym/Initialism/Keyword Definition

CCTs Cross-Cutting Themes

DO Development Officers

EAFRD European Agricultural Fund for Rural Development

EIP European Innovation Partnership

EIP-AGRI European Innovation Partnership for Agricultural

Productivity and Sustainability

EU European Union

FC Farming Connect

GHG Greenhouse Gas

IB Innovation Broker

IBERS Institute of Biological, Environmental and Rural

Sciences

KE Hub Knowledge Exchange Hub

MaB Menter a Busnes

NGO Non-Governmental Organisation

OG Operational Group

R&D Research and Development

RDP Welsh Government Rural Communities - Rural

Development Programme (2014–2020)

RSPB Royal Society for the Protection of Birds

ToC Theory of Change

UK United Kingdom

WG Welsh Government

1. Introduction

- 1.1 European Innovation Partnership (EIP) Wales was launched in January 2016 and funded under the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI), which itself was launched in 2012. Just under £2m has been made available from the Welsh Government Rural Communities Rural Development Programme (2014–2020) to deliver this scheme. EIP Wales is delivered by Menter a Busnes (MaB) alongside support from Farming Connect (FC), Innovation Brokers (IBs), and the Knowledge Exchange Hub (KE Hub) a collaboration between FC and IBERS at Aberystwyth University. The role of EIP Wales is to facilitate innovative and new ideas for farming and forestry businesses.
- 1.2 This evaluation was commissioned by the Welsh Government to assess the implementation and impact of EIP Wales. Specifically, our evaluation was tasked with the following eight key objectives:
 - assess the level of engagement/services provided through Farming Connect
 - examine the effectiveness of the project application and decision and appraisal processes
 - assess the Innovation Broker role in terms of quality, relevance, flexibility, and value for money
 - assess the particular design aspects of the EIP scheme
 - assess and evaluate the dissemination of the group findings to the wider public accessing Farming Connect
 - assess the innovativeness of projects
 - assess and evaluate the overall impact of EIP Wales projects for the participating OG members
 - to what extent has EIP Wales successfully addressed the three Welsh
 Government cross-cutting themes and the cross-cutting objectives of innovation and environment and climate change mitigation and adaptation?
 - 1.3 The evaluation is being delivered over three phases, the first of which comprised scoping and Evaluation Framework development and was undertaken in 2021.
 The Framework outlined a series of evaluation questions, based on the

aforementioned objectives, which have been used to steer the evaluation activity (the evaluation questions can be found in Appendix 1). This report presents the interim evaluation of EIP Wales, which is primarily concerned with evaluating the implementation process, whilst we also consider the impact of projects completed to date. The final evaluation report will be completed in 2023 and will primarily seek to provide an impact assessment of the EIP projects and of the scheme as a whole in terms of the overall aims, performance indicators, and outcomes.

1.4 The interim and final evaluations will aim to help inform ongoing delivery and future innovation partnership schemes in Wales following Brexit by providing key recommendations and lessons learnt.

Overview of the European Innovation Partnership in Wales

- 1.5 In Wales, £1.8m has been made available as direct, 100 per cent grant funding with which to deliver 46 projects over six years from 1st August 2016 to 30th June 2023. These projects are delivered by Operational Groups (OGs) and designed to be led by farmers or foresters (often including a group of them) alongside other stakeholders such as research institutes, non-governmental organisations (NGOs), advisors, or other businesses.
- 1.6 The scheme has been designed to support farmers and foresters (primarily) in accessing funding in order to test innovative technologies or ideas within their businesses in a controlled manner with support from experts. Having conducted the controlled research, the experts can then advise participants on the best way in which to implement new practices in their own systems. Ensuring that any new practices are adopted within participants' systems is considered to be a key enabler to the sustainability of impacts.
- 1.7 The support includes not only the funding itself (maximum of £40k allocated), but also information and advice on project design through the KE Hub, support with knowledge transfer activities through FC, and dedicated staff (external IBs and staff deployed at MaB) to facilitate OGs through the application process and during the lifetime of the project.
- 1.8 MaB is responsible for high-level management of the scheme, including regular monitoring of the projects and IB activity, capturing results, and support dissemination planning. The KE Hub provides supporting research to applicants on

their project ideas, which is a crucial part of the appraisal process. IBs support applicants through the application process and will often lead on writing the applications, although the project should be based on lead farmers' ideas. IBs often lead on forming the OGs and generally have an important facilitation role in project delivery to ensure that they are undertaken with sufficient scientific rigour. Whilst all projects have been encouraged to utilise IB support, six projects have been delivered without their involvement.

- 1.9 Whilst the purpose of the EIP Wales scheme is to test new ideas, (equally) the scheme cannot fund and is not aimed at primary research. The intention is to build on existing research outcomes to be applied at a practical level. We understand that there is no other targeted support available that specifically encourages farmers and foresters to try out research outcomes at a practical level. By ensuring that the funding cannot be used for primary research, the applications and projects are more likely to be based on the needs of farmers and foresters (as opposed to attracting applications from researchers who have access to other funding streams). This is a key principle of the EIP Wales scheme. Other design features have also been introduced to ensure that the research delivers on the needs of farmers and foresters, including the size of the grant. (It is assumed that farmers/foresters would be more comfortable with applying for the relatively small grants, whilst larger research groups would be disincentivised from applying.) The EIP attempts to strike a balance between primarily focusing on practical projects that farmers can run themselves and based on their needs, whilst also ensuring sufficient scientific rigour to generate learning that can be applied throughout the sector.
- 1.10 FC has a crucial role, utilising its network (particularly the Demonstration Network) to disseminate findings from the research projects and linking the projects with other knowledge transfer activity within these sectors in Wales. This is critical in ensuring that there is a broader sectoral impact, disseminating the learning from these projects from a select few farming and forestry businesses to the rest of the sectors so that new practices are adopted more widely.
- 1.11 There are five main EIP project components, which are summarised below:
 - Facilitating the uptake of new ideas and technologies at the farm/woodland level to improve efficiency and productivity. The ideation can take place in different forms participants may know of a new technology that has been developed but is not widely

- available and could be used within their business; alternatively, they may have an issue that they do not know how to solve and an EIP project could help to find a solution. We also understand that the Welsh Government have instructed the scheme to explore some projects based on specific strategic objectives.
- 2. Bringing like-minded farmers, foresters, researchers, consultants, and agribusinesses together to work on common problems (i.e. the OGs). OGs need to be composed of at least two farmers/foresters from separate businesses, who are based in Wales and registered with FC, along with one other member from a related organisation, e.g. a researcher, consultant or agri-business.
- 3. Providing information and advice to groups on their potential project ideas through the KE Hub. This involves undertaking a literature review on each project idea to ensure its appropriateness and eligibility.
- 4. Facilitating research, i.e. support from the IB to deliver the research project on site.
- 5. Communicating ideas and project results with the wider industry to improve the flow of information and the uptake of new technologies. This includes a section on the FC website that is dedicated to hosting information on the groups and the progress of their projects along with updates linked to social media to increase the dissemination. The information is captured through various research outputs including final reports, infographics, videos, and technical publications, all of which can be accessed on the website. The FC Demonstration Network provides a platform through which to help disseminate findings from projects, with some being approached to become focus sites enabling dissemination to take place in the form of progression and open events as well as via the website and social media. Additionally, FC uses the information from the reports to disseminate the findings to the wider industry through a variety of mechanisms including the FC website, technical articles, and presentations at meetings and events.
- 1.12 A visual graphic of the scheme's theory of change (ToC) and logic model can be found in Appendix 2.
- 1.13 The remainder of this report is structured as follows:
 - Chapter 2 outlines the methodology deployed to conduct the research.
 - Chapter 3 examines the types of businesses engaged in this scheme, their appropriateness, and their drivers for participating.

¹ Approved EIP Wales Projects | Business Wales (gov.wales)

- Chapter 4 assesses delivery performance to date by exploring whether the scheme has been delivered as intended as well as the merits of the different design aspects.
- Chapter 5 provides an initial review of the projects delivered and considers their impact on the OG members as well as on the sector more broadly.
- Chapter 6 considers the work undertaken to disseminate the findings to date,
 the effectiveness of the approach, and examples of success.
- Chapter 7 concludes the report with a series of recommendations.

2. Methodology

- 2.1 This evaluation combines quantitative and qualitative methodologies, utilising three types of evaluation — theory-based, process, and impact — in line with the Evaluation Guidance for Co-operation and Supply Chain Development Scheme Projects.² Our approach also aligns with HM Treasury Green, Magenta and Aqua Book guidelines. The first phase principally used theory-based evaluation techniques to review, test and refine the assumed connection (i.e. the theory/intervention logic) between activities undertaken by EIP Wales and the anticipated outcomes and impacts. This process involved a comprehensive review of the core documentation and broader literature, six scoping interviews with key management and delivery staff, and a ToC workshop session. The research culminated in establishing a ToC logic model for EIP Wales (see Appendix 2), which performed a crucial function in capturing our understanding of the scheme, identifying performance indicators and the assumed causal links between activities, outputs and outcomes as well as the potential barriers or blocks to success.
- 2.2 The initial scoping phase also included a detailed desk-based review of the scheme's monitoring processes, allowing the evaluation team to understand the types of data being captured internally by Welsh Government and MaB officials delivering the EIP Wales scheme. Together, this allowed us to identify what data were needed from the external evaluation research fieldwork, thus informing our research tool design process. This was all captured in an Evaluation Framework which, as informed by the ToC, outlined the key evaluation questions, the judgement criteria used to address those questions, and the indicators and data needed to answer those questions.
- 2.3 The evaluation team designed the survey questionnaires to undertake the fieldwork with the relevant stakeholders, which principally involved capturing feedback from the OG members.³ We were supplied with a contact list of 239 OG members. A census approach was utilised, with each member being contacted up to five times to participate in our telephone survey from mid-November 2021 up to

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² Welsh Government, Evaluation Guidance for Co-operation and Supply Chain Development Scheme Projects, pp.8-9, January 2018.

³ See Appendix 3 for survey of OG members.

the end of January 2022. This resulted in 84 responses from OG members (consisting of 80 farmers, three forestry businesses, and one other organisation), constituting a 35 per cent response rate. It is important to emphasise that we were only provided with contact details for the farmer and forester OG members. Accordingly, with one exception⁴, only farmers and foresters responded to our survey and, thus, informed this report. This is one of the methodological limitations within the interim phase, as our ability to assess cross-sectoral collaboration and benefits for non-farmers and non-foresters is constrained. However, this will be rectified in the final evaluation phase, wherein we will contact other (i.e. non-farmer/forester) OG members to capture their views.

- 2.4 Whilst a census approach was deployed at the beginning, we reviewed the response from each of the 46 projects after all businesses had been contacted, as we aspired to secure representation from as many projects as possible in our sample. Having identified projects with no representation in our sample, further efforts were made to contact those specific OG members, resulting in obtaining feedback from 40 of the 46 projects (87 per cent).
- Of those 40 projects, 30 respondents confirmed that they were the lead applicants, whilst a further three were recorded as such in our database. Our analysis on some questions has included extrapolating the results for lead applicants so as to compare with non-lead applicants in order to understand how engaged other members were in their OGs. Some of these comparisons will be shown in the report.
- 2.6 We typically received feedback from one or two OG members per project (20 of the 40 projects had one response and 14 had two responses). There were a few projects, however, in which several OG members had responded to the survey, including one project in which nine survey responses were received, another in which seven responses were received, and two in which six responses were received (the remaining two projects had three responses each). This may skew the survey feedback included in this report because the overall sample may be disproportionately affected by positive or negative feedback relating to the success (or lack thereof) of those projects.

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⁴ One academic did respond to the survey.

- 2.7 In addition, we conducted a survey of 'non-beneficiaries', i.e. businesses that had applied for or enquired about a project but had not proceeded with it.⁵ We were supplied with 81 contacts pertaining to 27 projects that did not go ahead. Utilising the same census approach as outlined above, we contacted all 81 individuals up to five times each, resulting in 30 responses a 37 per cent response rate obtained from January to mid-February 2022. These were split evenly between 15 who had made unsuccessful applications and 15 who had withdrawn from the application process. It should be noted that some of these individuals had also participated as OG members in other approved projects. They were still contacted and asked specifically about the unsuccessful project and why it had not gone ahead. A small number of farmers will have therefore responded to the OG member survey and the non-beneficiary survey.
- 2.8 Qualitative interviews were undertaken with four delivery team members (MaB and FC), 10 IBs⁶, and three external stakeholders. This served to triangulate the findings from businesses.
- 2.9 Finally, the evaluation team undertook a comprehensive review of the project literature, including the application forms of all 46 projects. This helped to establish our understanding of the aims, inputs, delivery model, and targets of each project alongside their alignment with the cross-cutting themes (CCTs). The evaluation forms of completed projects were also reviewed to triangulate with our survey findings on outcomes and delivery performance, whilst feedback data were also obtained from FC dissemination events.
- 2.10 It is important to emphasise that, as an interim evaluation report, we only seek to present the emerging findings here, with only 20 of the 46 projects at the time of this report having been completed. This has affected our ability to assess some aspects of delivery more than others. For example, the application process has been completed for all projects; therefore, we can make some conclusive remarks on the efficacy of that process. Conversely, it is slightly too early to assess the dissemination activity, with most projects still ongoing at the time of our research. Thus, we can only offer our emerging findings with regard to some of the delivery components, and our final assessment may be different.

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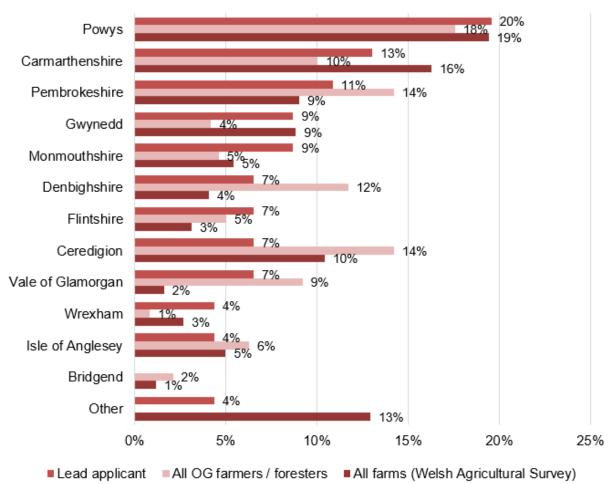
⁵ See Appendix 4 for the questionnaire used.

⁶ See Appendix 5.

3. Profile of businesses supported

- 3.1 According to the Welsh Agricultural Survey (2017), there were just under 25,000 farms in Wales at the time. As of October 2021, 239 farmers and foresters (predominantly farmers) had been involved in the OGs, although several have been involved in more than one project with the OGs, comprising 385 such members when accounting for multiple participation.⁷
- 3.2 The geographical distribution of the farms is fairly similar to what one might expect, being concentrated in the more rural authority areas in Wales and following a similar pattern to the distribution of all farms throughout the country (see Figure 3.1 below).

Figure 3.1: Geographical location of EIP Wales lead applicants, all OG farmers/foresters, and all farms in Wales



Source: EIP Wales monitoring information & Welsh Agricultural Survey 2017

⁷ Data supplied to Wavehill in October 2021.

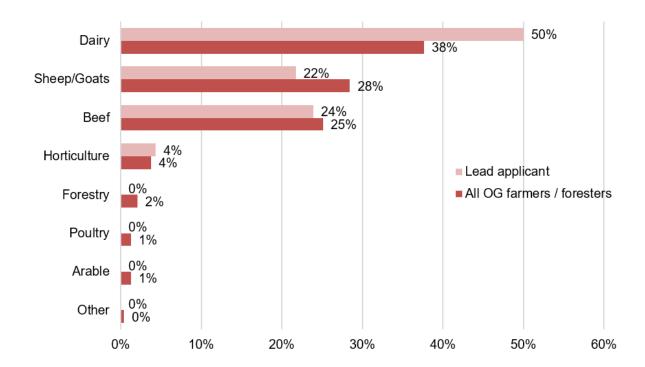
- 3.3 Powys accounts for most of the OG members and lead applicants, reflecting the county's position of containing most farms in Wales. The notable exception, however, is in the north-east, wherein there is more EIP Wales activity than might be expected (given that it is not an area known for farming). Indeed, the three counties of Denbighshire, Flintshire, and Wrexham account for 18 per cent (42/239) of all EIP Wales members, despite being home to only 10 per cent of farms in Wales. Similarly, the Vale of Glamorgan contains more activity than might be expected, whilst Pembrokeshire is also well served by the scheme. Conversely, some areas in the west, such as Carmarthenshire, Ceredigion, and Gwynedd, whilst among the main areas of activity, have fewer members than might be expected (given the importance of agriculture within those areas). Additionally, 10 of the counties in Wales⁸ that are less known for agriculture have no involvement in the scheme at all, despite accounting for 13 per cent of all farms in Wales.
- 3.4 Figure 3.2 shows that three sectors have been dominant in the EIP Wales projects. Between them, sheep/goats and beef account for 54 per cent (128/239) of all OG farmers/foresters, which is not dissimilar to the 58 per cent recorded in the 'cattle and sheep' sector in the Welsh Agricultural Survey 2017.9 The dairy sector has been the most prevalent, accounting for 38 per cent (90/239) of all farmer OG members and half of lead applicants (23/46), which is much higher than the share of the sector throughout Wales — only seven per cent in 2017. This emphasis on the dairy sector is likely to be in response to some of the challenges faced by the sector in recent years, with substantial volatility, price reductions and, linked to this, an intensification of the dairy industry in Wales leading to environmental concerns. Other sectors, including forestry, account for less than 10 per cent (21/239) between them. Thus, the sectoral composition of the OG members engaged has not been representative of the sector as a whole, nor should it where there are particular areas that need to innovate more than others. Equally, the data do show that the scheme has engaged with businesses from almost all of the different subsectors within agriculture. According to the delivery team, the only subsector with which they had not been able to engage is the pig industry.

