

Research Report

Exploring the socio-economic dynamics and innovation capacities of rural food and farming microbusinesses

Authors: Charlotte Chivers, Caitlin Hafferty, Matt Reed and Sofia Raseta, Countryside and Community Research Institute

NICRE Research Report No 10: August 2022

Contacts: cchivers@glos.ac.uk / mreed@glos.ac.uk

1. Non-technical summary

This report provides a range of data-informed insights significant to developing rural food systems, agricultural sustainability and rural innovation. We have found that the participants from the Landworkers' Alliance (LWA) tend to be younger than their farming peers and run smaller enterprises. They are more likely to be new entrants and do not necessarily identify as 'farmers' having started to produce sustainable, healthy, local food. Most operate a portfolio of enterprises diversified mainly into the food system, processing and retailing food rather than selling along the food chain or servicing the agricultural sector. To that extent, they constitute the local food sector, with 90% selling their products within 25 miles of their business and 40% within five miles. Although many are owner-operators, a sizeable minority employ others. Given the scope and demands of these portfolios of enterprises, diverse skills and a highly entrepreneurial outlook are standard requirements.

These businesses' social and environmental engagements are the primary motivation for the business operators, with profit as means to these ends. Volunteering opportunities are a crucial offer from these businesses, which brings a cascade of benefits to all those involved. Improving and regenerating the farmed environment is an equal priority, with aspirations to protect the soil, deepen the resilience of the farm biodiversity and minimise pollution. In these ways, these diverse, complex and sophisticated clusters of enterprises are making a distinctive contribution to the rural economy.

The challenges reported are accessing appropriate finance, under-developed markets, insufficient targeted business support, inflexible planning arrangements, and agri-environmental schemes that do not embrace this group. This group falls between many policy stools, not traditional farmers, but not food or catering businesses. Yet, they are focused on delivering many of the 'public goods' to which government policy is committed. The resilience and innovation they bring to rural areas are essential to the diversity of businesses that help rural areas thrive.

We make **10 suggestions** as to how rural actors – state, private and civil society – could provide support to these microbusinesses:

DEVELOPING RURAL FOOD SYSTEMS, SUSTAINABILITY & INNOVATION: 10 RECOMMENDATIONS FOR ACTION



1. Eligibility for agri-environmental support for smaller farms & holdings



2. Support businesses that benefit wellbeing & the 'green mind'



3. Expand permitted development for farm & horticulture buildings



4. Provision of affordable rented property for agricultural workers



5. Business support packages focused on environmental and social outcomes



6. Machine rings focused on small-scale agriculture and food processing



7. Support initiatives to provide regional Dynamic Procurement Systems (DPS) schemes



8. Increased renting out of small parcels of land for smaller enterprises



9. Framework for developing novel skills to future-proof businesses



10. Supporting opportunities for local producers to supply good quality staples into food justice and solidarity networks

2. Acknowledgements and funding

This paper has been published by the National Innovation Centre for Rural Enterprise (NICRE), which is funded by Research England to collaborate, research and co-design ideas and solutions to foster rural enterprise and unlock the potential of rural economies. NICRE works with businesses, policymakers and other partners across the UK to take part in research and catalyse change.

It brings together the strengths of its founding university partners: Centre for Rural Economy and Business School at Newcastle University, Enterprise Research Centre at Warwick University and Countryside and the Community Research Institute at the University of Gloucestershire and Royal Agricultural University.

We would like to thank all those who have freely given their time, energy and experience in the online survey and focus groups.

Founding research partners:



Funded in partnership with:



Founding business partners:



3. Table of contents

1. Non-technical summary	2
2. Acknowledgements and funding	4
3. Table of contents	5
4. Introduction and background	6
5. Research design and methodology	7
i. Online survey questionnaire	7
ii. Online focus groups.....	8
6. Findings: Online survey of LWA members	10
i. Online survey participant characteristics	10
ii. Overall priorities of LWA members	11
iii. Economic findings: Online survey	13
iv. Social footprint of rural food and farming microbusinesses: Online survey	21
v. Environmental footprint of rural microbusinesses: Online survey findings	22
7. Findings: Focus groups	24
i. Focus group participant characteristics	24
ii. Delivering public goods through rural microbusinesses: Benefits and risks for economic, social, and environmental resilience	25
iii. Economic resilience: focus groups	28
iv. Social resilience: focus groups.....	35
v. Environmental resilience: focus groups.....	38
vi. Key considerations for the future: food systems, politics, and power.....	40
8. Key conclusions	44
9. Recommendations for action	45
References	47

4. Introduction and background

The Landworkers' Alliance (LWA), alongside many other organisations which operate within the sustainable food and farming sector, has until now relied on 2012 survey data for information about the businesses it represents. A new dataset was needed both to update the 2012 data and to gather a more holistic understanding of these businesses. The aims of this project have been two-fold:

1. To examine the current conditions of rural food and farming microbusinesses working in the food, farming and forestry sectors that operate within localised supply chains - providing economic, environmental and social data about their impact, barriers faced in business development and innovation potential.
2. To gather high-quality data from businesses through participatory and inclusive online methods that accurately reflect these enterprises' operation and principal aspirations, with the LWA and Countryside and the Community Research Institute (CCRI) co-developing analytical understandings of this information.

This report provides an overview of the findings of an online survey (n = 132) and focus groups (n = 3) of LWA members. We have gathered both qualitative and quantitative data, providing strong insights into how these rural food and farming microbusinesses operate in England.

LWA members are broadly focused on adopting agroecological approaches to production alongside achieving food sovereignty, thus contributing to environmental and social justice. This is reflected in the LWA's vision (LWA, 2022), where they also state that producer organisations and communities should be central to decision making, with a stronger voice in policymaking relating to agriculture.

The development of smaller-scale sustainable agricultural businesses has a complex history and geography that has only episodically been the subject of government reports, so its learning has been reliant on the efforts of the sector itself and academic studies. Previous studies have demonstrated that small sustainable farm businesses are highly innovative, diversified and employ a wider range of staff than other forms of agricultural businesses. The Covid-19 pandemic has demonstrated the value of small-scale and highly resilient food businesses when the global food system buckles. As well as having inherent value, these businesses have a wider social value as incubators of innovation in rural areas.

5. Research design and methodology

This study consisted of an online survey questionnaire and three focus groups with LWA members. Whilst the largely quantitative online survey allowed us to gather breadth, the focus groups provide qualitative depth, illustrating the complexities surrounding the resilience of rural microbusinesses. By a microbusiness we mean an enterprise that employs fewer than 10 people, and/or has a turnover of less than £2million a year.

i. Online survey questionnaire

The online survey asked several questions, most of which were quantitative with some opportunities to add free-text answers. Topics included agri-environmental schemes, past and current sources of funding, the perceived impacts of localising food on their businesses, and the impacts of Covid-19. A full online survey protocol is available in the appendix. The survey was live on Jisc Online Surveys (Jisc, 2021) between 24/08/2021-22/10/2021 and was designed to take participants no more than 10 minutes to complete. The survey was advertised in emails to LWA members and across social media. A prize draw offered prospective participants an incentive to take part, with a top prize of £500 in cash.

All 132 responses captured in the survey were deemed valid for inclusion. The submissions may have been consistently reliable because the LWA members that participated had a vested interest in the topic and were happy to complete the form. Readers will note that there is some missing data throughout, as questions were not mandatory. The total number of responses to the online survey questions varies slightly.

When the survey opened on 24/08/2021, there were 1735 LWA members. By the time it closed on 22/10/2021, this had increased to 1817. An average was taken from this figure (1776) to calculate that around 7.4% of members answered the online survey. This results in an 8% margin of error, which is illustrated in the figures throughout this report. Where the resulting data allowed, mean comparisons (t-tests) were conducted to identify whether there were significant differences between means. NVivo 12 Plus was used to conduct sentiment analysis on certain qualitative answers (e.g., response to Covid-19).

ii. Online focus groups

The focus groups (n=3) were conducted with 22 LWA members, recruited from the online survey questionnaire (see above). They were hosted online via [Zoom](#) and facilitated by a member of the research team. The focus groups were held in October and November 2021, with between 7-8 participants joining each session (see **Table 1** for details of each focus group).

Table 1. Details of the online focus groups (n=3)

Name	Date and time	Number of participants
<i>Focus Group 1</i>	28 th October 2021, 17:00-18:40 BST.	7 participants (two participants joined from one computer).
<i>Focus Group 2</i>	3 rd November 2021, 17:00-18:40 BST.	7 participants.
<i>Focus Group 3</i>	4 th November 2021, 17:00-18:40 BST.	8 participants (two participants joined from one computer).

Participant recruitment

Before participants submitted their survey responses, they were asked to leave their contact details if they would like the opportunity to participate in an online focus group. Many (77) participants indicated a willingness to participate, 64 of whom had responded in time to be considered to take part¹. The random number generator in Microsoft Excel was then used to select a sample of 40 participants. From this sample, 22 people were able and willing to participate.

Focus group design

The online focus groups were designed to create a friendly, informal, and participatory environment. Informed consent was gained from each focus group participant to ensure they were happy to take part.

Each session followed a simple format and participants' accessibility was a key consideration (e.g., access to the internet). The purpose of the focus groups was to discuss three broad and inclusive topics. The topics were designed to provide depth to the survey findings, capturing the diverse benefits and risks associated with economic, social, and environmental resilience in rural food and farming microbusinesses:

- 1. Diverse enterprises** (e.g., *what enterprises do you operate? What are the benefits of running diverse enterprises? What are the challenges?*).

¹ We 'closed' the focus group preference aspect of the survey before it ended. This is because we needed to ensure we had ample time to organise the focus groups.

2. **Benefits for the environment and society** (e.g., *what benefits and services does your farm provide for the environment, biodiversity, and local communities? How has this helped your business? What are the challenges?*).
3. **Adaptation and resilience** (e.g., *what challenges are currently impacting your business, either positively or negatively? This includes any impacts due to Covid-19, climate change, etc.*).

Thematic analysis

The focus groups were recorded and automatically transcribed using a GDPR compliant third-party automated transcription software, [Otter.ai](#). Each transcript was reviewed and edited by a member of the research team. It is important to note that utterances ('uhms' and 'ahs'), false starts, repetition, information which could easily identify the participant, and words considered irrelevant to the discussion were removed to make quotes more readable. Removed words are indicated by [...], and additional information (e.g., to provide context) is presented in { }. Participants' anonymity has been protected by the removal of names, locations, and other identifiable information. Each of the 22 participants was given a code name to identify the individual *and* the focus group they attended (e.g., "Participant 1, Focus Group 3").