Figure 3.2: Sectoral composition of all OG farmers/foresters

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⁸ These counties are: Blaenau Gwent, Caerphilly, Cardiff, Conwy, Merthyr Tydfil, Neath Port Talbot, Newport, Rhondda Cynon Taf, Swansea, and Torfaen.

⁹ StatsWales, Welsh Agricultural Survey 2017



Source: EIP Wales monitoring information

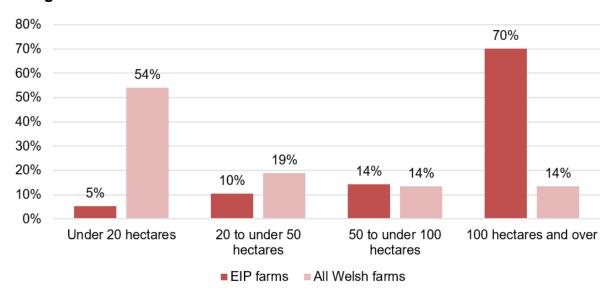
Other demographic data within the scheme's monitoring information show that 88 per cent (210/239) of the OG farmers/foresters are men (the remaining 12 per cent are women), and the age distribution is fairly evenly split between the younger cohort (59 per cent (140/239) are up to the age of 50, including four per cent (9/239) up to the age of 24) and the older cohort (41 per cent (99/239) are aged 50+). This seems to show that the scheme has engaged with more younger farmers than average within the industry. For instance, the 'Agriculture in the United Kingdom 2020' report showed that 36 per cent of UK farmers in 2016 were aged 65 years or above and the median age was 60.¹⁰ By comparison, only seven per cent (16/239) of EIP Wales farmers were aged 65 years or above at the time of applying and most were below the age of 50.

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¹⁰ Department for Environment, Food and Rural Affairs, Agriculture in the United Kingdom 2020, 2021

- 3.6 We asked some additional questions in the OG member survey to gain further insights into the types of businesses supported. Whilst we cannot be sure that these responses are reflective of the entire EIP Wales population, they do give us a useful indication.
- 3.7 Firstly, the survey suggests that EIP Wales has engaged with larger-than-typical farming businesses. On average, farming businesses engaged in the scheme operated on 231ha of land, compared to the national average of only 48ha (according to the Agriculture in the United Kingdom 2020 report).¹¹

Figure 3.3: Size of farm (ha) – comparison between OG members and national average



Source: OG member survey (n=77) and Agriculture in the United Kingdom 202012

Turnover data further reveal that the farming businesses are much larger than is typical, with 84 per cent (62/74) generating more than £50,000 in the last financial year in comparison with only 34 per cent across Wales, according to DEFRA's Agriculture in the United Kingdom 2020 report. Indeed, the average turnover reported by the survey respondents was around £514,000, which is more than 10 times the Welsh average for all cash income (£44,000).

Figure 3.4: OG members' (farmers only) turnover bandings

¹¹ Ibid.

¹² Agriculture in the United Kingdom 2020

¹³ Ibid.

¹⁴ Ibid.



Source: OG member survey (n=74)

- 3.9 This is perhaps unsurprising because the scheme has not been designed for smallholdings, which often do not have strong commercial interests (the types of organisations that compose a large part of the sector). The scheme is designed to help businesses to make their operations more profitable. Thus, we would expect to see larger businesses accessing the support. However, the scale of the difference may suggest that the scheme has largely been accessed by farming businesses operating at the other end of the spectrum — the small group of progressive, profitable businesses that often look to innovate and may already be 'plugged in' to support networks. Indeed, when we discussed this with the delivery team, it was acknowledged that many of the participants will belong to that description, i.e. the 'usual suspects', although they also maintained that these farmers had brought in other farmers via the OG approach who may not typically engage in these types of schemes or look to innovate. Equally, the main aim of these projects is to deliver coordinated trials and publish data that can provide meaningful results that change other farmers' practices. With that in mind, it is a sensible approach to engage the 'early adopters', i.e. farmers who are comfortable with the innovation process, so that robust trials can be conducted and better information disseminated to the broader sector.
- 3.10 Other data from the OG member survey reinforce this notion that most of the farmers engaged are the usual suspects, with 74 per cent (59/80) reporting that they had received other grants or financial support from the Welsh Government or other public bodies in the last five years. This is not surprising, given the role of FC

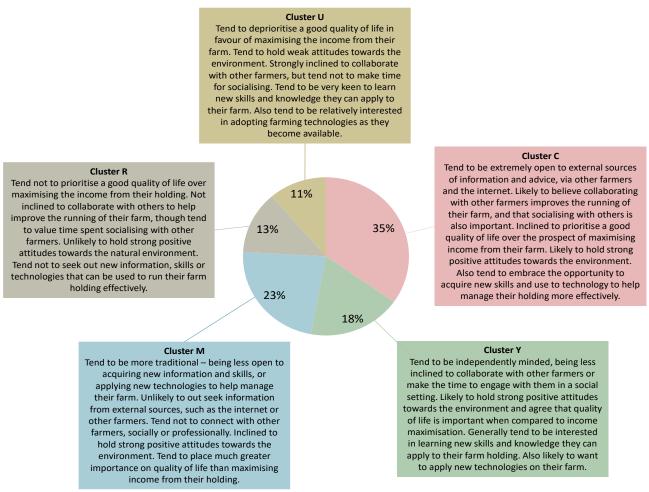
in publicising the scheme. Businesses had typically received the Sustainable Production Grant (35 per cent; 28/80), the Farm Business Grant (31 per cent; 25/80), or Glastir (11 per cent; 9/80), while a range of other grants were also cited.

Welsh Government Farm Segmentation Model

3.11 In order to further understand the profile of farm businesses participating in the EIP Wales scheme, the research also drew on the Welsh Government's Farm Segmentation Model. The model segments Welsh farm holdings based on the values and beliefs of those managing them. It is intended to support the design and implementation of policies and programming by understanding the differences in attitudes and perceptions across different groups of farmers. The questions explore a range of themes including adaptability and innovation and the networks and broader support on which farmers draw. Furthermore, they explore attitudes towards environmental sustainability, the importance of connectedness with other farmers, and the role of new skills and knowledge in running a farm effectively. The segmentation model then maps these characteristics against five segments or clusters.

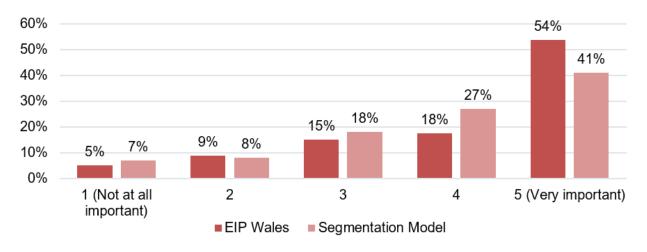
¹⁵ Lee-Woolf, C., Hughes, O., King, G., & Fell, D. (2014) Development of a segmentation model for the Welsh agricultural industry. A report by Brook Lyndhurst for the Welsh Government.

Figure 3.5: A segmentation model for the Welsh agricultural industry



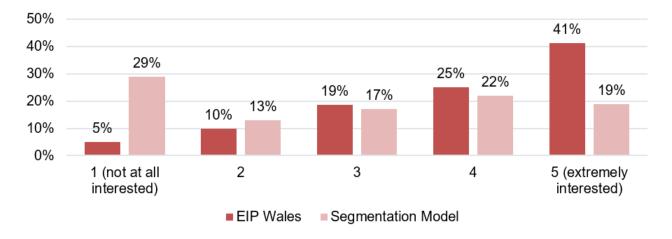
Source: Lee-Woolf, C., Hughes, O., King, G., & Fell, D. (2014) Development of a segmentation model for the Welsh agricultural industry. A report by Brook Lyndhurst for the Welsh Government.

Figure 3.6: 'How important is talking to other farmers as a source of information and advice for you personally?'



Source: OG member survey (n=80) & Farm Business Segmentation Model 2014 (n=1,814)

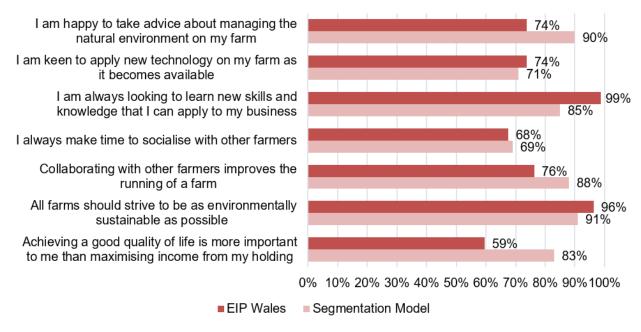
Figure 3.7: 'How interested are you in accessing information or advice about farming on the Internet?'



Source: OG member survey (n=80) & Farm Business Segmentation Model 2014 (n=1,814)

3.12 Figure 3.8 shows the final set of indicators used to test the characteristics of OG members. It reinforces some of the comments made previously in the section, revealing that OG farming businesses are more likely to be commercially oriented (e.g. they are more likely to deprioritise a good quality of life in favour of maximising the income from their farm, as shown by the final statement in Figure 3.8). Perhaps surprisingly, given the nature of the scheme, OG members do not appear to be particularly prone to collaborating with other farmers to improve the running of their farms — only 76 per cent (61/80) felt that collaborating with other farmers improves the running of a farm, less than the 88 per cent reporting this nationally. They do embrace new skills, information and technology more than is typical (99 per cent (79/80) vs. 85 per cent reporting this nationally) and are more likely to want to apply new technologies on their farm (74 per cent (59/80) vs. 71 per cent reporting this nationally). Together, these data suggest that the group do value and recognise the need to upskill and improve their knowledge, although they are also independently minded.

Figure 3.8: 'To what extent do you agree or disagree with the following statements?'



Source: OG member survey (n=80) & Farm Business Segmentation Model 2014 (n=1,814)

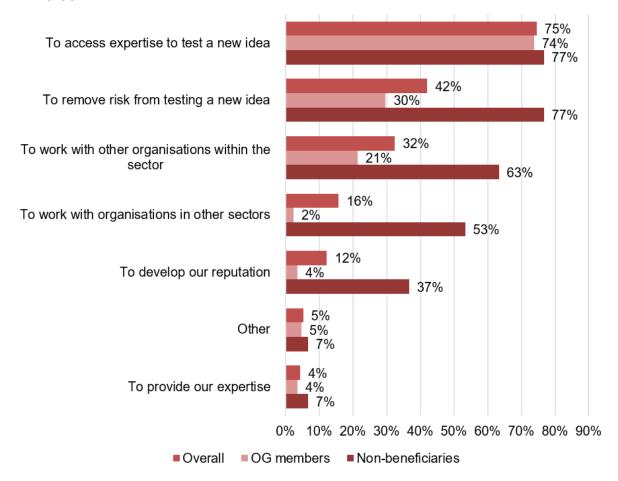
3.13 If we consider the pattern of the data as a whole, we can broadly state that the farming businesses taking part in EIP Wales most closely resemble Cluster U (see Figure 3.5 above), which, in fact, account for the smallest segment in Wales (11 per cent of farms). This is, of course, a very broad generalisation, and each business will have its own, different values and beliefs — indeed, some will be closer to the other cluster segments. However, this does provide a useful insight with which to understand whether the scheme has attracted a particular group of businesses, and the data do suggest that businesses with particular characteristics have been drawn to the scheme, and these are generally not reflective of the sector as a whole. They are larger-than-average businesses, which are typically already 'plugged in' to support networks; they are more business-minded, eager to learn new skills and adopt new technologies.

Motivations for accessing support

3.14 Interestingly, the main driver for accessing support from EIP Wales appears to have been the expertise offered by the scheme, rather than the financial incentive, with 75 per cent of applicants selecting this as a driver, compared with only 42 per cent selecting the need to remove the risk from testing a new idea. This suggests that businesses primarily wanted support in helping them to trial new practices, rather than simply accessing funding that would enable them to do so themselves — that support offer appears to have been key. Additionally, the opportunity to work with

other organisations was also an important driver for 21 per cent (18/84) of OG members.

Figure 3.9: 'Please can you describe why you wanted to develop a project through EIP Wales?'



Source: OG member survey (n=84) & non-beneficiaries (n=30); n=114 overall

4. Assessment of delivery performance & design aspects

Routes to engagement

- 4.1 Responsibility for promoting the scheme primarily lay with FC and this is reflected in the data where the main way in which people became aware of the scheme was by means of discussion with their FC-employed Development Officers (DOs). This is consistent with comments from the delivery team, which explained that they utilised staff "out in the field" who talk to farmers regularly, and were instructed to signpost to the scheme if relevant issues/ideas arose in conversation. The team focused on ensuring that DOs got "up to speed" and "kept emphasising" the importance of raising awareness in their discussions with farmers.
- The importance of FC channels (a small number heard about the scheme through FC publications, too) explains why the scheme has primarily engaged with businesses that are more innovation-focused and often participate in different schemes, as shown in the previous chapter. According to one of the stakeholders: "If farmers knew to go and ask somebody in FC about how [they] get [their] ideas funded, then they would get to EIP quite quickly." However, the stakeholder proceeded to state that farmers who were not as 'plugged in' will have been much less likely to know about and able to access the support. Thus, the proactive marketing approach was largely constrained to FC members.
- 4.3 A large proportion of OG members became aware of the support through word of mouth, potentially as a result of the interest generated from some of the earlier projects:
 - "As the projects started to get established, it was a snowball effect. There were articles on the projects [...] people read them and would contacts us we had a lot of farmers contacting us directly after seeing the articles." (Delivery team member)
- 4.4 Thus, whilst the proactive marketing was largely targeted at businesses already engaged with FC, the scheme could also draw on other key stakeholders to raise awareness farther afield. The delivery team explained that OG members would often invite neighbours or friends, who may have traditionally operated outside of the support ecosystem, to join them as fellow OG members and that there were "new faces" participating in the scheme.

4.5 IBs had an important role from the outset. They were given a licence to highlight opportunities from EIP Wales to their clients and to signpost where necessary. Two stakeholders suggested that this posed a risk in which the IBs might "push through" projects for their own commercial benefit. However, one of the IBs countered this point by explaining how the comprehensive application and appraisal process provided the appropriate checks and balance. This is a valid comment, as we will demonstrate in the next section.

35% Through Farming Connect Local 24% **Development Officers** 66% 24% Word of mouth - through other farmers / 30% foresters 7% Word of mouth - vet From an Innovation Broker Word of mouth - other Overall MaB OG Members Non-beneficiaries Farming Connect Magazine Online i.e. through the website or social media Other publications At a Farming Connect event 3% At another event 0% 10% 20% 30% 40% 50% 60% 70%

Figure 4.1: 'Can you please tell us how you became aware of the support?'

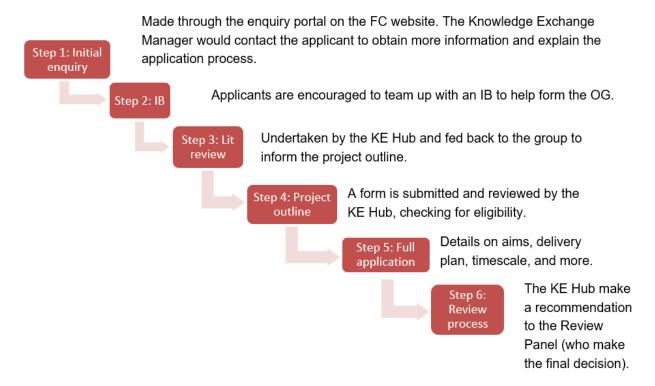
Source: OG member survey (n=83) & non-beneficiaries (n=29); n=112 overall

Project application and appraisal process

4.6 Applying for support from the scheme was a lengthy process, including the initial query, forming an OG, receiving a literature review to ensure that the research area was appropriate, a project outline stage followed by the full application, and a robust review process incorporating further checks from the KE Hub and final scoring

delivered by a Review Panel (see graphic below). It was described by one of the IBs as a "very mature and transparent" process which allowed the projects to be assessed on scientific and technical grounds with an opportunity for comments and adjustments where needed.

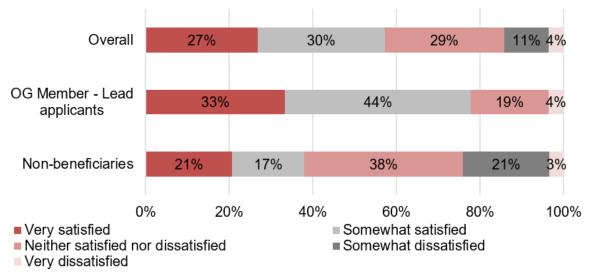
Figure 4.2: Outline of the six steps of the application and appraisal process



4.7 The comprehensive nature of the process means that it can be described as 'robust', with the advantage of ensuring that the projects are credible and merit investment. Equally, it also means that it is not an accessible process for farmers to lead upon. For this reason, the role of IBs has been crucial in helping or even leading the application bid writing, budgeting, and other aspects of the application process. The named lead applicants (farmers) who responded to our survey were broadly satisfied with the expression of interest and the application and appraisal processes, with 78 per cent (21/27) reporting that they were either 'very' or 'somewhat' satisfied, and when explaining their reasons, the comments often referred to the support from the IBs and how they had taken the burden from them. Whilst non-beneficiaries were, unsurprisingly, less satisfied with the process (only 38 per cent (11/29) were very or somewhat satisfied), it is interesting to note that they, too, were more positive than negative (see Figure 4.3), even though their

application had been rejected. This further suggests that the application and appraisal process has been effective.

Figure 4.3: 'Generally, how satisfied were you with the Expression of Interest, application and appraisal processes?'



Source: OG member – lead applicants (n=27) & non-beneficiaries (n=29); n=56 overall

4.8 Most lead applicants (17/27; 63 per cent) indicated that there had been no barriers within the process, with many explaining that they had not been involved. Indeed, when asked specifically about the support from IBs to refine project ideas and develop a project outline and application, 12 (92 per cent) of the 13 respondents provided the highest score of being 'very satisfied' with this element, and six (46 per cent) specifically stated in their comments that their IBs had been "in charge", as one put it, of that process. Two respondents (15 per cent) also stated that they would not have been able to undertake the process themselves because they did not have the time. According to one IB:

"I don't think any of the projects that I've been working on would have done it without somebody supporting them. The application process was very EU-funding-orientated. It felt quite clunky. You had to say the right things in the right places." (Interview with IB)

4.9 The risk with such an IB-reliant approach, wherein in many cases the IBs led on the application process with little input from the OG members, is that the projects are

¹⁶ Only 13 responded to this follow-up question because it was determined by the specific support received by IBs; in other words, only the respondents who recalled receiving support from an IB to refine project ideas and develop a project outline and application answered this question.

shaped in IBs' vision and based on their ideas, not those of the OG members. Equally, there is a question of equity. Not all IBs are as adept at application development as others; thus, individuals with the more experienced or knowledgeable IBs may have been at an advantage in terms of securing investment. Indeed, four of the non-beneficiaries responding to our survey highlighted how they felt let down/needed further expertise during the application stage:

"The process is very difficult. It didn't feel like there was much support to apply for it. We did it ourselves and it was difficult and challenging to do so. I think the process could be simplified or there could be help available, as there was none." (Non-beneficiary survey)

4.10 The other concern is the lack of selectivity in the appraisal and selection approach. We understand that all projects that were able to demonstrate that they were eligible received investment. The team explained that whilst they could have introduced funding windows and scored applicants against one another to make it more competitive, they felt that it was not necessary, given that they were already securing an appropriate cross section of projects, and that it would be easier to manage on a rolling basis. Nevertheless, having a more competitive process and a large base of ideas from which to select could have raised the potential quality and outcomes of projects even further.

Knowledge Exchange Hub

4.11 This aspect of the project was well received by applicants, with nine of the 18 lead applicants responding to the relevant question in our survey (50 per cent) indicating that the KE Hub had been 'very useful', and a further five (28 per cent) indicated that it had been 'useful' (the remaining four provided a neutral response). Several respondents explained how the literature review reports were informative and answered everything that they needed. Others reported that they were not something to which they had paid much attention, but it was reassuring to know that they were there should they need them and indicated that they had been important for their partners or IBs in developing the project. Two respondents did note that they would have valued having a more accessible report, i.e. a summarised version/presented in plainer language:

"Myself and the other farmers didn't really pay that much attention to the report, as it was too long and very academic. Our local vet explained the important bits to us and it seemed quite useful, but I can't remember that much about it." (OG member survey)

4.12 The KE Hub had an important role in informing the appraisal process and ensuring that the projects were based on existing research. They had a fundamental role that went beyond directly supporting the OG members and project delivery — they provided a crucial validation service and were valued by the core delivery team. Aside from the validation role, their influence on shaping projects and ongoing delivery appears to have been more mixed, with IBs generally reporting that they had used some of the information in the application process but had not used it much thereafter:

"It was not particularly important. We referenced off. It might have influenced slightly the areas that you would look at within the project. And then I don't know we've touched it since then." (Interview with IB)

Delivery through the Operational Groups and facilitation of research

Overall perceptions of support

- 4.13 Overall, OG members were very satisfied with the support received in delivering the projects, with 83 per cent (70/84) citing that they were 'very' or 'somewhat' satisfied and only four per cent (3/84) being dissatisfied. Lead applicants have been more satisfied than other OG members, which is perhaps unsurprising when considering that the projects are trialled on the lead applicants' sites and they are likely to receive the main engagement from the support team, although it may be indicative of other members not being as involved in the projects.
- Explaining the reasons for the high scores, 31 of the 80 comments (39 per cent) referred to the "excellent" communication and information provided by the support team and how they were very responsive to queries and gave recommendations. Many of the comments alluded to the support providers' ability to effectively manage and organise their projects. OG members highlighted how their meetings as a group/with the IBs were well organised, how the communication was clear throughout, how there was clarity regarding what was expected of them, and how the trials would be undertaken, e.g. with regard to sample collection or data sharing. Comments again referred to the manner in which the support staff had taken the burden from them by helping and leading on the paperwork. These comments are illustrative of the importance of the facilitation role, wherein the support team had assumed much of the responsibility for coordinating and delivering the projects:

"The support has been excellent throughout. The project and how it worked was very well set out and all aspects explained clearly with a realistic timetable. The support to reduce the amount of paperwork farmers had to do was excellent." (OG member survey)

"Everything about the project was communicated clearly and efficiently. We were given the information we needed to know and not overloaded with techno-babble. All aspects of the project were well organised (from the meetings to the testing to [...] getting the results)." (OG member survey)

"The two specialists we worked with were excellent and we learned a lot from them. Aside from operational/specialist knowledge, the help they gave us in ensuring we

kept within the budget and overseeing the available grant finance was really good." (OG member survey)

4.15 Whilst the comments mostly related to the value of the facilitation support, 16 respondents (20 per cent) spoke about the value of the expertise available to them. This covered a whole range of different areas, with examples of experts providing advice on sheep nutrition and preventative measures with which to reduce animal illness and infection, whilst many highlighted the useful advice received from vets, e.g. with regard to their cattle-scanning practices.

Facilitation support

- 4.16 In the OG member survey we asked about the different aspects of the facilitation support, from help with initially designing the projects and establishing the OG to the delivery of the projects themselves. Moreover, we asked about the support from the different delivery partners. It should be acknowledged that some of this is restricted by OG members' understanding of who delivered what; however, the general thrust of the feedback is important to explore.
- 4.17 Only 17 of the 28 lead applicants (61 per cent) reported that they had received support from an IB. Welsh Government monitoring data show that 40 of the 46 projects (87 per cent) did include an IB. The discrepancy could be explained by either a less active role of IBs in some projects resulting in a lack of awareness among the lead applicants, or a lack of engagement or awareness from the lead applicants themselves.
- 4.18 Sixteen businesses responded to the question regarding the support from IBs in helping to form the OG, with six (38 per cent) reporting that they had organised the OG themselves or with a partner. All nine who had received support from the IBs to do this provided a score indicating that they were 'very satisfied', explaining that they were able to utilise their expert knowledge, including one example in which the IB found a vet in Devon who specialises in sheep dairy.
- 4.19 A further 14 businesses responded to the question regarding ongoing support from IBs in delivering the projects, with 12 (86 per cent) providing the highest score of 'very satisfied' and the other two reporting that they were 'somewhat satisfied'.

 Respondents noted how the IBs were well organised, "kept on top of the paperwork", provided "tremendous advice" which was "not too technical and made

everything easy for me and other OG members to understand", and ensured that the projects were delivered as intended (e.g. organising the testing schedule and timing around the sample collection). Another respondent explained how the IB role had been crucial in coordinating activity over the delivery period:

"Because it was over two years, it needed the structure to be able to continue the project and ensure that everyone was at the same pace and we could compare with each other to see how different methods (lime treatment, for example) could be monitored and we could all learn and develop from the different operational methods being used across the different members of the group." (OG member survey)

- 4.20 All but one survey respondent familiar with the IB input into their project indicated that their IB did possess the relevant expertise with which to support their needs in delivering the project. This further demonstrates the high level of satisfaction with the IB support and suggests that the scheme has effectively matched IBs with the appropriate projects.
- 4.21 Businesses that had engaged with MaB and the KE Hub on an ongoing basis generally found their support to be useful, too, with eight of the 16 (50 per cent) responding to this question citing that it was 'very useful' and a further three reporting that it was 'somewhat useful'. The reasons given were typically that the support was accessible, with four highlighting how it was "good to know we can call on them if required", whilst others cited specific examples such as the support from MaB in going through costings, as well as the help in securing an extension during the COVID-19 pandemic. Others provided a neutral score, explaining that they had not had much contact with them or that it had taken place through their IB.
- 4.22 Furthermore, there was broad agreement where businesses were asked whether EIP Wales experts (which would include IBs and support from MaB and the KE Hub) had provided effective advice and support to implement new practices in their systems 38 per cent (29/76) strongly agreed with this statement and 41 per cent (31/76) somewhat agreed. Respondents again highlighted the excellent information and advice provided by "knowledgeable" staff, who were able to explain to them what they needed to do throughout the process:

"The vet that advised throughout the project had a great understanding of the issue and what was the best practical way to develop a testing and vaccination programme." (OG member survey)

"They've explained what grass was best on our type of farm, stocking rates, fertiliser use, and nutrient management." (OG member survey)

4.23 In summary, OG members have reported being very satisfied with the facilitation support provided for their EIP project. Most seem to have received support in developing the OG and were very satisfied with that element, whilst high levels of satisfaction were recorded for the support in delivering the projects, too. OG members have generally been very content with the expertise and knowledge of their IBs.

The Innovation Broker role & facilitation options

- 4.24 Monitoring data supplied to Wavehill show that consultants from ADAS¹⁷ acted as the IBs for half of the projects (23/46), and Landsker¹⁸ consultants were the IBs for another nine projects. Kite Consultancy¹⁹ accounted for the IB role for three projects, and AgriPlan Cymru²⁰ performed the function for another three projects. Together, these represent some of the leading consultancy firms servicing the agricultural and forestry sectors in Wales.
- 4.25 It was revealed during the scoping phase of our evaluation that EIP Wales had placed more emphasis on the IB role than had many other nations in Europe. Members of the EIP Wales delivery team who participated in our initial scoping consultation were interested in exploring the value for money provided by the IB function. It was explained that the IB's role is mostly one of facilitation and yet they receive a "consultant's fee". Accordingly, we have explored questions regarding the value of the IB role and potential alternative options in discussions with the delivery team, stakeholders, and OG members.
- 4.26 Some external stakeholders and delivery team members questioned whether so much of the funding should go into consultancies, noting that the funds would be better going directly to the farmers and forestry businesses engaged in the EIP

¹⁷ ADAS is one of the largest agricultural and environmental consultancy firms in the UK.

¹⁸ Landsker is one of the leading business consultancy firms in Wales.

¹⁹ Kite provides consultancy services to farming and allied industries.

²⁰ AgriPlan Cymru

projects. One of the external stakeholders suggested that the reason as to why the facilitation role is currently necessary is that the process is "so full-on", and the answer should be to streamline the process. Their preferred model was to have a simple process that farmers could manage themselves; thus, any investment from the scheme could be diverted to farmers directly. The difficulty with this model as a solution is that it would undermine the current robustness and technical nature of the project appraisal process, thus affecting the rigour within the projects delivered and the results obtained. This type of approach would seriously undermine the main aim of the scheme, which is to test new practices and create robust results that can be disseminated throughout the sector.

- 4.27 The current model does secure a structure and scientific rigour to the funded projects and removes the burden from farmers by utilising the IBs. The disadvantage of this approach is the amount of influence that the IBs then have in delivering the projects. This demonstrates that there are pros and cons within each of the different approaches.
- As far as OG members are concerned, they valued the support from IBs. We revealed in section 2.2 that the expertise offered by the scheme was the most important component for businesses, rather than the financial incentive, and OG members have been very satisfied with the IB support, as shown previously in this report. Furthermore, 70 per cent (31/44) strongly agreed that it was important to have an IB to help deliver their project, and a further 23 per cent (10/44) 'somewhat' agreed with that statement. Businesses explained that they had a critical role in organising the projects with clear timetables and action plans, developing the testing process, ensuring that farmers knew when to collect samples, and helping farmers to understand the data. It was further highlighted how the IBs had the experience and expertise needed to deliver these types of projects, whilst five respondents went as far as to say that their projects would not have been possible without the IBs:

"They are the ones to coordinate the whole project. They communicated between the sites (which were quite spread), drafted reports, organised the open days (which were well attended), supported, and supplied the necessary equipment." (OG member survey)

- "The company that were doing the project did 75 per cent of the work. We just watered and looked after the lettuce and exotic edibles." (OG member survey)
- 4.29 Generally, the importance of the IB role was attributed to the work that they did in managing the projects and organising delivery. The comments focused on those themes much more often than on the expertise requirements for the IBs. For that reason, some members of the delivery team highlighted an alternative model in which there would be a larger central team of project officers that could perform the facilitation role at a cheaper rate.
- 4.30 There are two questions to consider here. The first is whether there is a need for the facilitation role the evidence outlined in this report certainly suggests that it is needed. The second question is concerned with who should provide the facilitation role. Centrally funded project officers might be able to deliver the service at a cheaper rate, although external consultants are likely to offer more experience (the IBs to whom we spoke were very experienced in this regard) and, therefore, might be better placed to deliver projects within the structure that is needed. Additionally, there have been examples in which the expertise provided by the IB has been crucial, e.g. to source natural predators or provide advice on lameness.
- 4.31 The different models for delivering the projects have been summarised in three potential options below: the first is a 'no facilitation' route, the second is a centrally facilitated scheme, and the third is the status quo with the use of externally commissioned IBs. Each has its pros and cons, as we note below. Perhaps the ideal scenario in future schemes would be to consider a hybrid model between Options 2 and 3, wherein the more 'straightforward' projects are delivered by centrally employed project officers, and the more complex ones, which require specialist support, are externally commissioned.

Table 4.1: Delivery model options for future interventions

Option 1: No facilitation support & light processes	Option 2: Central team provide facilitation support	Option 3: Facilitation support provided by IBs
Pros	<u>Pros</u>	Pros
Ensures that the project is farmer-ledInvestment goes directly to	 More rigorous than Option 1 due to robust processes and facilitation support 	Projects are facilitated by more experienced providers
farmers	Facilitation support can be delivered more economically	Access to expertise to improve projects further

Cons

- Risk of supporting inappropriate projects (e.g. have already taken place elsewhere)
- Projects are not delivered with sufficient rigour, so the results are not reliable
- Farmers struggle to manage the workload
- More control by the central team to ensure that projects are not influenced by external agendas

Cons

- Projects are not facilitated as effectively
- Support team are unable to provide the same level of expertise

 More rigorous projects and impactful results

Cons

- More costly to deliver
- Greater risk of undermining the farmerled approach

A top-down vs. bottom-up approach

4.32 The scheme was designed to be delivered by and based on farmers' and foresters' ideas via a bottom-up approach. Many OG members highlighted the importance of having a farmer-led approach to these schemes, noting that doing so helps to ensure that the aims are actionable, that it "makes it more applicable to the commercial reality on the ground", and that they are better placed to know what would work on their farm. Forty-five of the responses (56 per cent) focused on these themes. Additionally, nine respondents explained how it helped to ensure a legacy impact, as farmers would be more likely to maintain the practices, and helped to secure buy-in from farmers directly involved, as well as tempting other farmers to adopt the practices themselves:

"The aims of the project were very practical, as it was farmer-led. We knew the barriers and difficulties we faced when trying to access the local supply chain and sell our produce locally, so [we] knew what issues the project needed to focus on." (OG member survey)

"Farmers are more likely to be supportive of the project [because] they trust farmers over consultants and government officials. They also have a better understanding of the problems they face and how best to solve them." (OG member survey)

4.33 Conversely, it was also highlighted how having some projects based on other stakeholders' ideas was important because it enabled them to better utilise their knowledge:

"The project idea was developed and introduced by the local vet. This meant we had a lead who understood the practicalities of health inspections and testing on

- farms and the benefits farmers would have from improved animal health." (OG member survey)
- 4.34 For the most part, OG members indicated that the projects were based on their idea, with 38 per cent (30/78) 'strongly' agreeing and 33 per cent (26/78) 'somewhat' agreeing with this statement (72 per cent in total), whilst nine per cent (7/68) disagreed, reporting that the idea belonged to the IB or the vet:
 - "The project was led by a consultant and not the farmers. They approached us with the project idea." (OG member survey)
- 4.35 One IB highlighted that two of their projects had been suggested by the Welsh Government and that it was their role to manage the projects and engage OG members to be part of them. These had been suggested because they were strategic projects that explored technologies that could help farmers to respond to changes in legislation. This is consistent with the findings from the OG member survey, wherein a small minority reported that the projects were not based on their idea.
- 4.36 Together, our analysis demonstrates that the projects have generally been formulated as a bottom-up approach, although some of the resources were used for more strategic projects through a top-down approach.
- 4.37 There was a slightly more mixed response with regard to the delivery of the projects, although most OG members (66 per cent; 51/77) still maintained that they were led by the farmers/foresters. We know from other survey evidence, however, that the IBs had a leading role in many cases. Indeed, three of the 33 lead applicants to whom we spoke were unaware that they were the lead applicants. Further questions revealed how most non-lead members do not appear to have been highly engaged within their OGs, with 55 per cent (30/55) stating that they were not at all familiar with the scale of the project (i.e. level of funding) and 58 per cent (32/55) stating that they were not aware of how the funding had been spent.
- 4.38 In summary, the extent to which projects can be described as top-down or bottom-up varies from project to project, depending on how proactive the OG members and IBs were and how they came about. Generally, however, most projects were conceived by farmers and foresters and based on their needs, albeit with extensive support from the IBs in delivering them.