The three focus groups yielded a large volume of qualitative data which was analysed using NVivo software. This involved thematically coding the focus group data into an initial coding framework which linked directly to the research. Additional themes emerged based on the analyst's interpretation of what was salient in the group discussions. While this coding approach is partly systematic (offering a clear structure and process), the coding was open to researcher interpretation.

6. Findings: Online survey of LWA members

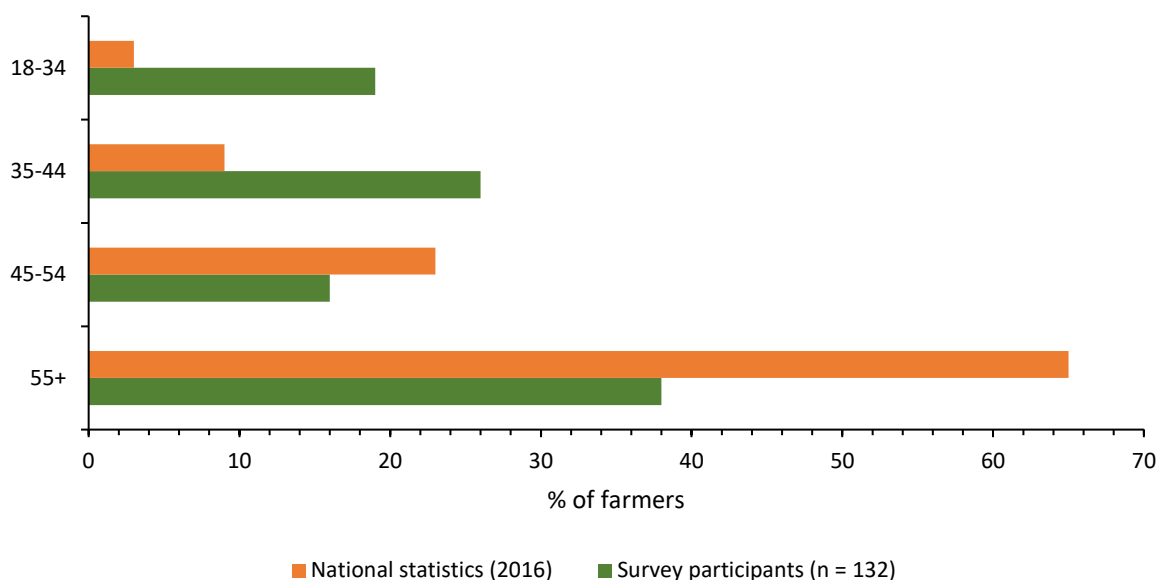
i. Online survey participant characteristics

Most of the 132 online survey participants (71%) were from England, with the remainder from Scotland and Wales (16% and 13% respectively). The average farm size was 59.4 acres (ranging from 0-1120 acres).

Over half of the participants (57%) were horticultural producers. The remaining participants were grazing livestock (16%), mixed farming (10%), 'other' (9%), dairy (4%), forestry (3%), poultry and cereals (1% each). In terms of land ownership, 55% of participants (n = 72) own at least some of their farmed land, with an average of 70 acres owned per participant. In addition, 42% (n = 55) of participants own all their farmed land. These figures are lower than for agricultural land ownership across England, whereby around 68% of farmed land is owned (Defra, 2020). This indicates that owning land is less common among LWA members than it is for the wider farming population.

In terms of age, no participants were aged between 18-24, with all respondents aged below 35 fitting into the 24-34 category. Regardless, there is still a higher percentage of 'young' participants when compared to national statistics surrounding the agricultural workforce (Defra, 2021; Figure 2). This comparison should, however, be treated with caution; firstly, not all LWA members identify as 'farmers', and secondly; the national dataset may not be entirely accurate as only a single, principal farmer from each holding completes the farm survey, whilst our survey was open to anyone working within the business. In addition to the potentially high proportion of younger farmers within rural microbusinesses, many online survey participants (71%, n = 94) identified as not deriving from agricultural backgrounds. This suggests that many new entrants to the sector are entering agriculture to conduct agroecological farming within short supply chains, a finding consistent with previous research (e.g., Lobley et al, 2009).

Figure 2. LWA survey participants vs national statistics for farmer ages across the UK in 2016 (Defra, 2021).



ii. Overall priorities of LWA members

The self-image of farmers has previously been identified as being constructed of their ability to run a profitable enterprise and their status within the farming community (Mills et al, 2007). As shown in figure 3, this research finds that the microbusinesses who participated in this study construct their self-images slightly differently, prioritising their social and environmental footprints above being profitable. In many cases, it appears that these enterprise holders are content with being financially stable but do not necessarily strive to make substantial profits; this is likely due to their values where they prioritise providing public goods and because many of these enterprises are not full-time ventures. This also suggests that rather than being driven by their status in 'farming' communities, they are driven by their status within other communities and networks. Their involvement in many non-agricultural activities (e.g., education visits, ecological surveying) provides further evidence for this.

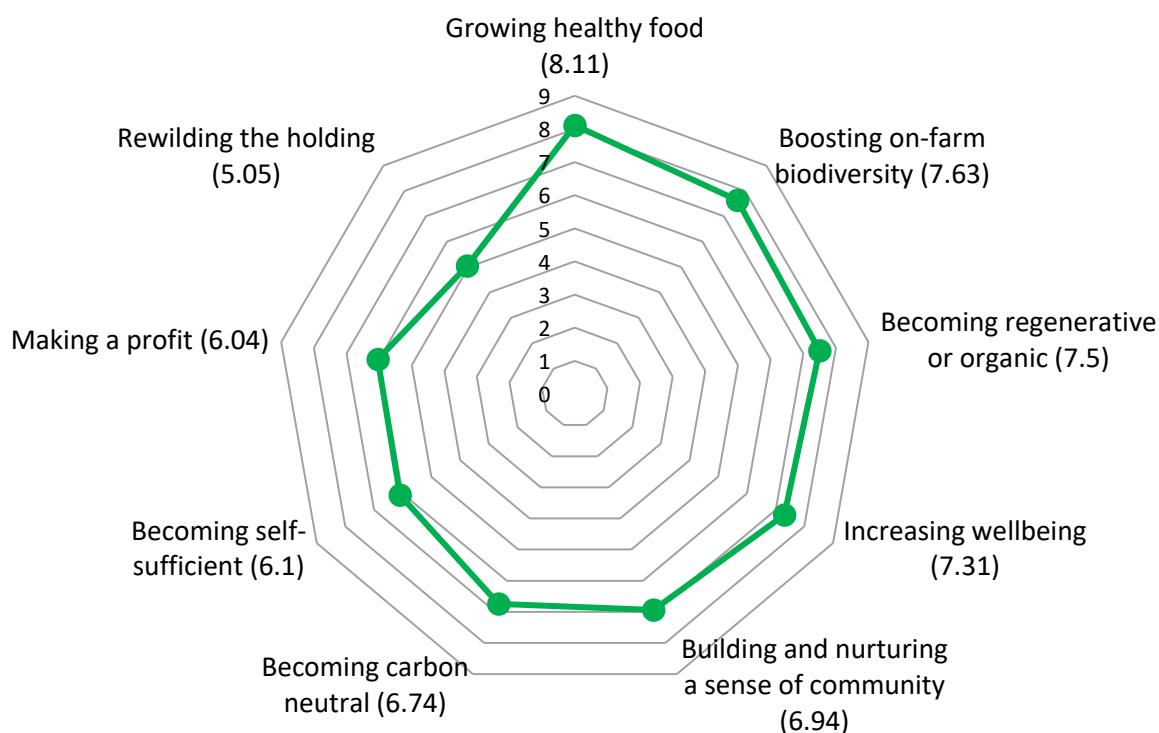
The factor which participants consistently placed as their highest priority was a drive to grow 'healthy food' (figure 3). This priority illustrates the strong linkage between food production and human health and shows that many of these rural businesses are striving to provide high-quality food. This also suggests that these rural businesses with short supply chains are seeking to meet many of the recommendations made in the recent National Food strategy; for example, that food should '*make us healthy, not sick*' (National Food Strategy, 2021). It also suggests that the participants are differentiating themselves from other enterprises by focusing on the word 'healthy', rather than a commitment to commodity food production.

Among the priorities that they were asked to score, 'rewilding' was scored as the lowest priority on average, though the average score of 5 indicates that some participants are

considering it. This may be due to the high number of participants with small holdings who may not feel able to partake in rewilding.

These findings are indicative that there is potential for LWA members to have consistent motivations with previous studies of organic and non-conventional farmers. These studies found that local food production resulted in several social benefits, including support from and integration within their local community, building trust with consumers, contributing to the maintenance of the landscape, and raising awareness about food, as well as a portfolio of diversified enterprises on the holding (Morris & Buller, 2003).

Figure 3. Radar map of the self-professed priorities of LWA members who participated in the online survey.