Size of grant

- 4.39 The size of the grant, with a maximum amount of £40,000, is much smaller than in other EIP schemes in most other countries and regions across Europe. The delivery team explained that it was designed to ensure that it was small enough to be manageable for farmers and foresters and to dissuade large organisations from attempting to access the grant and 'taking over', but large enough to ensure that the projects could be rigorous and provide meaningful results.
- 4.40 The vast majority of OG members (78 per cent; 60/77) believed that the size of the grant was 'about right', whilst just under one fifth (17 per cent; 13/77) thought that it was too low and the remaining five per cent (4/77) thought that it was too high. Additionally, non-beneficiaries were also asked this question, with all but one (26/27) stating that they believed the grant size to be 'about right', suggesting that the size of funding was not an issue preventing businesses from participating.
- 4.41 Stakeholders suggested that there needs to be more consideration given to the strategic purpose of these grants, with two describing it as "seed funding", i.e. that the scheme is an opportunity to test a number of different projects at a relatively low cost, but they noted that there was perhaps a missing link in relation to what happens next. It was argued that there should be a separate fund ringfenced for the most successful projects to deliver them at scale and, in doing so, to open the projects from ones that directly affect a handful of farmers to ones that could support hundreds.

Collaboration

4.42 The survey evidence suggests that, for the most part, the projects have been delivered collaboratively, which was a key principle for the scheme in having a cross-sectoral, OG-led approach to delivery. There was some concern surrounding whether having commitment from OG members in paper through the application process would be delivered in practice. The survey revealed that 82 per cent (62/76) agreed with the statement that 'the OG worked well together', with many highlighting how they would have regular meetings as a team, facilitated by the IB: "You [have] got to question and deal with an expert in their field and also deal with different agencies, which for me was a core part of the group; to share your findings

- and if you had any questions, the experts were always on hand to offer help and guidance this was the best part." (OG member survey)
- 4.43 Several examples of cross-sectoral collaborations were highlighted by IBs and the delivery team. There was a positive collaboration between the lead farmer and an academic from the Institute of Biological, Environmental and Rural Sciences (IBERS) in the upland grazing project, RSPB were heavily involved in the Pastures for Pollinators project, and vets have been closely involved in some of the animal health projects (wherein they have provided advice to farmers on the group). These are merely some of the examples that were highlighted to us further examples can be seen in the list of projects outlined in Appendix 6.
- 4.44 There were other examples in which there had not been as much collaboration or engagement from the OG members. Indeed, delivery team members and IBs described a highly variable picture:
 - "Hugely variable. Have good examples where non-farmer members [have] been proactive, e.g. really engaged in talking through results, [helping] to identify data, etc. With others, some non-farmer members wouldn't know what the project has done." (Interview with IB)
- 4.45 One IB explained that where OG members had been "roped in" or the projects were "being done for them", they were not at all interested in engaging, whereas if they were a key instigator, they were much more involved. The IBs appear to have a crucial role in encouraging engagement from OG members, with the delivery team reporting that they continually reiterate the importance of keeping all members fully up to speed:

"I've got a mix of groups. I've got farmers that are really quite engaged [...] I still have to push and push and push to get them to meet and achieve what they want to do [...] I've got two other projects where the farmers didn't really come up with the idea as a full collective. They want to be part of the project, but you're trying to hold them all the time together and they wouldn't. A lot of those farmers aren't the people who would naturally come forward for support. We've identified them through other sources and they've said [that they would] like to be part of this project but then haven't engaged." (Interview with IB)

4.46 The data show high satisfaction with the composition of the groups with regard to the expertise mix — 86 per cent (67/78) agreed that their OG represented an appropriate mix of expertise. This further demonstrates the effective role played by IBs in managing the process of setting up the OGs.

Overall European Innovation Partnership scheme management

4.47 The scheme has been managed by the core delivery team at MaB, which hold regular update meetings with IBs to monitor the progress made on the projects and plan the dissemination activity. The IBs were very positive about their approach, noting that the team had effectively coordinated activity, led on ensuring that a good group of projects were brought together, and were very "dedicated" in their role.

Challenges and areas for improvement

- 4.48 Perhaps unsurprisingly, the main challenge cited by OG members was the COVID19 pandemic, with 28 respondents describing how it had caused delays, often due
 to a lack of access to laboratory testing, whilst the OGs were also largely unable to
 meet for long periods of time. The delivery team did try to address this latter issue
 through organising video calls, although we understand that these were not always
 effective due to poor IT skills, poor broadband, and the inability to show physical
 changes. Furthermore, some highlighted the disruption caused to delivery and the
 effect on the project, e.g. where planned visits could not go ahead or they had to
 use a smaller sample as a result of the COVID-19 pandemic.
- 4.49 Ten respondents (13 per cent) cited practical challenges such as sourcing equipment or weather-related issues, whilst eight highlighted the impact on their capacity. Linked to this, two respondents explicitly cited the lack of compensation for their time as a frustration, whilst three highlighted a lack of engagement from other OG members (including one who explained that other members would not engage due to the time commitments without being reimbursed):

"Having the farmers remaining committed to the project, as they started dropping out after one year of a three-year project. Other farmers thought I was mad doing this project, as I wasn't paid for my time, or the land devoted to it, and that is why they started dropping out, as they did not want to invest their time and labour into it [...] without any payment for their services." (OG member survey)

- 4.50 This is consistent with comments made by the project team and several external stakeholders. It again relates back to the concern that too much of the investment falls into the hands of consultants and that not enough goes to the farmers. However, whilst the team and stakeholders thought that this might be an issue, only three of the 80 comments (four per cent) from OG members were related to this when they were asked about the main challenges surrounding delivery. Additionally, when asked directly about improvements that they would want to see made, only four of the 80 comments highlighted the need to pay farmers for their time. This is likely because they were able to utilise the IBs and other aspects of the support infrastructure to take much of the delivery pressure off themselves. It could be argued that, given that the trials are taking place on their farms and that the scheme is typically investing in their ideas, it is not unfair to expect OG members to invest some of their time without being compensated for it.
- 4.51 Other challenges included five businesses reporting that there should be better communication regarding the results among OG members, and seven indicated that they would like to see a simplified application process. The main response (33/80), however, was that there had been no challenges of note at all. Additionally, when those who did cite challenges were asked whether the project could have done anything to address the challenges, the main response was that the team had done all that they could, or that the challenges were such that they were out of the team's control (31/45).
- 4.52 We note that one IB suggested that there ought to have been more work done to learn from and network with other EIP schemes across Europe. This is an important point because it was noted in the EIP Wales scheme documentation that OGs should be encouraged to make contact with other groups across the EU that are working on similar themes. We understand that this activity has not taken place and, therefore, represents one area of weakness in the delivery to date.
- 4.53 Another delivery team member highlighted how the selection of IBs had been limited to those who were in the FC Advisory System, and that there had been some examples of projects in which it would have been useful to go outside of that framework. Similarly, an IB suggested that there was some variability in the quality of different brokers, with some perhaps not of the requisite standard; accordingly, it was suggested that there should be a better screening process in place.

4.54 Other suggestions have already been outlined in the report, including the alternative delivery models in relation to the facilitation support (no facilitation or delivered by a central team), as well as investing in more strategic projects or with a separate fund to scale up activity.

5. Review of projects delivered and their impact

- 5.1 A full outline of the 46 funded projects is shown in Appendix 6 of this report. It shows the substantial amount of variability in the projects supported, including crop production, animal health, nutrition, management practices including the use of new technologies (e.g. robotic weeders, photonics, GPS tracking, and genomic testing), slurry management, new market development, protection from theft, and much more.
- 5.2 The main themes contained within the projects were outlined in the scheme's monitoring information and are shown in Figure 5.1 below. It shows that the range of projects cover almost all parts of the sector. As we might expect, given its dominance within agriculture in Wales, the red meat sector is a theme within 49 per cent of projects (22/45), whilst 42 per cent (19/45) include a focus on dairy. The chart also shows that 24 per cent (11/45) of projects contain an element that could help to tackle climate change (e.g. through better yields, more efficient and sustainable production, reducing slurry pollution), and 38 per cent (17/45) include improvements to business practices (e.g. through generating efficiencies, increasing performance, supply chain opportunities, assessing the economic viability of new market opportunities, etc.) as a theme, whilst 29 per cent include a focus on biodiversity.

Figure 5.1: Themes listed for each project in the EIP Wales monitoring data Organic Production 51% Dairy 42% Red Meat-Sheep 42% Business 38% Grassland 38% Red Meat-Beef 36% Biodiversity 29% Climate Change 24% Horticulture 16% Arable 11% Forestry 9% Poultry 4% ICT 2% 0% 10% 20% 30% 40% 50% 60%

Source: EIP Wales monitoring information (n=45)

Strategic objectives

- The broad variability of these projects is a product of the open, farmer-led approach adopted for the scheme. Whilst this has enabled the scheme to explore a wide range of issues, some external stakeholders questioned whether such a "scattergun" approach would be conducive to generating strategic impacts. However, we note that the approach has been in keeping with the overall strategic objective of fostering innovation within the sector using a farmer-led approach, with projects being delivered based on their ideas and needs.
- 5.4 Lead applicants had to demonstrate in their application to which of the Welsh Government RDP 2014–2020 priorities their project contributed. They responded as follows:
 - 45/46 (98 per cent) contributed to Priority 1: Fostering knowledge transfer and innovation in agriculture and rural areas
 - 44 (96 per cent) contributed to Priority 2: Enhancing the competitiveness of all types of agriculture and enhancing farm viability
 - 32 (70 per cent) contributed to Priority 3: Promoting food chain organisation and risk management in agriculture
 - 27 (59 per cent) contributed to Priority 4: Restoring, preserving and enhancing ecosystems dependent on agriculture and forestry
 - 33 (72 per cent) contributed to Priority 5: Promoting resource efficiency and supporting the shift towards a low-carbon and climate-resilient economy in agriculture, food and forestry sectors.
- This demonstrates how the projects delivered against the core aims of the scheme, i.e. making farming and forestry businesses more competitive and more profitable through innovation, whilst most applications also contained an element of generating environmental benefits.
- 5.6 Furthermore, the monitoring data contained information on synergies with the Wellbeing of Future Generations Act, revealing that:
 - 22 (48 per cent) of the projects aligned with the goal of creating 'a prosperous Wales'
 - 11 (24 per cent) aligned with the goal of creating 'a resilient Wales'
 - 9 (20 per cent) aligned with creating 'a globally responsible Wales'
 - 7 (15 per cent) aligned with creating 'a healthier Wales'.

Level of innovation and scalability

- 5.7 Lead applicants were asked a question in order to determine the level of innovation of their project. Only six out of 26 respondents indicated that the project was based on a new practice within the sector, with 20/26 (77 per cent) stating it was a new practice in Wales/the area. Thus, the projects have primarily been concerned with applying practices from elsewhere and testing how they work on Welsh farms and forestry sites. In some cases, whilst the technology itself was not innovative, the application of the technology in those circumstances was new and the scheme was used to test the cost-effectiveness of doing so.
- The delivery team, IBs, and external stakeholders emphasised the importance of having clarity regarding what was meant by innovation, and favoured a broader definition, i.e. for it to be new to the businesses involved within the OG. This is to some extent dictated by the funding regulations, which did not allow for investment in primary research; thus, innovation in its purest sense could not be undertaken. However, the projects did have to demonstrate that the research had not been applied in Wales previously.
- Generally, stakeholders and delivery team members did believe that an appropriate range of projects were selected. They sought to strike a balance between investing in ideas that were not only innovative but also practical and scalable. The fact that they were primarily based on farmers' ideas appears to have ensured that they lean more towards the practical/scalable side of the spectrum, whilst there have been a smaller group of projects that are perhaps more 'left-field'. For example, if we consider the 'EIP4 Reducing antibiotics in sheep' project, it is a strong example of a practical project that focuses on reducing the use of antibiotics and, thereby, reducing costs through exploring alternatives. The project has the potential to demonstrate clear benefits that can be scaled up and adopted farther afield by other sheep farmers. On the other hand, the 'EIP42 Exotic plants' project explores the opportunity for Welsh growers to diversify by growing niche crops. This is potentially more innovative, although it has a higher risk of not working and is not as scalable.

Projects' progress

5.10 There has not been much variability with regard to the size of the projects. The data reveal that 11 of the 46 projects were awarded the full amount, whilst a further 31 were awarded within five per cent of the full amount (i.e. at least £38,000).

- Moreover, only four projects received less, with one receiving just over £25,000, another just over £30,000, and two from £36,000–£38,000.
- A review of the project end dates suggests that 20 of the 46 were completed by the end of 2021, whilst a further 20 were due to end by June 2022 and the remaining six are set to complete at the end of 2022/early 2023. At the time of writing this report, 14 of the 46 projects were running behind schedule (primarily due to COVID-19), with 30 recorded as being 'on track' and the remaining two expected to be delivered on time (despite pandemic-related issues).
- Just under half (47 per cent; 39/83) of OG members surveyed reported that their projects had been completed at the time of the survey. Where they had completed their projects, we asked a number of follow-up questions about the results and outcomes. The vast majority of OG members with completed projects (72 per cent; 23/32) 'strongly agreed' that their project had been a success (a further 16 per cent (5/31) 'somewhat' agreed with this statement), mainly as they had achieved positive results. Indeed, when asked, 50 per cent of respondents 'strongly agreed' and a further 34 per cent 'somewhat agreed' that they had received the benefits that they hoped the projects would generate. Examples of these include reducing the use of antibiotics, reducing illness and infection through testing, demonstrating the financial benefit of genetic testing, etc. A small number of comments, perhaps from OG members who were not as heavily engaged, suggested that they had not been made aware of the results; thus, the scheme should ensure that all OG members are alerted.
- 5.13 The projects that have not been able to show improved practice but that conclusively show that an idea does not work can also be described as successes. For example, one delivery team member highlighted the 'EIP6 Squill production' project, which trialled the growing of squill on North Wales farms and found that this did not work because the availability of seed bulbs was an issue for any commercial exploitation. These findings are equally important to those of the 'successful' projects and are just as important with regard to the dissemination side of the scheme to prevent other farmers from investing in things that are already shown to be unviable.

Outcomes for Operational Group members

- Most participants (57 per cent; 46/81) reported that they had changed practices within their business as a result of the project, whilst a further 25 per cent (20/81) replied with 'Not yet', suggesting that they could do so in the future. Given that less than half of projects were completed at the time, with many OG members still waiting for results from their projects, we can safely assume that the figure of 57 per cent will increase further. Indeed, OG members who had completed their projects were also asked this question in their 'EIP Wales end of project evaluation form' of the 35 responses, 24 (69 per cent) reported that they had made changes as a result of the project. These primarily concerned improving farming techniques (25 responses), animal health improvements (12 responses), and using testing to inform decisions (seven responses). This is a key finding revealing that most of the farmers and foresters engaged in the scheme have made tangible changes.
- 5.15 Additionally, 54 per cent (25/46) of respondents reported that they had been able to generate new income or reduce costs as a result of the project, whilst a further 41 per cent (19/46) responded with 'Not yet'. The examples given to support these claims included reduction in their use of medication and treatments, reduction in infection levels, lameness, and crop wastage, increased fertility, and more. Nine respondents (20 per cent) provided estimates of their cost savings. On average, businesses reported that project funding had saved them just over £5k each per annum:

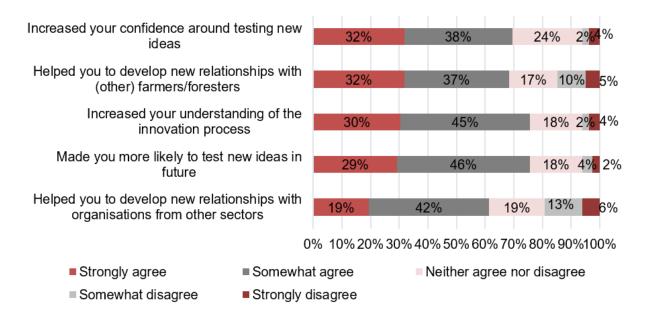
"£100 every five weeks will be saved by not worming the cattle, as long as the testing continues." (OG member survey)

"When taking into account the cost of genetic testing, we would save £19 per cow, as the offspring would be healthier, produce more milk, and have higher fertility." (OG member survey)

"It has reduced some costs, as we test for more things before treatment. The cost varies quite substantially depending on the weather and how long the animals are in the shed for. We save around £8 a head over winter, so around £3k–£4k annually." (OG member survey)

- "This is just an estimate, but I would say lameness has already been cut by 10 per cent, which probably saves us about £10,000 over a year in treatment, vets' bills, etc." (OG member survey)
- 5.16 The self-reported data suggest a high level of additionality with regard to economic savings. Asked whether they agreed or disagreed with whether they would have changed these practices anyway without the support, only seven per cent (3/44) strongly agreed and 14 per cent (6/44) 'somewhat' agreed. Most (59 per cent; 26/44) disagreed with this statement. A similar response is found at the end of project evaluation forms, wherein only one of 32 respondents noted that they would have implemented the changes without the support the rest either categorically stated that they would not have (16) or were unsure (15). Furthermore, alongside these self-reported data, we can also draw on evidence from the group of businesses that applied or initially showed interest but did not proceed with a project through EIP Wales. The vast majority of respondents to our non-beneficiary survey (23/26) reported that their project did not go ahead without EIP support, which further suggests a high level of additionality for this type of scheme.
- 5.17 OG members were asked a range of other questions in order to test the soft outcomes of the support, as shown in Figure 5.2 below, with most agreeing that it had made them more confident with regard to trialling new ideas (70 per cent; 57/82), increased their understanding of the innovation process (76 per cent; 62/82), and made them more likely to test new ideas in the future (76 per cent; 62/82). These are key indicators of success with regard to the scheme's main objective of fostering innovation within the sector. Indeed, four respondents reported that they had already engaged in follow-up research after completing their project and that this type of activity is likely to increase further with more projects coming to an end. One of the IBs described how the project had delivered a cross-fertilisation of ideas and mindset between the academic and commercial disciplines, and had instilled a scientific discipline to developing new technologies and practices.