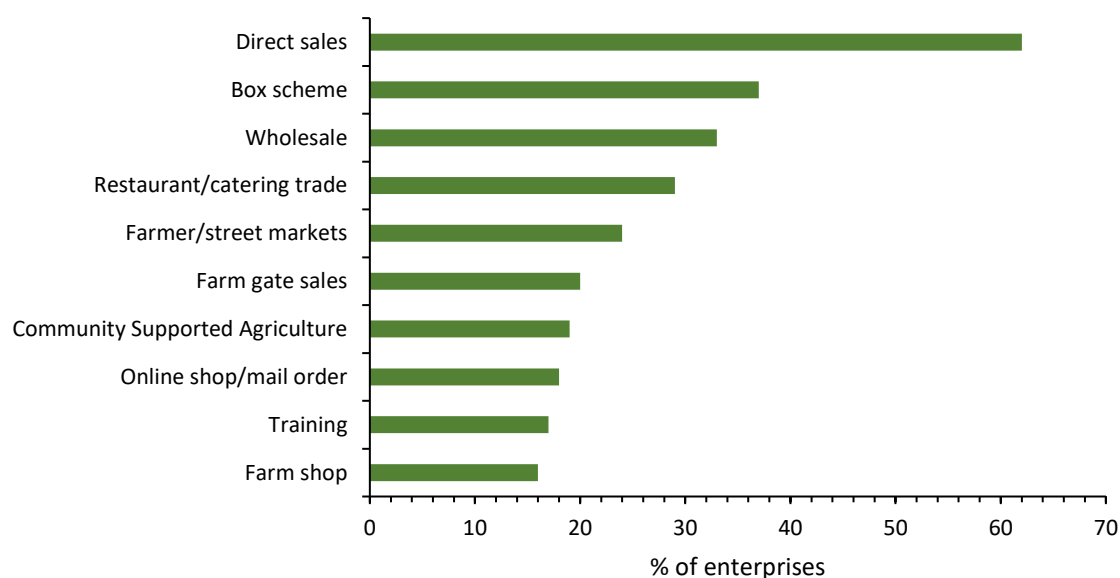
iii. Economic findings: Online survey

The diversity of enterprises operated by rural food and farming microbusinesses

The online survey revealed the diversity of enterprises being operated, many of which may offer substantial economic, social, and environmental benefits. The average number of enterprises per surveyed microbusiness was 3.6, ranging from 1-9. Just 22 (17%, n = 129) participants had a single enterprise. Enterprises with the largest farm holdings had the most enterprises, with the average number of enterprises rising to 5 in holdings of >100? acres. The age of the participant, type of farming enterprise, priority placed on making a profit, and how resilient participants perceive themselves as all showed no correlation with how many enterprises participants operate. Those participants with more enterprises, however, appear to be more likely to have a business plan than those with just a few (figure 1).

The top 10 most common enterprises amongst LWA member participants are shown in figure 4. Other enterprises included delivery rounds, contracting, consultancy, food processing or manufacturing, tourism (accommodation or activities), workshops, crafting, cut flowers, charitable activities, and woodworking.

Figure 4. Enterprises operated by LWA members who participated in the online survey (n = 132).



It was not surprising that direct sales were the most prominent enterprise amongst these farmers, consistently this form of integrated supply chains enables retaining added value within the portfolio of enterprises. Significantly this is a very different pattern than we would expect to see for farm diversification more generally in UK agriculture, which prioritises offering services within the agricultural sector or amenity services such as livery or tourism accommodation (Sutherland et al, 2019). These findings suggest that the

enterprises tend to operate within the food system, and as such offer a distinctive footprint of activity.

This tendency to operate several enterprises is likely conducive to resilience and financial stability: where one enterprise fails for a year (e.g., due to sub-optimal weather conditions), the business holder can rely on some of the other enterprises to make up for those losses. However, it is important to note that there are constraints to running several enterprises, including the increased time burden and the inherent requirement to possess a plethora of skills if each enterprise is to be run successfully (see discussion below). Many participants also undertake activities within their businesses that increase their 'social footprints' rather than make a profit. For example, one participant has a community market garden for the rural homeless, whilst another provides outdoor development for children with complex needs. The finding that profit maximisation is the second-lowest priority for these business holders shows how many LWA members prioritise other aspects of business resilience and/or benefit above profit.

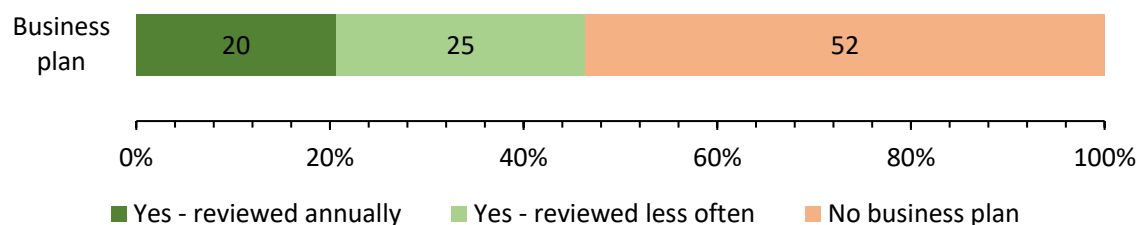
Business planning

As shown in figure 5, many participants do not currently have business plans in place, despite formal business plans leading to more profitable farm businesses². It appears that LWA members are less likely to have business plans in place than the wider farming population, whereby 19% and 59% of farms in England had a formal or informal business plan in place respectively during 2016/17 (Defra, 2018). Overall, 83% of farmers in England were doing at least one element of business planning in 2016/17, whilst the figure here for UK LWA respondents is just 45%. In addition, where planning is on an informal basis, some participants may not define their projections and plans as 'business plans' per se; thus, more land managers may be undertaking some level of business planning than these data suggest.

One reason for a relative lack of business planning among respondents may relate to grant funding; as shown below, many participants do not receive any funding and thus may not have been required to create formal business plans, which are often a prerequisite for grant applications. Alternative reasons may relate to a lack of resources, a perceived lack of need, a scarcity of advisory support, or a lack of interest in business planning (see Defra, 2018). Many of these businesses provide a range of public goods (see below) and could benefit by having business plans. Policymakers should consider, therefore, the potential value for money of providing planning support to these businesses.

² As claimed by AHDB (2019)

Figure 5. Proportion of online survey participants who claimed to have business plans in place.