Figure 5.2: 'To what extent do you agree that being involved in EIP Wales has ...?'



Source: OG member survey (n=83)

5.18 Figure 5.2 also shows that most OG members do believe that the scheme has enabled them to develop new relationships with other farmers and foresters and, to a slightly lesser extent, with individuals from other sectors. Furthermore, 90 per cent of respondents (72/80) reported that they intend to continue collaborating with other OG members in the future. Several comments highlighted the impact of these collaborations and the learning undertaken:

"I think it's excellent — you get different attitudes and different personalities in the group and we can all learn from each other. For example, one farmer could be spending a lot on something and another farmer will [ask] what [they] want to do that for — [that they] don't need to!" (OG member survey)

"The whole structure of the programme and availability of experts to go through things were excellent. The group meetings were extremely beneficial and opened my eyes [a] lot more than I thought [they] would do, and see what other streams of expertise are available to get full and minimum flock counts by looking at things I had not previously thought about, such as evaluating minimum feeds on the farm in response to blood testing — the EIP project was definitely a worthwhile thing to do." (OG member survey)

One of the delivery team members highlighted how the networking and collaboration extended beyond the projects; in a recent OG meeting that they had attended, for example, farmers were discussing other things affecting their business beyond the scope of the project, such as fertiliser costs. It was highlighted how they

would use one another as a sounding board during these meetings and offer peer support.

Broader outcomes

- 5.20 The main objective is for this scheme to have an impact that reaches beyond the group of farmers, foresters, and other OG members directly involved in the funded projects. It is hoped that, through effective dissemination, the scheme will have an impact farther afield across the sector.
- 5.21 Whilst it was too early to explore this in detail in the interim evaluation phase, some delivery team members did highlight examples in which the impact of the scheme was starting to be felt on a broader level. For example, the 'EIP20 Dairy ewes' project was said to have attracted much interest. A young farmer heard about the project and decided to create a joint venture with an older peer in which the main operation was that of dairy farming using ewes: "the whole attention [towards] milking sheep sparked the young person to do that" (source: interview with delivery team member). In another example, a delivery team member highlighted how the 'EIP27 Lot slurry' project had the potential to provide important solutions that could help farmers to rise to the challenge of The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021. This was a strategic project that the Welsh Government had encouraged, given the challenges that these new regulations would bring. It demonstrates the importance that these types of projects can have at a strategic level.

Cross-cutting themes and cross-cutting objectives

- The 'Programme Application for funding' details how EIP Wales would address the three cross-cutting themes (CCTs) of 1) Equal Opportunities, Gender Mainstreaming and the Welsh Language, 2) Sustainable Development, and 3) Tackling Poverty and Social Exclusion through a combination of internal policies and practices on the one hand and the projects' activity, outputs, and priority areas on the other hand.
- 5.23 A review of the application documents reveals that 45 of the 46 were claimed to address CCT1 through having a gender balance in the OGs, or that simply no one would be excluded on the basis of their gender or social group. Many also spoke about involving the "next generation" and how the projects sought to provide better

opportunities for young people, for example, by working with agricultural colleges. Only one application discussed the contribution that they made to the Welsh language, which outlined how the OG operations would be conducted in Welsh and how the final report would be available in Welsh. Given the importance of agriculture as an economic sector to Welsh language speakers, where a much higher proportion of farmers speak Welsh than the national average, we can assume that support in helping the sector to grow has an indirect, positive benefit for the Welsh language.

- 5.24 With regard to CCT2, 43 of the application documents claimed to deliver against sustainable development. They highlighted the direct impacts on the environment if the new practices were successfully implemented, including in relation to waste management, developing shorter supply chains, efficiencies, and reducing greenhouse gas (GHG) emissions.
- 5.25 Forty-three of the application documents also claimed to address CCT3, including 29 projects that were recorded as 'improving skills of young people and families', 13 as 'tackling worklessness and raising household income', and six as 'improving the health and educational outcomes of people living in Wales'. The applications spoke about creating increased and improved employment opportunities, increasing financial profitability, and allowing farmers, who may face social isolation, to solve problems together.
- As well as the CCTs, the Rural Development Regulation (1303/2013) stipulates that programmes and, therefore, schemes under the Rural Development Programme should contribute to the two cross-cutting objectives of 1) innovation and 2) environment and climate change mitigation and adaptation. There is an intrinsic link to innovation, of course, as the scheme is fundamentally concerned with supporting farmers and foresters in innovating. Additionally, as we note above, 43 of the projects' application documents indicated that they would contribute towards sustainable development through exploring practices that can reduce businesses' GHG emissions; thus, there is a clear link with the environment and climate change objectives. As we noted previously in this chapter, 24 per cent of projects had a specific focus on climate change and sought to mitigate its effects through better yields, more efficient and more sustainable production, reducing slurry pollution, and so on.

5.27 In summary, the projects do contribute towards the CCTs and the cross-cutting objectives, particularly with regard to sustainable development, the environment, and climate change, with many OG members reporting that they had managed to successfully adopt more efficient practices which will reduce their GHG emissions.

6. Dissemination of findings

- 6.1 The dissemination of findings is a critical component of the scheme because without it, any impacts generated are limited to the group of farmers and foresters directly participating. It is hoped that through effective dissemination, other businesses learn about these new practices and their results and may decide to adopt them, thus generating a broader sector-wide impact.
- 6.2 Dissemination has been largely based on various FC channels, as described previously in the report. Findings have been promoted through final EIP project reports hosted on the website, posts and short videos on social media, and technical articles in the bimonthly FC magazine, with each issue having included an in-depth outline of a particular EIP project, whilst a quarterly EIP newsletter has also been issued to all FC-registered businesses, featuring EIP6–8 projects. Furthermore, projects have been promoted through open days utilising the FC Demonstration Network approach. The data shared with the evaluators reveal that 20 such events took place up to the end of 2021, with two undertaken in 2018 and three in 2019 and in 2020, and this increased to 12 in 2021, whereby reflecting the increased amount of completed projects. The COVID-19 pandemic, naturally, had a substantial impact on this, too, with several events being hosted online, which may have affected engagement. The data suggest that the online delivery may have secured a higher number of attendees, with 30, on average, attending each of the six online events in comparison to an average of 22 people attending other events. However, the quality of engagement seems to have been higher in physical events, which were scored 4.8/5 on average in comparison to 4.5/5 for the online events.
- In total, 486 individuals had attended these events, or 24 per event on average.

 They ranged from small events, wherein only six participants attended a technical event relating to the 'EIP22 Fat tail sheep' project, to 95 participants attending an event for the 'EIP15 Foliar feed for grassland' project. The final stage of this evaluation will focus on engaging with those participants attending some of these events in order to understand some of the learning and whether it had led to any changes in practices.
- 6.4 Alongside the formal FC communication, peer-to-peer learning is likely to be a critical component of dissemination, with research showing that farmers typically

place most trust in other farmers to learn about new practices.²¹ Around half of OG members responding to our survey (46 per cent; 38/83) reported that they had discussed their project with other organisations, including 39 per cent who had discussed it with other farmers and foresters and 12 per cent with other organisations. Most of this took place through informal discussions with neighbouring farms and other farmers, with 21 citing this, whilst six respondents had discussed their project in more formalised networks, e.g. cooperatives, FC Discussion Groups, Young Farmer Clubs, and farming unions, whilst five had taken part in open days to share their findings. This proportion of 46 per cent is likely to increase further when other projects have completed — indeed, 54 per cent of those who had completed their project already reported that they had discussed it with other organisations. Similarly, 53 per cent of OG members who had submitted an end-of-project evaluation form to MaB reported that they had shared practical advice arising from the project with other people from outside of the OG, whilst a further 35 per cent responded with 'Not yet', suggesting that there is scope for this to increase further.

6.5 Together, these data suggest that the scheme has been able to reach businesses and sectors beyond the participant groups. Indeed, some of the respondents claimed that they know that other farmers had introduced the new practices to their farms following the dissemination activity:

"Provided open days with other dairy farmers in the area to explain the project and the benefits. Around 25–26 other dairy farmers are introducing the practice after seeing the results." (OG member survey)

"Mostly by talking to other farmers and telling them about how this testing reduces infections and medicine costs and saves money overall." (OG member survey)

"I've discussed it with other farmers who have not been involved in the project who are in the same situation on their farms, with the same problem as my farm. They've all been quite keen to get involved." (OG member survey)

²¹ Rust, N.A., Stankovics, P., Jarvis, R.M. et al. <u>Have farmers had enough of experts?</u>. Environmental Management 69, 31–44 (2022).

- When asked about the best way of disseminating project findings, OG members typically referred to the current methods in place, utilising the FC magazine, the website, and open days, whilst nine suggested distributing through the farming press and other related publications. Four respondents highlighted the importance of supplying farmers with hard copies of reports and suggested posting relevant reports out to them directly. Two wanted to see the scheme working closely with farming unions and suggested that the team should promote findings at their meetings. Overall, their responses indicate that OG members generally feel as though the scheme is disseminating findings through the appropriate channels.
- 6.7 The key stakeholders, IBs, and delivery team members participating in this evaluation were generally content with the dissemination approach, noting that FC was best placed to deliver because of its reach (which is unparalleled in Wales). It was highlighted how there is a constant "drip feed" of dissemination regarding EIP Wales projects in every FC publication and at the end of FC meetings, workshops and events (whether they are directly related to the scheme or not). The scheme has been embedded into FC's communications. Equally, stakeholders did highlight the risk of messaging about EIP Wales getting lost or being diluted by the sheer volume of other information that is disseminated through the FC channels. Thus, the delivery team are seeking to maximise outreach by using other industry publications, such as publishing articles in Farmers Weekly or the Guardian.
- The delivery team felt that the approach was working in some instances, and were able to cite examples in which they knew that other businesses within the sector had shown interest in the EIP projects. For example, the scheme has received many queries from farmers with regard to the 'EIP15 Foliar feed for grassland' project since the demonstration event that 95 individuals attended.
- 6.9 Two external stakeholders did indicate that they had not been heavily involved or engaged regarding dissemination activity, with one suggesting that there should be more of a 'Team Wales' approach (rather than being undertaken through an FC silo): "I think there's definitely opportunities to work more joined up." This is consistent with some of the suggestions made in the OG member survey with regard to better utilisation of the farming unions and other key stakeholders to disseminate information.

7. Conclusions and recommendations

- 7.1 The evidence in this report suggests that the EIP Wales scheme has been delivered effectively to date. There was broad agreement that the range of projects supported have been appropriate and with the potential for scaling up and, thus, generating positive impacts at a broader industry level. This has been aided by a robust application and appraisal process and by effective facilitation support from MaB and the IBs. Whilst there has been a large amount of variability with regard to the ownership taken by farmers and foresters, the engagement from OG members more broadly, and the collaborative activity, these are found to have been positive overall.
- 7.2 The projects have generally been based on farmers' and foresters' needs and ideas, although IBs have taken the lead in delivering the work for the most part. A range of different delivery models could have been deployed, which has been demonstrated in this report, from no facilitation support to utilising a core team of project officers as well as the current model that uses IBs each has its advantages and disadvantages regarding striking a balance between having a bottom-up approach and ownership whilst also ensuring scientific rigour. Generally, we believe that the scheme has managed to strike a balance between these competing needs.
- 7.3 The main question regarding what impact this scheme will eventually generate is whether it can raise awareness sufficiently and encourage other businesses within the sector to adopt new practices so as to expand the benefits farther afield. We have only started to explore this question in this evaluation report, and have found that there are certainly examples in which this is beginning to happen. However, this will need to be a greater focus in the final evaluation phase.
- 7.4 We conclude this report by considering the key findings alongside recommendations for the remaining delivery period and potential future schemes.

Level of engagement with EIP Wales

7.5 The geographical distribution of participating farms broadly reflects the distribution of farms throughout Wales, with most OG members being situated in Powys, Carmarthenshire, Pembrokeshire, Gwynedd, and Monmouthshire. The scheme has involved farmers and foresters from every corner of Wales, although some areas

- have been underrepresented, namely Carmarthenshire, Ceredigion, and Gwynedd, whilst 10 counties less known for agriculture but that collectively account for 13 per cent of all farms in Wales have no representation in the scheme.
- 7.6 Red meat has been one of the main sectors supported by the scheme, reflecting its prevalence within Welsh agriculture, whilst dairy farmers are substantially overrepresented, perhaps indicative of the challenges faced by this sector in recent years (which have possibly acted to heighten the need for innovation).
- 7.7 Farming businesses participating in EIP Wales have certainly been larger than is typical, reflecting that it is a scheme designed for more commercially minded organisations that are interested in improving their business operations. Similarly, they have also largely been businesses that are more 'plugged in' to the wider support infrastructure, which embrace new skills, information and technology. Thus, the OG members can generally be described as the 'usual suspects' for the most part, although we understand that other farming businesses have also been engaged.
- 7.8 Besides a target of engaging at least three forestry projects, the recruitment process was very open with no specific sectors, types of businesses/projects, or areas targeted specifically. The delivery team only sought to ensure that there was a broad cross section of projects and businesses engaging with the scheme. Whilst this is in keeping with the bottom-up, non-prescriptive nature of the scheme, the risk is that it leads to projects that do not respond to the greatest need to innovate and do not correspond to strategic objectives.
- 7.9 **Recommendation 1:** EIP schemes throughout Europe have varied in their level of prescriptiveness, from a top-down approach to the bottom-up approach favoured in Wales. Whilst there are clear benefits to the approach adopted in Wales, future schemes may wish to consider adopting some level of targeting to ensure that projects do correspond to strategic objectives and areas of greatest need.

 Underpinning this, there should be analysis with which to identify the main areas within agriculture and forestry that require innovation.
- 7.10 The expertise offered by the scheme was a more important motivation for businesses' engagement than was the financial support with which to deliver the projects. This is an important point to consider when thinking about what future schemes should look like and whether there should be a facilitation component.

- 7.11 **Recommendation 2:** The Welsh Government should consider placing more emphasis on the provision of expertise and facilitation support and potentially less on grant support in future schemes that are focused on trialling innovative approaches within the farming and forestry sectors.
- 7.12 Routes into the scheme have encompassed a mix of proactive communications through various FC channels, but primarily the Development Officers, and through word of mouth (particularly from peers). There is a concern, however, that farmers who are not already 'plugged in' to the support infrastructure will have been much less likely to have found out about the scheme, given the reliance on FC channels.
- 7.13 **Recommendation 3:** Schemes in the future should consider ways of engaging the 'hard-to-reach' farmers who are not part of the support infrastructure. The main way in which those businesses did find out about EIP Wales was through peers. Future schemes could consider encouraging members to invite peers, who are not the 'usual suspects', more explicitly.

Application and appraisal processes

- 7.14 The application and appraisal processes were robust, which allowed projects to be assessed on their scientific merit. Whilst it was comprehensive and likely too time-consuming and difficult for most farmers to complete, this was mitigated by the fact that IBs were given a licence to lead the process. The farmers and foresters were generally satisfied with this compromise, although some external stakeholders were concerned that it gave IBs too much influence on project design, thus affecting the bottom-up approach.
- 7.15 We did find that there was a lack of selectivity in the processes, with the grants being awarded almost on a first come, first served basis (provided that they met the eligibility criteria). Applying more selectivity would be more in keeping with the principles of RDP funding, and securing a broader group of projects from which to select could have potentially led to a different or perhaps better selection of projects.
- 7.16 **Recommendation 4:** Schemes in the future should consider adopting funding windows so that projects can be scored against one another, thus securing greater selectivity in the projects being awarded funding.

The role of the Innovation Broker

- 7.17 IBs have had a crucial role in delivering EIP Wales projects. In fact, very few would have been possible without the IB support, given the complexities of managing the initial application processes and the need to manage projects that can generate robust results. The main value has been the facilitation support the help in coordinating activity and organising the various aspects, e.g. sourcing materials, sampling schedules, and data collection. Some stakeholders felt that this role could be delivered at a lower cost by utilising a large team of core staff, whilst others believed that it should be completely run by farmers to stay true to the bottom-up approach in the purest form. There would likely be substantial disadvantages with both of these approaches, possibly affecting the scientific rigour and, thus, value of the projects being delivered. Equally, it is likely that not all projects require support from a specialist; they could be delivered with more elementary facilitation support from a delivery team member.
- 7.18 Recommendation 5: An element of the IB role should be retained in future schemes where projects require the expertise or experience that they can provide. However, future schemes could also consider having a larger team of core staff who could assume responsibility for managing the 'simpler' projects.

Assessment of the EIP Wales design aspects

- 7.19 There was broad consensus that the size of the grant was appropriate, making it more accessible to farmers. Linked to this, most farmers do believe that their projects have been based on their ideas. There have been some examples in which another stakeholder (e.g. a vet) came up with the idea, or in which a strategic project had been encouraged by the Welsh Government, although these appear to be in the minority. When it comes to the actual delivery of projects, however, it seems to have been more mixed, with IBs leading on much of the activity.
- 7.20 Whilst the size of grants was appropriate in trialling new ideas and fostering innovation, some stakeholders were concerned about the strategic impact of such investments, as there was no mechanism in place to ensure that the impact would be felt more broadly throughout the sector other than the hope that the dissemination activity would have a positive knock-on impact.

- 7.21 **Recommendation 6:** Future schemes should consider incorporating a separate, follow-up fund which could be ringfenced for the most successful and most scalable projects and allow them to scale activity by drawing in more farmers.
- 7.22 The level of collaboration within OGs has varied from project to project, although it has been positive overall. Some felt that this had been the best part of the project, and valued the opportunity to exchange information with other OG members. There have also been examples of businesses working with organisations from other sectors for the first time, whilst the vast majority indicated that they intended to maintain these relationships beyond the project delivery period. There has been less collaboration with other OGs, however, despite there being an initial ambition for OGs to make contact with other groups across the EU that are working on similar themes.
- 7.23 **Recommendation 7:** The delivery team should consider whether there are opportunities for greater networking in order to share learning/disseminate knowledge both within Wales and beyond.