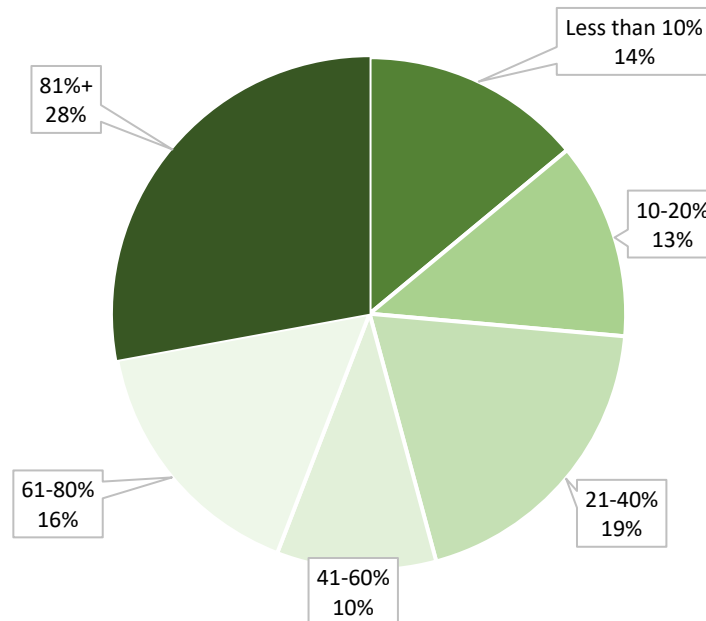
A third of online survey participants (n = 43) operate without any full-time staff, with many enterprises run on a part-time basis in conjunction with other sources of income. Meanwhile, 51% of respondents have 1-2 FTEs, whilst 17% have more than 3 staff. Businesses with 3-6 enterprises appear to have higher staffing levels than less diverse enterprises. Those with more full-time staff were more likely to place importance on profitability, perhaps due to the increased pressure to generate several living wages from this enterprise. Interestingly, 70% of LWA members who participated in the survey do not tend to have any seasonal staff. This may make them resilient against the recent shortages of seasonal labour associated with the onset of Brexit (see Nye & Lobley, 2021).

It appears that these rural microbusinesses are collaborative businesses, with just 10% of participants making significant business decisions on their own. Many online participants (42%, n = 55) stated that they make business decisions as a family or with their partners and spouses. This involvement of spouses/partners is unsurprising and indicates the importance of having a supportive family unit when running a rural microbusiness, as discussing ideas with other members of their family or communities may act as a buffer to prevent 'rash' decisions from being made.

Locality of sales

Online survey participants were asked where most of their customers are based. Figure 6 provides an overview of how many participants sell their produce within five miles of their holdings. Almost half (47%, n = 61) stated that most are local localities (i.e., within five miles of the enterprise). A further 42% (n = 55) serve customers within 25 miles of their holdings. Just 9% of participants serve customers on a national scale. It appears that those with larger farm sizes are the most likely to sell their produce further away; the average farm size for those who sell less than 40% of their produce within five miles is 103 acres, whilst those who sell more than 40% of their produce within these bounds have an average farm size of 24 acres. This finding demonstrates that many micro agriculturally-based businesses can operate without necessarily having to sell their produce outside of their local areas. Operating at a local scale is beneficial in itself as selling produce locally reduces emissions due to the resulting low food mileage. Low food miles are also beneficial as it likely increases the freshness (and therefore, quality) of the produce being sold. In addition, trading within a small geographical range boosts local economies through keeping money within communities.

Figure 6. Proportion of sales within five miles according to online survey participants.



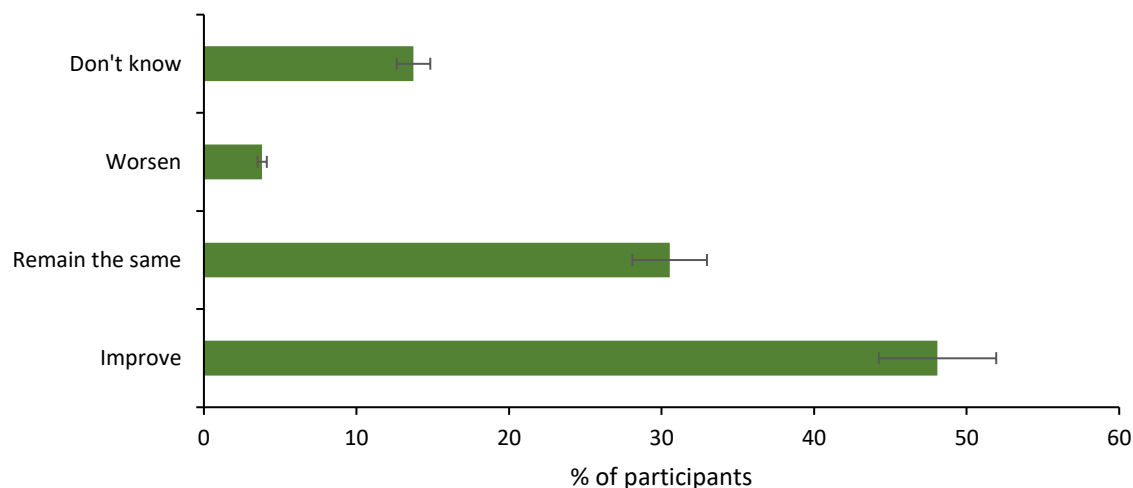
Perceptions of financial resilience according to rural food and farming microbusinesses

Whether an enterprise is financially stable is an important aspect of business resilience. Online survey participants were asked how they believe their businesses are currently performing in terms of profitability (on a 5-point Likert scale, where 1 = very badly, 5 = very well). On average, participants answered 2.99, indicating that many participants are doing 'OK'. This suggests that these enterprises are relatively financially stable.