Dissemination activity

- 7.24 The dissemination of project findings has relied on a combination of the tried and trusted FC communications approach alongside peer-to-peer networking. There are examples in which this approach is starting to have a positive impact, particularly with regard to some of the successful open day events that attracted a large number of farmers. Anecdotal evidence suggested that farmers had queries about adopting new practices. However, the effectiveness of this approach will need to be tested further during the final evaluation stage, as further dissemination activities are planned up to the end of the delivery period, which are likely to raise awareness, build understanding, and potentially lead to further uptake of the practices trialled through this scheme.
- 7.25 The peer-to-peer dissemination activity has been mixed, with just over half of OG members in completed projects stating that they have discussed findings with their peers. Given the importance of peer-to-peer knowledge transfer within agriculture, this will be a very important component of the dissemination approach and the overall success of the scheme.

7.26 **Recommendation 8:** The delivery team should hold sessions with OG members to emphasise the importance of sharing findings with farmers and foresters from outside of the group. Where possible, OG members should be equipped with dissemination materials that can be used to share the key findings of their projects.

Impact to date

- 7.27 The projects have been highly variable, representing a mix of projects which have typically focused on practical and scalable activities, whilst a smaller number have been more 'left-field' and can be described as more innovative. Generally, the scheme does seem to have struck a balance between these different considerations, and has used a broad definition of innovation in order to ensure that the industry can benefit as much as possible.
- 7.28 The vast majority of OG members believe that their project has been a success. Most have introduced changes, most state that they have received the benefits that they hoped the projects would generate, and some were able to demonstrate cost savings or new income that has been generated as a result of their project. Furthermore, the scheme does appear to have fostered innovation, with OG members stating that they are more confident, more knowledgeable, and more likely to conduct innovation in the future as a result of EIP support. The evidence suggests a high level of additionality with regard to these impacts, where it is likely that most of the projects would not have gone ahead at all without EIP funding and support.
- 7.29 The evidence reveals that the main CCTs and cross-cutting objectives are addressed through EIP Wales, particularly with regard to sustainable development and tackling poverty, where the efforts to generate positive environmental and economic benefits are intrinsically linked within the projects.
- 7.30 A final evaluation report is scheduled for 2023 and will have a particular focus on assessing the overall outcomes and impacts of the scheme.

Appendix 1: Evaluation questions

The following evaluation questions were identified in the Evaluation Framework to help guide the focus of this interim evaluation report.

- 1. Assess the level of engagement/services provided through Farming Connect
 - a. What is the sectoral composition of farms/forestry that has engaged with EIP Wales?
 - b. What are the routes that OG members have used to engage with the scheme?
 - c. Have the OG members been involved in any other RDP schemes?
 - d. To what extent are the services provided by Farming Connect encouraging to potential OGs?
- 2. Examine the effectiveness of the project application and decision and appraisal processes
 - a. How effectively were the expression of interest and the application and appraisal processes implemented?
 - b. Were there any barriers/challenges faced during the application process?
 - c. To what extent do the services provided by Farming Connect support OGs in completing applications?
- 3. Assess the Innovation Broker role in terms of quality, relevance, flexibility, and value for money
 - a. To what extent is the Innovation Broker role relevant and flexible with regard to the needs of OGs?
 - b. What is the added value of the Innovation Broker, especially for the OG?
- 4. Assess the particular design aspects of the EIP scheme
 - a. Has the size of the grants been appropriate in relation to delivering the main objectives?
 - b. Does the Innovation Broker role provide good value for money?
 - c. What role did the KE Hub have in improving and changing projects?
 - d. What are the benefits as a farmer-led/group-working initiative?
- Assess and evaluate the dissemination of the group findings to the wider public accessing Farming Connect
 - a. To what extent have the findings of the EIP Wales project had an impact on the wider agricultural or forestry industry?

- b. To what extent are the activities/solutions adopted during projects sustained after the end of the project?
- c. How effective has the dissemination process been at sharing the findings of the EIP Wales projects?
- 6. Assess the innovativeness of projects
- Assess and evaluate the overall impact of EIP Wales projects for the participating OG members
 - a. What are the impacts of the individual EIP Wales projects for the participants of the OG?
 - b. To what extent has being involved in an EIP Wales project fostered innovation?
 - c. To what extent has involvement in an EIP Wales project had a different impact for different types of actors?
 - d. To what extent are the innovations additional to what would have taken place without the support?
- 8. To what extent has EIP Wales successfully addressed the Welsh Government's three cross-cutting themes and the RDP cross-cutting objectives?

Appendix 2: A theory of change for EIP Wales

Rationale/Need for EIP Wales

- There is a clear need for the agricultural and forestry sectors to innovate, particularly in the current context of substantial external economic and environmental pressures. However, a combination of risk aversion, a lack of confidence and knowhow, and traditional attitudes all contribute to preventing such innovation from taking place.
- This support is needed to remove the risk and provide the knowhow and confidence with which to trial new innovations, whilst changing traditional attitudes by demonstrating the benefit of these innovations through effective dissemination activity.
- This support is also needed to bridge the gap between industry and the research community, with much of the research related to these sectors never being applied.

Inputs & Resources

- £1.8m grant funding
- Expertise provided by the IBs and members of the Review Panel
- Existing infrastructure and services within the sector, including the KE Hub, FC's networks, and publications

• Existing infrastructure and services within the sector, including the KE Hub, FC's networks, and publications							
Activities Outp	puts	Intermediate Outcomes One	Intermediate Outcomes Two	Overall Impacts			
raising through FC channels Developing OGs Conducting literature reviews Support to develop project outline and application Ongoing support to deliver projects Monitoring of progress and project management Dissemination of research findings	M5 OGs encompassing 210 members M5 projects successfully undertaken, including at least hree forestry projects, demonstrating what does and does not work M5 literature review documents and 45 final reports alongside other technical outputs No. of projects showcased hrough the FC Demonstration Network No. of articles and social media posts published Reach of dissemination activity No. of events/meetings attended	 Implementing innovations within participants' systems Developing new products Participants overcoming barriers to innovation (confidence/knowledge/att itudes) Valued working as a group Awareness of and interest in research findings throughout the sector Participants securing additional funds for followup research phases 	 Tangible benefits to participants from implementing the innovations (e.g. new income/reduced costs) Participants improving/adapting practices Non-participants deciding to implement innovations Participants developing new relationships with peers/other sectors Non-farmers/foresters raising their profile/demonstrating expertise Increased confidence/willingness to experiment with new practices Follow-up research being conducted where appropriate 	Agriculture/for estry becoming more engaged with the research community Developing resilience/effici encies within the sectors			
Assumptions	Barriers		Enablers				
 There is sufficient demand (particularly from non- farmers/foresters) Topic areas have broad appeal t the sectors Appropriate range of expertise offered 	 Communicating technical to OG members not collication capacity Failure to engage mossystem 	che for broader uptake nical research findings aborating, disengaging, or lacking est suitable projects due to FPTP policy/trade changes, EIP-AGRI	 Farmers/foresters taking ownership of work, encouraged by the scheme's design Prioritising projects that have broad relevance Securing an appropriate blend of IBs Utilising FC networks 				

Appendix 3: Operational group member survey

Introduction

Os hoffech ateb y cwestiynau yn Gymraeg, dewiswch 'Cymraeg' o'r blwch uchod

The Welsh Government have commissioned Wavehill, an independent research consultancy based in Ceredigion, to undertake an evaluation of the European Innovation Partnership (EIP) in Wales. Its purpose is to assess how effectively the operation has been delivered and to identify any benefits for participants and the sector more broadly. It will also be an opportunity to identify whether any changes are needed to improve the operation over the remaining period or in future interventions. As participants, your feedback is crucial in order to help us to understand these matters.

This survey explores a range of issues, including the application process, your experience and satisfaction with different aspects of the support, information about your project, and the benefits received.

Your involvement in this research is completely voluntary, and any information that you provide will be treated confidentially. For information about how we obtained your details and how we will handle the information that you provide to us, please visit the following link: link to PN.

If you have any further questions regarding this research, please contact either ioan.teifi@wavehill.com or emma.sullivan@gov.wales.

Thank you in advance for your time.



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



Section 1 - Profile

- 1. Can you please confirm that the following information is correct?
 - a. Participant name
 - b. Name of business/organisation
 - c. Project name
- 2. (Lead applicants only) Our records show that you were the lead applicant for this project. Is that correct?
 - a. Yes
 - b. No
- 3. Can you confirm the type of organisation that you represent?
 - a. Farming business
 - b. Forestry business
 - c. NGO (non-governmental organisation)
 - d. Research institute
 - e. Advisor
 - f. Other SME
 - g. Other organisation
- 4. Please can you describe why you wanted to develop a project through EIP Wales (Open question research team to provide the following options as prompts and back-code responses)?
 - a. To remove risk from testing a new idea
 - b. To access expertise to test a new idea
 - c. To work with other organisations within the sector
 - d. To work with organisations in other sectors
 - e. To provide our expertise
 - f. To develop our reputation
 - g. Other

If having selected 'Farming business' in Q3

Why do we need this information? This will help us to understand the views and experiences of different farmers who have participated in EIP Wales.

- 5. What is the main sector on your farm?
 - a. Cereals
 - b. General cropping
 - c. Horticulture
 - d. Specialist pig
 - e. Specialist poultry
 - f. Dairy

- g. Upland grazing livestock
- h. Lowland grazing livestock
- i. Mixed
- i. Sheep
- k. Beef
- I. Other (please specify)
- 6. What size is the total area of your farm? Would you prefer to give your answer in hectares or acres?

- 7. What is the tenure status of your farm?
 - a. All owned
 - b. Mostly owned
 - c. Mostly rented
 - d. All rented
- 8. Approximately what was the total turnover of the farm in the last financial year (2020–21)? Please enter a numerical figure only (no pound signs, commas, etc.).
- 9. If you do not have the actual figure at hand, please provide an approximate number.
 - a. None
 - b. <£10,000
 - c. £10,000 to £49,999
 - d. £50,000 to £99,999
 - e. £100,000 to £199,999
 - f. £200,000 to £499,999
 - g. £500,000 to £999,999
 - h. £1,000,000 to £1,999,999
 - i. £2,000,000 to £4,999,999
 - j. £5,000,000 to £9,999,999
 - k. £10,000,000 to £19,999,999
 - I. £20,000,000 to £49,999,999
 - m. £50,000,000 or above
- 10. Have you received any other grants or financial support from the Welsh Government or other public bodies in the last five years?
 - a. Yes
 - b. No
- 11. (If 'Yes') Which schemes have you received financial support from?
 - a. Sustainable Production Grant
 - b. Farm Business Grant
 - c. Timber Business Investment Scheme
 - d. Other (please specify)
- 12. On a scale of 1–5 (where 1 is 'not at all important' and 5 is 'very important'), how important is talking to other farmers as a source of information and advice for you personally?
- 13. On a scale of 1–5 (where 1 is 'not at all interested' and 5 is 'extremely interested'), how interested are you in accessing information or advice about farming on the Internet?

14. To what extent do you agree or disagree with the following statements?

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Achieving a good quality of life is more important to me than maximising income from my holding					
All farms should strive to be as environmentally sustainable as possible					
Collaborating with other farmers improves the running of a farm					
I always make time to socialise with other farmers					
I am always looking to learn new skills and knowledge that I can apply to my business					
I am keen to apply new technology on my farm as it becomes available					
I am happy to take advice about managing the natural environment on my farm					

Section 2 – Experience/satisfaction with support

- 15. Can you please tell us how you became aware of the EIP programme support?
 - a. Through Farming Connect Local Development Officers
 - b. Online, i.e. through the website or social media
 - c. At a Farming Connect event
 - d. At another event
 - e. Farming Connect magazine
 - f. Other publications
 - g. Word of mouth through other farmers/foresters
 - h. Word of mouth other (please specify)
 - i. From an Innovation Broker

- 16. Generally, how satisfied have you been with the support to deliver your EIP project?
 - a. Very dissatisfied
 - b. Somewhat dissatisfied
 - c. Neither satisfied nor dissatisfied
 - d. Somewhat satisfied
 - e. Very satisfied
- 17. Can you please explain your answer?

(Non-lead applicant only)

18. As a non-lead member of the Operational Group, how familiar are you with the funding given to your project and how that funding has been spent?

	Not at all familiar	Somewhat familiar	Very familiar
Level of project funding			
Information about how the funding has been spent			

(AII)

- 19. Grants were offered of up to £40,000. Do you think that this was too high, too low, or about right?
 - a. Too high
 - b. About right
 - c. Too low
- 20. What are the reasons for your answer?

(Lead applicant only) Application process & project development

- 21. Generally, how satisfied were you with the expression of interest and the application and appraisal processes?
 - a. Very dissatisfied
 - b. Somewhat dissatisfied
 - c. Neither satisfied nor dissatisfied
 - d. Somewhat satisfied
 - e. Very satisfied
- 22. Were there any barriers/challenges faced during the application process?

23. Did you receive support from an Innovation Broker (i.e. an expert or facilitator
commissioned to support participants through the application process and
project development and implementation)?

a. Yes

b. No

- 24. (If 'No') Please explain why you chose (not) to receive this support.
- 25. How useful were the following support services in helping you during the application process and project development and implementation?

	Not at all useful	Not very useful	Neutral	Somewhat useful	Very useful
Support provided by the Knowledge Exchange Hub (i.e. literature review/supporting research for project ideas) in helping you to shape the project					
(If applicable) Support from Innovation Brokers to refine project ideas and develop a project outline and application					
(If applicable) Support from Innovation Brokers to form the Operational Group by identifying and bringing in other parties					
(If applicable) Ongoing support from Innovation Brokers to deliver the projects					
(If applicable) Ongoing support from KE Hub or Menter a Busnes staff to deliver the projects					
Support to disseminate the findings					

26. Please explain your answers.

Support provided by the Knowledge Exchange Hub	
(If applicable) Support from Innovation Brokers to refine project ideas and develop a project outline and application	
(If applicable) Support from Innovation Brokers to form the Operational Group by identifying and bringing in other parties	
(If applicable) Ongoing support from Innovation Brokers to deliver the projects	
(If applicable) Ongoing support from KE Hub or Menter a Busnes staff to deliver the projects	
Support to disseminate the findings	

(If applicable) Innovation Broker (all respondents)

- 27. (Non-lead applicants) Did you receive support from an Innovation Broker (i.e. an expert or facilitator commissioned to support participants through the application process and project development and implementation)?
 - a. Yes
 - b. No
- 28. Do you believe that the Innovation Broker had the relevant expertise to support your needs in delivering this project?
 - a. Yes
 - b. No
- 29. To what extent do you agree or disagree that it was important to have an Innovation Broker to help deliver your project?
 - a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree
 - d. Somewhat agree
 - e. Strongly agree
- 30. Please explain your answer.

Information about your project and Operational Group

- 31. (Lead applicant only) As far as you are aware, is your project based on:
 - a. A new practice to the sector
 - b. A new practice to Wales/the area
- 32.(All farmers/foresters) To what extent do you agree or disagree that the Innovation Broker/EIP Wales provided effective advice and support to implement the new practices in your system?
 - a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree
 - d. Somewhat agree
 - e. Strongly agree
- 33. Please explain your answer.

(All respondents)

34. To what extent do you agree with the following statements about the Operational Group?

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The OG worked well together					
The OG represented an appropriate mix of expertise					
The project was based on the farmers'/foresters' idea					
The project was led by the foresters/farmers					

- 35. What are the benefits of having a farmer-led/group-working initiative?
- 36. What have been the main challenges in delivering your EIP Wales project?
- 37. What, if anything, could the EIP Wales team have done to help overcome these challenges?

Section 3 – Benefits for participants

38. To what extent do you agree that being involved in EIP Wales has:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
(All farmers/foresters)		-	-		
Increased your confidence					
around testing new ideas					
(All farmers/foresters)					
Increased your understanding of					
the innovation process					
(All farmers/foresters) Made					
you more likely to test new ideas					
in the future					
(All respondents) Helped you to					
develop new relationships with					
(other) farmers/foresters					
(All respondents) Helped you to					
develop new relationships with					
organisations from other sectors					
(Non-farmers/foresters)					
Raised your profile/helped to					
demonstrate your expertise					

- 39. Do you intend to continue collaborating with other OG members in the future?
 - a. Yes
 - b. No
- 40. Have you discussed the project with other organisations?
 - a. Yes farmers/foresters
 - b. Yes other organisations
 - c. No
- 41. (If 'Yes') Please provide details.
- 42. To what extent do you agree or disagree that you have been able to achieve what you set out to do (to date) with regard to the benefits for your organisation?
 - a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree
 - d. Somewhat agree
 - e. Strongly agree
 - f. Too early to say
- 43. Please explain your answer.

If having completed the project

- 44. Our records show that your EIP Wales project has been completed. Is that correct?
 - a. Yes
 - b. No

If 'Yes'

- 45. To what extent do you agree or disagree that your project has been a success?
 - a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree
 - d. Somewhat agree
 - e. Strongly agree
 - f. Too early to say
- 46. Please explain your answer.