Participants were, however, optimistic about their prospects; when asked how well they believe their businesses will be performing in five years' time, the average score rose to 3.76. Further analysis indicates that 48% of participants believe their prospects will improve over this period (figure 7). As reflected in the qualitative findings from the online survey, this may be due to confidence that their increase in sales resulting from a boost to local supply chains resulting from the Covid-19 pandemic will continue, or that these business holders feel that their enterprises are resilient to various challenges.

Those participants who have a business plan which is reviewed at least once a year were the most likely to believe that their prospects are likely to improve. One way of interpreting this finding is that those with a plan may, as a result of dedicating time to considering the direction of travel for their businesses, feel more optimistic about their futures than those without plans. Meanwhile, whether participants have a successor in place had no effect on whether they believe their prospects are likely to improve or worsen. This may be because other issues, such as security for tenant farmers may be seen as more impactful than succession amongst these rural microbusiness holders (see below).

Figure 7. Perceptions surrounding whether online survey participants believe their profitability is likely to improve or worsen in the next five years.



Just over a third of LWA member participants (35%) either have or potentially have a successor. A further 35% do not have a successor at present. It is uncertain whether LWA consider their holdings to be the beginning of intergenerational projects or 'family businesses'. Consideration of access to land, the opportunities for new entrants and the ability to exit for retiring farmers is an important part of any policy to make agriculture more sustainable.

Impacts of Covid-19 on rural microbusinesses

Most survey participants (73%) believed they responded well or very well to the Covid-19 pandemic. A word cloud of the terms used by participants when entering free-text (figure 10) indicates that many rural microbusinesses became more profitable during the pandemic as consumers became more reliant on local food producers whilst the supermarket-driven supply chains struggled to adapt to the pandemic. Many survey participants stated that they were resilient during Covid-19 because demand for their products increased: '*Huge increase in demand. Wider awareness about our existence and understanding about what we do*'. In many cases, this was more complex with certain enterprises within the business struggling (mostly relating to restaurant sales) whilst others (primarily veg box schemes) prospered:

50% of restaurant sales dropped. Started up a small local box scheme (3 mile radius) and sold more to another box scheme. Wholesale to existing shops hugely increased. This made up majority of losses. This year box numbers dropped at ours and local box scheme but restaurant sales are too inconsistent this year to rely on. Turnover significantly less this year than 2020 as need to pay more casual staff to pack more individual items to larger local box scheme customer, but having to accept less per KG than we'd sell to restaurants and shops.

There were, however, ways in which rural microbusinesses could have been more resilient in the face of the pandemic; for example, by having better access to labour and to local abattoirs.

Figure 10. Word cloud illustrating the key terms used most often by online survey participants whilst explaining how the Covid-19 pandemic has affected their enterprises. Larger words are those which were used most frequently.



Table 3 provides an overview of whether LWA members who participated in the online survey were broadly affected positively or negatively by the Covid-19 pandemic. The analysis revealed stark differences in terms of how these enterprises responded and adapted during the pandemic; whilst some businesses benefited from the pandemic, others suffered greatly. More LWA members appear to have had positive outcomes as a result of the pandemic than negative, indicating that these short-supply chain-based businesses are relatively resilient to change. The nature of these locally embedded businesses enabled them to provide services to their communities. This differs from the findings of another recent report on how rural businesses were affected by Covid-19, which found that many rural business owners were forced to rely on familial resources (e.g., savings) to get them through the pandemic (State of Rural Enterprise report, 2022). This indicates that whilst rural microbusinesses such as those studied here may not rely

heavily on their enterprises as a source of income, larger rural businesses (SMEs) may have been hit harder by the pandemic due to a reliance on the business for bringing in an income.

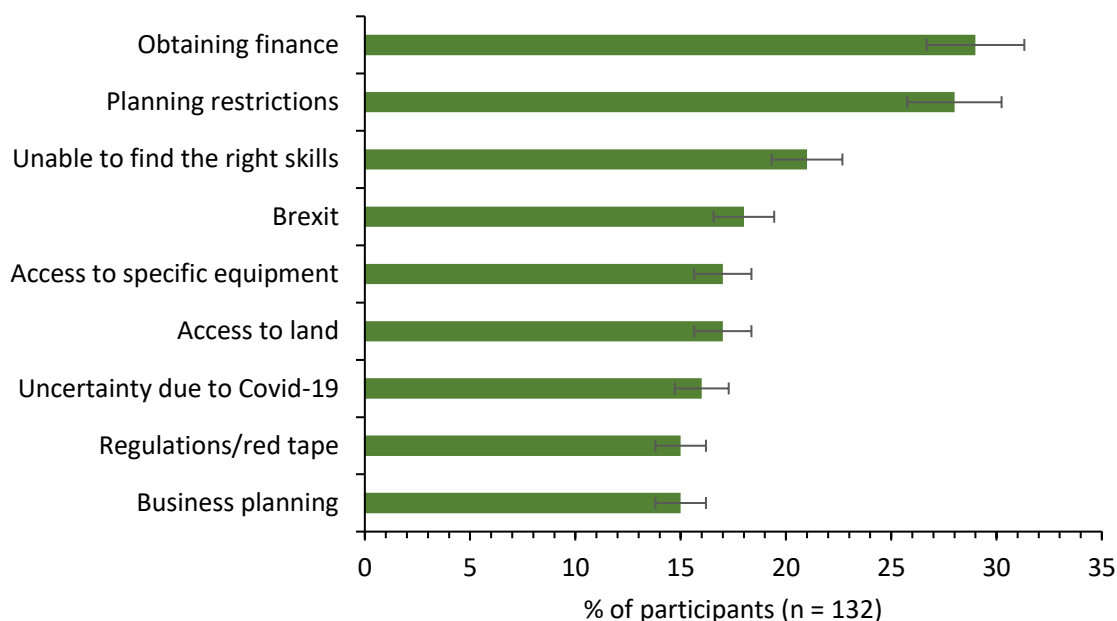
Table 3. Overview of whether participants were broadly affected positively or negatively by the Covid-19 pandemic. 100 participants provided answers to this question (n = %).