- 47. (All farmers/foresters) As a result of this project, have you changed any practices within your business?
 - a. Yes
 - b. No
 - c. Not yet
- 48. (If 'No') Can you please explain why you have not changed any practices within your business as a result of this project?
- 49. (If 'Yes') To what extent do you agree or disagree that you would have changed these practices anyway without the support?
 - a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree
 - d. Somewhat agree
 - e. Strongly agree
 - f. Too early to say
- 50. (If 'Yes') Can you please describe any benefits from these changes?
- 51. (If 'Yes') Have you been able to generate new income or reduce costs as a result of this?
 - a. Yes
 - b. No
 - c. Not yet
- 52. (If 'Yes') Can you provide an estimate of the annual income/cost savings generated from implementing these practices?
- 53. (All respondents) Have you engaged in any follow-up research since completing the project?
 - a. Yes please explain
 - b. No
- 54. Have there been any other benefits as a result of this project?

Section 4 - Reflections

- 55. What changes, if any, would you like to see made to EIP Wales over the remaining period or in future interventions?
- 56. What type of support would best address your needs going forward?

- 57. Do you have ideas around how the project findings should be disseminated?
- 58. Do you have any other comments that you would like to add?
- 59. Would you be happy for Wavehill to give you another call during our final evaluation at the end of 2022 to ask a few questions about any outcomes from your project?
 - a. Yes
 - b. No

Thank you very much for your time.

Appendix 4: Survey of unsuccessful applicants

Introduction

Os hoffech ateb y cwestiynau yn Gymraeg, dewiswch 'Cymraeg' o'r blwch uchod

The Welsh Government have commissioned Wavehill, an independent research consultancy based in Ceredigion, to undertake an evaluation of the European Innovation Partnership (EIP) in Wales. Its purpose is to assess how effectively the operation has been delivered and to identify any benefits for participants and the sector more broadly. As part of this process, we want to hear from individuals who applied to take part in EIP Wales but were unsuccessful or withdrew from the process. The purpose of this exercise is to help us to understand why potential participants did not take part and what happened with their project ideas. It is also an opportunity to obtain your feedback on the application process and the need for EIP Wales.

Your feedback will help us to understand the value of and need for EIP Wales and whether any improvements are needed.

The survey should take no more than 5–10 minutes of your time. Your involvement in this research is completely voluntary, and any information that you provide will be treated confidentially. For information about how we obtained your details and how we will handle the information that you provide to us, please visit the following link: link to PN.

If you have any further questions regarding this research, please contact either ioan.teifi@wavehill.com or emma.sullivan@gov.wales.

Thank you in advance for your time.



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



Section 1 - Profile

- 1. Can you please provide the following information?
 - a. Your name
 - b. Name of business/organisation
- 2. Can you confirm the type of organisation that you represent?
 - a. Farming business
 - b. Forestry business
 - c. NGO (non-governmental organisation)
 - d. Research institute
 - e. Advisor
 - f. Other SME
 - g. Other organisation
- 3. Please can you describe why you wanted to develop a project through EIP Wales?
 - a. To remove risk from testing a new idea by accessing grant funding
 - b. To access expertise to test a new idea
 - c. To work with other organisations within the sector
 - d. To work with organisations in other sectors
 - e. To provide our expertise
 - f. To develop our reputation
 - g. Other

Section 2 – Experience of engaging with EIP Wales

- 4. Can you please tell us how you became aware of the EIP support?
 - a. Through Farming Connect Local Development Officers
 - b. Online, i.e. through the website or social media
 - c. At a Farming Connect event
 - d. At another event
 - e. Farming Connect magazine
 - f. Other publications
 - g. Word of mouth through other farmers/foresters
 - h. Word of mouth other (please specify)
 - i. From an Innovation Broker
- 5. Why did you not proceed with the EIP Wales support?
 - a. My/our application was unsuccessful
 - b. I/we decided that the support was not needed to deliver the project
 - c. I/we identified a more suitable source of funding
 - d. Partners/others in the group withdrew or lacked commitment
 - e. We proceeded with a better project idea
 - f. Other (please explain)

7. (If 'B') Please explain why	'. (If 'B') Please explain why the support was not needed.									
3. (If 'C') What was this funding?										
9. (If 'D') Would you have wa a. Yes b. No										
10. (If 'E') Was this funded throa. Yes b. No										
11. (If 'No') Why not?										
12. Do you have any further co	omments a	bout the r	easons w	hy your El	P projec	:t				
13. Generally, how satisfied we application and appraisal parts. Very dissatisfied b. Somewhat dissatisfied c. Neither satisfied nor d. Somewhat satisfied e. Very satisfied	rocesses? ied		ression o	f interest a	nd the					
14. Were there any barriers/ch	allenges fa	aced durin	g the app	olication pro	ocess?					
15. How useful was the suppo	rt that you	received t	to:							
	Not at all useful	Not very useful	Neutral	Somewhat useful	Very useful	N/A				

6. (If 'A') Why was the application unsuccessful?

	Not at all useful	Not very useful	Neutral	Somewhat useful	Very useful	N/A
Help you shape the project and refine your project idea						
Develop a project outline and application						
Form the Operational Group by identifying and bringing in other parties						

Section 3 – About your project

- 16. What were you hoping to achieve with your proposed project?
 - a. Diversify my business
 - b. Respond to new policy area
 - c. Other (please specify)
- 17. As far as you are aware, was your project based on:
 - a. A new practice (i.e. to trial a new way of working, developing a new product, etc.) to the sector
 - b. A new practice to Wales/the area
- 18. Grants were offered of up to £40,000. Do you think that this was too high, too low, or about right?
 - a. Too high
 - b. About right
 - c. Too low
- 19. (If 'C') Was the funding limit restrictive for your project?
 - a. Yes
 - b. No
- 20. (All) What are the reasons for your answer?
- 21. Did your project go ahead without EIP support?
 - a. Yes
 - b. No

If 'Yes'

- 22. Have you received any support to deliver the project?
 - a. Yes
 - b. No
- 23. (If 'Yes') Please describe the nature of this support.
- 24. Have you completed your project?
 - a. Yes
 - b. No

If 'Yes'

- 25. To what extent do you agree or disagree that your project has been a success?
 - a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree
 - d. Somewhat agree

- e. Strongly agree
- f. Too early to say
- 26. Please explain your answer.
- 27. (All farmers/foresters) As a result of this project, have you changed any practices within your business?
 - a. Yes
 - b. No
 - c. Not yet
- 28. (If 'Yes') Can you please describe any benefits from these changes?
- 29. (If 'Yes') Have you been able to generate new income or reduce costs as a result of this?
 - a. Yes
 - b. No
 - c. Not yet

Section 4 - Reflections

- 30. Do you have any comments or would you like to suggest any changes that should be made to EIP Wales?
- 31. What type of support would best address your needs going forward?
- 32. (If 'Yes' to Q21) Would you be happy for Wavehill to give you a call during our final evaluation at the end of 2022 to ask a few questions about any outcomes from your project?
 - a. Yes
 - b. No

Thank you very much for your time.

Appendix 5: Delivery team discussion guide

Evaluation of EIP Wales

Background

Wavehill have been commissioned to assess the implementation and impact of EIP Wales, which is a requirement of the funding. As part of an interim and final evaluation, it is critical that the findings and lessons learnt be fed into delivery, inform future innovation partnership schemes in Wales following Brexit, and improve their impact on the sector in Wales.

The evaluation is being delivered over three stages:

- 1. Scoping Stage: Interviews and desk-based review and logic model development: to ensure a robust understanding of the programme logic model and develop an Evaluation Framework (including indicators and data requirements) to measure both implementation (process) and impact.
- 2. Interim Stage: Provide an interim evaluation of the programme: At this stage we will focus on evaluating the implementation process and the impact for completed projects.
- 3. **Final Stage:** *Provide a final evaluation at the end of the programme*: The final evaluation will assess the impact of the EIP projects and of the operation as a whole in terms of the overall aims, performance indicators, and outcomes.

We recently completed the scoping stage and are now conducting the interim evaluation. As part of it, we wish to speak to team members involved in delivering EIP Wales in order to gain their perspectives on the effectiveness of delivery and on the difference that the operation has made.

We would expect this interview to take about 45 minutes of your time. Your participation in this research is completely voluntary. However, your views and experiences are important in order to help inform Welsh Government policies. For information about how we will manage feedback data, please see our privacy notice by clicking the following link: add link when on website.

Questions for discussion

Background

1. Can you please introduce yourself and explain your role in delivering EIP Wales?

Recruitment and application process

- 2. How effectively was EIP Wales promoted as part of the recruitment campaign?
 - a. Was it sufficiently promoted?
 - b. Were appropriate channels used to reach the target audience?
- 3. Are you satisfied that you have been able to recruit an appropriate cross section of farmers and foresters and engage with different agricultural and forestry sectors?
 - a. To what extent has EIP Wales supported the most suitable group of participants/projects?
 - i. How broad is the group of participants supported (i.e. to what extent does it go beyond the 'usual suspects')?
- 4. Did the application process work well/as intended?
 - a. Was there sufficient 'selectivity' within the process?
 - b. Were the selection criteria appropriate?
 - c. Have there been any issues with projects failing to progress from EOI through to full application and successful delivery?

Design and delivery

- 5. Do you believe that EIP Wales has been designed appropriately?
 - a. Has the size of grants (max. £40k) been appropriate?
 - b. What is the added value of the Innovation Broker, especially for the OG?
 - c. What have been the advantages/disadvantages of using Farming Connect and Innovation Brokers to perform the facilitation and dissemination aspects over the Wales Rural Network (the national rural networks in some other areas have performed this role)?
- 6. How effective have Innovation Brokers been in conducting the following activities:

	Very	Good	Acceptable	Poor	Very	Comments
	good				poor	
Refining project ideas and helping to						
develop project outline/application						
Supporting forming the Operational						
Groups						
Supporting delivering the projects on						
site						

7. Do you believe that there has been an appropriate mix of expertise among the Innovation Brokers?

- 8. How important is the support from the Knowledge Exchange Hub (i.e. literature review/supporting research for project ideas) in helping to shape projects?
- 9. Has the dissemination of findings to the wider public worked well/as intended?
 - a. Do the projects have sufficient appeal for broader uptake?
 - b. What have been the most effective approaches to dissemination?
 - c. To what extent has the dissemination activity reached the target audience?
 - d. Are you aware of this dissemination activity leading to other farmers/foresters trialling ideas on their site?

Project delivery and early outcomes

- 10. In your opinion, how innovative have the projects been?
- 11. From your understanding, how effectively did OG members engage with the project and work together?
 - a. To what extent did farmers/foresters take ownership of the work undertaken through the projects?
 - b. How important have non-farmers/foresters been in supporting delivery and what have they gained from their participation?
- 12. In your opinion, to what extent are the projects that have come through likely to meet the needs of the operation?
 - a. What do you believe to be the best examples of projects delivered to date?
- 13. What have been the main outcomes for farmers/foresters to date?
- 14. To what extent do you believe that farmers/foresters would have tested/made the changes without the support?
 - a. Could they have accessed support from another scheme to deliver their EIP Wales projects?

General reflections

- 15. Are there any gaps/areas that need to be improved in the delivery model? a. If so, what are they?
- 16. What, if any, have been the main internal and external challenges to delivery (e.g. COVID-19, policy/trade changes, operational limitations)?
- 17. What have been the main strengths within delivery to date and that should potentially be retained in future provisions?

Alignment

18. Is the approach that the programme is taking to integrating the cross-cutting themes (CCTs) into its delivery appropriate or could it be doing more? (four CCTs include Equality of Opportunity and Gender Mainstreaming; Sustainable Development; Tackling Poverty and Social Exclusion; and Welsh Language)

19.	How	effectively	has	EIP	Wales	aligned	with	n oth	er rural	grant	scher	nes	that h	nave
	beer	designed	to fo	oster	comp	etitivene	ess a	and	sustain	ability	in the	farı	ming	and
	fores	stry sectors	?		-					-			_	

20. Is there anything else that you would like to add at this stage?

Thank you for your time.

Appendix 6: Overview of projects

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP1 - Potato blight control	Gwynedd	£39,788	March 2019	The development of a compound extracted from common ivy to prevent the infection/spread of potato blight, a common UK disease which affects a vast percentage of potato crops. The trial will take place over two growing seasons. Expenditure will entail equipment/seed purchases, labour costs to grow and maintain the trial crop, and scientific measurement, analysis and reporting to determine the trial success. If an extract from ivy is proven to inhibit blight, this provides significant commercial/environmental opportunities for farmers, especially organic.
EIP2 - Cambrian Mountains Beef Group	Powys	£30,100	March 2020	This project will require the involvement of appropriate industry experts to develop the resources of the group in the following areas: • Understanding the requirements of existing and potential customers • Becoming more proficient in selling produce • Understanding and developing the marketing and administrative resources required to support a short supply chain Investment will be made in technical support to participants, including regular workshops. The participants will utilise their newly developed resources in order to develop relationships with new and existing customers.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP3 - Pasture for pollinators	Across Wales	£39,750	December 2020	Six dairy farmers who are members of the Calon Wen Milk Co-operative undertook a three-year project to see if some simple interventions could boost pollinator numbers on their farms. Their organic farms already provided suitable habitats for bumblebees and other pollinators, but they still wanted to see if more could be done. The project focused on the inclusion of a multi-species ley that included bird's-foot trefoil, clovers (red, white, sweet and alsike), yarrow, as well as ryegrass.
EIP4 - Reducing antibiotics in sheep	Isle of Anglesey	£39,940	July 2019	The project aims are as follows: • 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 to become more resilient.
EIP5 - Low impact forestry	Vale of Glamorgan	£40,000	October 2019	The project seeks to quantify the volume of water and sediment concentration losses from woodland rides following normal forestry activities by two low-impact tractors (hiring in a tracked bobcat and an articulated alpine tractor). We intend to compare relative losses with a control (no management) and a conventionally managed area. The project will enable us to illustrate the relative merits of the different types of management with a view to highlighting the most appropriate equipment for the job.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP6 - Squill production	North Wales	£38,030	March 2020	This project proposes to trial the growing of squill on North Wales farms. The aim is to establish the demands of the plant, including agronomy, harvesting and extraction techniques and their costs. Research will also be undertaken on the demand for this product and the viability of production within Wales assessed. Knowledge transfer throughout the project will engage the growers. If feasible, this could be an innovative, commercial option for farm diversification for Welsh farming businesses in the future.
EIP7 - Robotic weeder	Monmouths hire	£39,700	June 2022	The project seeks to analyse the impact of a computerised robotic inter-row weeder in small-scale, organically managed, horticultural systems. These weeders are commonplace in larger operations, but their effectiveness (viability) in small-scale situations has not been analysed. By trialling a computerised robotic inter-row weeder, we seek to determine the savings in terms of labour (cost) and time that can be made when compared with the current methods of high labour requirements at specific times of the year.
EIP8 - Genomic testing in dairy	Flintshire	£39,930	October 2020	This project investment will fund genomic testing of around 500 in-calf heifers across commercial dairy farms in Wales to assess their production, type, fertility, and health traits. Following calving, the heifers' first lactations will be milk recorded monthly to investigate the correlation of actual performance with genomic trait test results. An economic assessment will evaluate the commercial viability of routine genomic testing. This will aid decisions at the calf stage as to whether to rear or not, or breeding decisions at bulling.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP9 - Alternative forage systems	Vale of Glamorgan	£40,000	December 2020	This project seeks to compare the performance of different grass mixtures on marginal land within the South Wales Valleys. We will invest in and compare different seed mixtures on four separate farms over a three-year period. The hypothesis is that alternative seed mixtures may be more suited to high rainfall conditions, poor soil quality, and low input systems than standard ryegrass/clover mixtures. The work will also develop awareness of the value of measuring and recording different aspects of production.
EIP10 - Night milk	Wrexham	£39,999	September 2019	The project will fund milk sampling using a milk leukocyte differential (MLD) test prior to dry-off on three dairy farms with a total of approximately 800 cows. The test results will enable dairy farm managers to make dry cow treatment decisions concerning the inclusion or exclusion of antibiotic dry cow therapy at an individual cow and individual quarter level. The process will be delivered by a vet technician. Following their dry period, the cows will be monitored to gather data on udder health.
EIP11 - Electrophysic al dock control	Carmarthen shire	£39,200	November 2021	Docks are a major problem in grassland systems. Infestation can reduce grass yields and utilisation. Herbicides can have a negative effect on clover in pasture and implications for the wider catchment ecosystem if used incorrectly. A Zasso Electroherb machine will be hired over a period of two years to trial the control of docks via electrophysical destruction. The project will analyse the efficacy of the machine on its own, and with herbicides as part of an integrated weed management strategy.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP -12 Organic asparagus	Monmouths hire	£40,000	July 2021	We wish to trial asparagus crops on two small-scale, organic, horticultural farms and undertake a practical and financial analysis of the establishment and development of the crops. The crops are to be grown organically and the costs of establishment, management and output can be compared with existing figures from conventional systems. This important information does not appear to currently exist for this high-end product.
EIP - 13 Ancient cereals	Pembrokes hire	£39,900	March 2022	There is increasing demand from artisanal bakers, and more commercial outlets, for ancient species of cereals which are becoming increasingly popular with consumers. Although the demand for these ancient cereal species has increased, it can be difficult to produce them in an economically viable manner, given the generally low yields. This project seeks to trial several agronomic practices (seed rates and undersowing) for ancient cereal species to identify the most appropriate methods of production on three Welsh farms which are managed to organic standards.
EIP14 - Omega-3	Pembrokes hire	£39,942	October 2022	Twenty dairy farms, using four different production systems, will provide monthly bulk-tank milk samples for 24 months. Samples will be tested for their fatty-acid profile with a particular emphasis on omega-3 and omega-6. The systems are: spring block calving, conventional housed winter/grazing summer, housed all year round, and organic herds. The aim is to provide information as to whether particular management practices may increase the levels of fatty acids in milk considered to be beneficial for human health, providing a marketing advantage to this milk.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP15 - Foliar feed for grassland	Pembrokes hire	£37,738	September 2021	This project aims to assess the contribution that a foliar feed based on urea and humic acid can reduce the application of nitrogen fertiliser to improved grassland. It will measure the quality and quantity of dry matter of grass grown over a three-year period by comparing conventional ground-applied nitrogen fertiliser with application at a lower rate of the foliar feed. The project aims to demonstrate if nitrogen inputs into grassland can be reduced while maintaining dry matter yields, which can reduce reliance on bought in farm inputs, which would improve business resilience within grassland-based systems.
EIP16 - Trace elements	Denbighshi re	£39,800	December 2020	In this project we propose to utilise an intelligent and progressive approach to nutritional planning in breeding ewes on 12 farms. Blood, liver and forage samples will be utilised to understand the nutrient availability and utilisation by ewes on the study farms. Nutritional management advice will be formulated using these data and the response monitored. We hope to extrapolate this established technique to the specific context of the Welsh sheep industry, whereby serving to help strengthen it for the future.
EIP17 - Tackling scab	Powys	£39,960	June 2022	A farmer group in the Talybont North Ceredigion area will collaborate to identify the levels of scab infection within their flocks, as well as the routes of transmission, and then work collectively to reduce the incidence of the parasite in the locality. This collective approach will be achieved via regular risk assessments, knowledge exchange, and communication within the farmer group, facilitated by one vet and the EIP broker. There will also be a collation of the project outcomes and learning points for the benefit of the group members, and for the wider industry in Wales.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP18 - GPS tracking of livestock	Carmarthen shire	£39,700	June 2022	The project aims are to improve the understanding of flock/herd movement and habitat management in extensive grazing systems; trial the adoption of livestock-tracking technology to reduce farm labour costs; deal with potential livestock theft issues and improve access to animals for routine animal health intervention; explore the benefits associated with dataset collection on grazing activity in conservation areas; and increase farmer understanding of the economic benefits and increased efficiency associated with using such technologies.
EIP19 - Goat meat production	Pembrokes hire	£38,728	January 2022	Five goat farmers with different management practices, including housed and grazed, will come together to look at the efficacy of the recommended wormer dose rates for meat goats. This will be measured using FEC (faecal egg count) testing before the wormers are administered at different times of the year, and should the wormer be required, FEC testing post drench after the advised interval. This should provide an indication as to a 'best practice' worming routine and establish a more effective dose rate and regime for worming meat goats which can be shared with the industry. The aim is for this project to improve the sustainability of goat production and hopefully reduce the potential for anthelmintic resistance.
EIP20 - Dairy ewes	Gwynedd	£39,995.08	February 2022	Sixty dairy ewes from a single farm will provide milk samples every two weeks for five months during their lactation cycle in 2019 and 2020. The samples will be tested to analyse the bacteriological profile of the milk against the following criteria: breed of sheep, stage of lactation, and selenium diet supplementation. The aim is to assess the impact that these controllable factors have on the milk, with the information provided enabling farmers to diversify their flocks to produce higher-quality milk.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP21 - Upland leys	Powys	£38,532	April 2022	The project will be run by John and Sarah Yeomans, who farm north of Newtown (Powys) with land of up to 1,400 feet, and Richard Tudor of Llanerfyl, a renowned grassland farmer. The project will examine the success of plantain-containing leys with various percentages by weight of Timothy with a view to improving the efficiency of upland intensive grazing systems. Different establishment methods, namely scratching and slot seeding, will be utilised. The three-year project will examine the quality, quantity and persistence of these leys as compared to an existing upland ley. The inspiration comes from Finland, wherein work carried out utilising Timothy as a mainstay of grass leys and utilising gypsum has proven very successful in grazing regimes.
EIP22 - Fat tail sheep	Isle of Anglesey	£39,960	April 2022	Twenty-eight embryos and 150 doses of semen of the Damara fat-tailed breed of sheep will be imported from Australia. Embryo transfer and artificial insemination procedures will take place using three different breeds of surrogate ewes over a two-year period to establish the first fat-tailed sheep flock in the UK. Pure and cross-bred lambs will be monitored for adaptability and performance. Farmers participating will pioneer the development of this breed type in the UK, responding to the demand for fat-tailed meat.
EIP23 - Cattle FEC	Ceredigion	£39,750	June 2022	The farmers in the Operational Group have noticed in recent years that parasite burdens in their youngstock have been affecting growth rates and performance. Concerns were raised over the efficacy of the wormers being used and whether certain species of parasites were becoming more prevalent and more pathogenic. Through this project the farmers will work together to improve the performance and health of their stock. The project will use faecal egg counts (FECs), speciation tests, and predictive models to improve the diagnosis and treatment of gastrointestinal roundworms in cattle.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP24 - Trees in bracken	Powys	£36,700	October 2022	To examine the potential role of ground preparation of bracken land for establishing trees, prior treatment of bracken is necessary for the trees to survive. The current method of treatment is to use helicopter-applied herbicide treatment. This is not economically feasible on smaller parcels, and is not permitted on organic holdings or near sensitive or designated sites. The work will involve ploughing/cultivating strips of varying width with different machinery and planting a variety of tree species. Post-planting weeding will also be examined. The success of each technique will be evaluated by measuring the tree growth and survival rate, as well as the relative costs of each technique.
EIP25 - Selective dry cow therapy	Wrexham	£39,456	January 2022	The project will fund milk sampling using a milk leukocyte differential (MLD) test prior to dry-off on three dairy farms with a total of approximately 800 cows. The test results will enable dairy farm managers to make dry cow treatment decisions concerning the inclusion or exclusion of antibiotic dry cow therapy at an individual cow and individual quarter level. The process will be delivered by a vet technician. Following their dry period, the cows will be monitored to gather data on udder health.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP26 - Satellite grass measuring	Monmouths hire	£39,495	June 2022	The project will develop a novel way of rapidly measuring the effects of agronomic treatments on grass yields using images from satellites and drones. This is based on two recent studies funded by Innovate UK which demonstrated that remotely sensed optical imagery can be used to estimate grass yields and developed statistical procedures that use spatially referenced yield data points generated by modern combine harvesters to test whether agronomic treatments applied to strips (tramlines) of arable crops improve yields. A collective approach will be achieved by means of regular knowledge exchange and communication within the farmer group, facilitated by the EIP broker and the person manually monitoring grass yields. There will also be a collation of the project outcomes and learning points for the benefit of the group members, and for the wider industry in Wales.
EIP27 - Lot slurry	Gwynedd	£39,974.40	March 2022	Three dairy farms with LoRaWAN gateways will lease and install a range of compatible field-based Internet of Things (IoT) sensors that will record and monitor soil and weather-related parameters. The real-time information gathered by the sensors could help farmers to make better decisions regarding when to and not to apply slurry on their fields to minimise the risk of run-off losses. As a nutrient-rich resource, farmers are looking at ways of ensuring that they make the best use of slurry as part of their nutrient management plans. The project will bring together farmers, regulatory authorities, digital software engineers, and soil scientists to establish, trial and refine the system over a two-year period. They will also sit on the project's focus group, which will sit and assess progress four times during the work to provide a feedback loop to ensure that the technology is used to its best capacity and refined to meet the farmers' needs. This information could prove to be particularly useful in light of new regulatory measures with which to protect water quality from agricultural pollution, which were due to come into force in 2020.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP28 - Roundworm control in sheep	Carmarthen shire	£39,860	June 2022	This project will demonstrate that effective roundworm management in ewes in the lead-up to and shortly after lambing, which minimises the contamination of pastures and the risk of infection to lambs, can be achieved by targeting treatments and minimal anthelmintic use. It focuses on improving the targeting and efficacy of anthelmintic treatments through detailed monitoring of the peri-parturient rise in the nematode egg output of ewes; improving the prediction of parasite burdens on pastures to improve control through improved grazing management; collecting immunological data to support the rollout of a vaccine; and optimising ewe nutrition to enhance the ability of ewes to respond to infection. The aim is to improve production efficiency with associated reductions in carbon emissions, as well as increased productivity and profitability/resilience of farm businesses.
EIP29 - IDPM soft fruit	Pembrokes hire	£40,000	December 2021	We wish to trial biological pest control on two soft fruit farms operating different systems in South Wales. Growers are keen to move away from conventional pesticides. A range of predators and bio-pesticides will be trialled and growers will be mentored by specialists experienced in control species' lifecycles over two growing seasons. The latest industry methods will be utilised to maximise the potential for effective pest and disease control on their holdings. Outputs will be compared against conventional pest control methods.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP30 - Cryptosporidi um	Powys	£39,960	June 2022	Cryptosporidium is a parasite which can have a significant impact on human and farm livestock health. Farmers will investigate the prevalence of Cryptosporidium within their flock and on their farm by taking samples of water from watercourses, farm infrastructure, and sampling lamb faeces. The results will be used alongside a biosecurity review to establish the likely sources of infection. Management and preventative procedures will be developed to reduce the prevalence of Cryptosporidium on the farms. Project outcomes and learning points will be collated for the benefit of the group members, as well as the wider industry, focusing on both livestock and human health benefits.
EIP31 - Ammonia from broilers	Monmouths hire	£39,950	December 2021	An inevitable consequence of poultry farming is the production of ammonia through the natural breakdown of urates within poultry manure. The project will measure ammonia emissions from conventional broiler systems with biomass heating in four houses on two farms. On each farm, one control system will be compared with the use of three different additives intended to reduce ammonia emissions. The project will also compare bird welfare and performance (physical and economic) with a view to identifying best practice which could then be used on other farms.
EIP32 - MCF in bison/buffalo	Denbighshi re	£39,498.93	February 2023	In this project we propose to develop a comprehensive evidence-based approach to managing and controlling malignant catarrhal fever (MCF) on bison and buffalo farms in Wales. Blood and faecal samples will be used to understand the extent of exposure to OvHV-2, the causative agent of MCF, as well as a range of other pathogens that may impact the immunity of the animals and affect production. A risk-based control package will be tailored to the needs of the herds involved, followed by downstream monitoring to assess the success of this. We hope to translate the findings from this project into advice that is useful to farmers wishing to diversify into bison and buffalo production in the future.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP33 - Cucurbits	Powys	£40,000	January 2022	We wish to trial novel micronutrient management approaches in commercial cucurbit crops. Cucurbits can offer increased resilience to farm-shop-style businesses, with high-value returns from pumpkin PYO. A common problem within this crop group is blossom end rot (BER), which can render fruit unmarketable. It is believed that management of the crop calcium/boron nutritional status may provide a key method of controlling BER. We wish to trial the impact of foliar applications of calcium and boron applications in commercial cucurbit production.
EIP34 - Herbal leys	Carmarthen shire	£39,994	March 2023	This project will primarily examine stock health and performance when being grazed on a herbal ley in comparison to a conventional ryegrass mix. The stock will be rotationally grazed on both herbal leys and a more conventional ryegrass ley. The measurements taken will be to monitor the daily liveweight gain of the lambs, along with faecal egg counts (FECs) to monitor the worm burden and pasture larval counts to monitor the worm burden on the project plots. These data along with measuring pasture grown via a plate meter will give an indication as to how effective the herbal ley performs in a commercial setting over three different sites in Carmarthenshire.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP35 - Udder health	Carmarth enshire	£40,000	January 2022	A project in which four farmers in Carmarthenshire will take part in a dynamic testing routine. Testing will take place bimonthly on each farm. By monitoring and recording these results and, therefore, acting based on specialist recommendations, the farmers could drastically reduce bactoscan levels and instances of subclinical and clinical mastitis. These factors could significantly improve the udder health of the herds by using dynamic testing and, therefore, could reduce the number of mastitis incidences which can be replicated on other farms to bring benefits to the wider Welsh dairy industry.
EIP36 - Photoselective films for salads	Flintshire	£40,000	June 2022	The project focuses on the nutritional value of crops and improving overall growth rates. To access the benefits of spectra modifications, small-scale growers require evidence relating to the use and best practice approach of integrating this innovative technology into their businesses. Existing tunnels will be re-skinned with up to three films. A range of cultivars will be trialled and crop performance monitored to quantify the effects of production against conventional film.
EIP37 - Pregnancy diagnosis	Carmarth enshire	£40,000	November 2021	The aim is to establish a pregnancy rate for dairy cows within 28–30 days post-service by testing for PSPB in blood via taking blood samples, allowing the early detection of pregnancy, the early recognition of infertility problems in a dairy herd, and, finally, early treatment. Implementing an early diagnosis routine in the breeding routine could improve reproductive efficiencies greatly. Investigating the aforementioned will provide a comparison of ultrasound scanning and the monitoring of PSPB in the blood and establish which is the best method for farmers to use going forward.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP38 - Birch sap	Powys	£39,950	June 2022	Over two tapping seasons, three different methods of stabilising birch tree sap will be trialled across four sites in Wales to assess their suitability within varying production scales of birch concentrate production. A comprehensive cost—benefit analysis will be carried out and determine which is the most suitable production method. Additionally, since producers are community groups and volunteers, a social impact assessment will be undertaken to examine the social value that the project generates in local communities. Developing our understanding of these methods and the effects that they have on the quality of sap concentrate and final products will enable Welsh businesses and landowners to be better placed to make informed decisions regarding how they can add value to any birch resource to which they have access.
				This project will assess the feasibility of reaching 'carbon neutrality' (or net zero emissions) for individual farms and collectively, across six farms, with a range of enterprises and farming systems. It will review and calculate:
EIP39 - Carbon neutral	Powys	£40,000	December 2022	 emissions from production (total emissions (t CO2 e) and emission intensity (kg CO2 e/kg output)); and CO2 removal through sequestration in above- and below-ground biomass.
				The project will develop targeted actions to reduce GHG emissions and enhance CO2 sequestration on Welsh farms.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP40 - IoT security	Gwynedd	£39,930	June 2022	Five farms will be installed with LoRaWAN-configured Internet of Things sensors which will monitor the location of valuable farm assets that are a common target for thieves. The real-time information gathered by the sensors will alert farmers to an incident involving these assets, enabling them to inform the police sooner with higher-quality information. These monitoring systems will provide logged evidence to show when sensors were triggered. This information will help the police to focus their resources upon a specific time, helping trace stolen assets quickly. Utilising LoRaWAN in this way could prove to be particularly useful, especially in light of the results of the 2020 NFU Report on Crime, which showed that theft from farms cost Welsh farmers £2.6m in 2019. This was an increase of 11 per cent on the previous year.
EIP41 - Lameness	Vale of Glamorgan	£39,914.40	February 2023	The project will focus on implementation of the AHDB Healthy Feet Lite programme (HFLite) from trained advisors and the use of farmer action groups (FAGs) as different methods of knowledge exchange. Outcomes include mobility scoring and pre- and post-project interviews to assess knowledge and behavioural change. Funding will pay for the interviews, HFLite implementation, FAGs, and mobility scoring. It is expected that the project will not only reduce the prevalence of lameness in the herds involved, but also inform the optimal methods of engaging farmers in lameness management.
EIP42 - Exotic plants	Flintshire	£40,000	June 2022	The demand for new and exotic foods from across the globe is now more prevalent than ever before. This represents a strong opportunity for Welsh growers seeking to diversify their offering and increase productivity. Although these niche crops have been grown successfully in different countries, there is no agronomic advice available which is specific to the climate of Wales. This project is therefore designed to produce grower toolkits that cover every aspect of production to aid growers in developing high-value, niche and exotic edible products.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP43 - Farmland birds	Denbighshire	£39,727.36	March 2023	It will explore the following question: To what extent does the combined provision of supplementary feeding stations and specialised cover crops situated on two very different Welsh farms which are otherwise grassland-dominated reverse the decline of farmland birds over two winters? It will further explore the potential for productive farms to reverse the decline in biodiversity without an adverse impact on their productive systems to deliver public benefit in future schemes.
EIP44 - Fluke mapping	Ceredigion	£40,000	June 2022	eDNA sampling and quantitative polymerase chain reaction (qPCR)-based techniques will be used to map the prevalence of snails/fluke-infected snails on the sites. A group of beef and/or sheep farmers have expressed an interest in participating in a fluke-mapping project using eDNA. Each farmer has identified fluke issues which have caused economic losses and animal welfare concerns. The results will inform sustainable, cost-effective solutions for reducing the fluke burden on their farms.
EIP45 - Suckler herd AMR	Ceredigion	£39,508	June 2022	The project aims to improve the management and nutrition of suckler herds around calving to improve animal health and productivity while reducing the use of antibiotics. This will be achieved through: Optimising cow nutrition Optimising calf nutrition by increasing the colostrum quality, quantity and absorption Developing and implementing a robust programme for animal health monitoring On the basis of the monitoring data, preparing health plans that O Promote proactive and preventative approaches to addressing any underlying disease issues O Reduce the use of antibiotics and avoid prophylactic treatments.

Project	Lead farmer LA	Budget awarded	End date	Project summary
EIP46 - Biochar	Powys	£25,425	September 2022	Molinia biochar and molinia-based animal bedding co-composted with sheep wool will be trialled as separate and combined soil amendments in horticulture to establish their effect on the yield and quality of several vegetable crops. The trial will have direct links with Aberystwyth University's 'Beacons' and 'Circular Carbon Economy' projects. The key benefits of the project include: • Providing a sustainable market for molinia to encourage its removal and improving upland biodiversity • Developing a method (which is productive in its own right) to increase the quantity of carbon sequestered in soil • Providing an alternative to peat-based composts/soil conditioners • Demonstrating how vegetable yields may be improved with low-carbon-footprint alternatives to inorganic fertilisers • Developing a market for tail wool (which currently has no use or value). Funds will be spent on: • Researcher/expert time • Analysis costs (biochar, compost/growing media, crop plant tissue) • Compost certification costs • Compost/biochar delivery charges.