Sentiment	% of participants	Key themes	Illustrative quotes
Positive	38	<ul style="list-style-type: none"> More customers More volunteers Greater awareness More local activity More time Diversified in response 	<p><i>Huge increase in demand. Wider awareness about our existence and understanding about what we do.</i></p> <p><i>We switched from supplying cafes and restaurants to supplying a veg box for the local community. This was more profitable, easier, more satisfying, and nurtured a sense of community.</i></p>
Negative	25	<ul style="list-style-type: none"> Loss of customers Greater workloads Illness Abattoir closures Price increases 	<p><i>We were mainly selling to restaurants and didn't have the capacity to switch to direct sales</i></p> <p><i>We have had to sell mostly wholesale therefore we dropped sales by 35%. We shut our farm shop for 6 months. We normally sell at local events most have been cancelled for 2 years.</i></p>
Mixed	8	<ul style="list-style-type: none"> Greater sales but workloads too high 	<p><i>Has been difficult in terms of managing recruiting staff; but has offered opportunities to recruit customers through increased awareness about the link between food and health</i></p>
It hasn't	29	<ul style="list-style-type: none"> Business began during Covid Little change experienced Retired 	<p><i>This is our first year in business</i></p>

Threats to business resilience

Participants were asked to share the challenges posing the biggest obstacles to their success. The most prominent challenges are displayed in figure 8, many of which relate to economic, environmental and social resilience.

Figure 8. The main obstacles to the success of rural food and farming microbusinesses according to online survey participants.



Other challenges faced by participants include competition in the market, succession, liquidity, and taxation. Many participants (n = 36) also shared challenges not listed in the main survey. These obstacles primarily related to the wider food system, with participants citing low food prices (*'The time invested is not rewarded financially- food is so cheap it bears no relation to the effort it is to produce it'*) and a reduced demand for certain types of food (e.g., pasture-fed livestock). Additional concerns related to a lack of time, extreme weather and climate change, soil quality, a lack of marketing experience, and familial bereavements.

These findings indicate that whilst these business holders use their initiative to maximise resilience, they face various hindrances, many of which could be influenced by policy. For example, if offered greater opportunities to obtain funding and overcome certain planning restrictions, these respondents could be in a better position to generate further environmental and social benefits. According to the qualitative data gathered during the online survey (and from the focus groups, see below), these perceived planning restrictions appear to relate to the lack of opportunity for rural microbusinesses to convert or build housing for their workers and limits on their ability to construct structures such as polytunnels. Where these businesses are unable to house their workers or utilise their land so they can operate efficiently, they are being limited in their capacities to grow and thrive.

iv. Social footprint of rural food and farming microbusinesses: Online survey

How rural microbusinesses are delivering social benefits to their community

Most online survey participants shared ways in which their businesses provide wider services to their communities, demonstrating the social benefits being provided by these agroecological businesses with short supply chains. The most common services include school visits (31%, n = 41), ecological monitoring/surveys (34%, n = 45) and providing an events venue on-site (15%, n = 19). Other services include hosting concerts, art exhibitions, citizen science projects, coffee mornings, open days (e.g., for wassail), farm tours, seminars, training, habitat conservation, permissible access for walkers, and gardening clubs. Many of these activities (e.g., public access to nature) are included in the upcoming Environmental Land Management (ELM) scheme, thus it is important to consider whether these businesses could be better rewarded and recognised for their delivery of these public goods, through such a mechanism.

Over a third of online survey participants (35%, n = 45) stated that they hold responsibilities in their local communities, outside of their direct businesses. These responsibilities include being committee members for various local enterprises such as the LWA, growing groups, and various stakeholder and steering groups, trustees of community orchards, food cooperatives, and volunteering for other CSAs and local food groups. Though not directly comparable, another study found that 25% of environmental activity in arable farms across England is unsubsidised, with motivations for this relating to wanting to help the environment and improve on-farm agronomy (Mills et al, 2018). Our findings provide evidence that food-related micro businesses also provide a substantial amount of work for 'free'.

How rural food and farming microbusinesses are becoming more resilient through engaging with their communities

Over half of the participants (56%, n = 73) agreed that working closely with their local communities brings skills into their businesses that they wouldn't otherwise have, with just 18% (n = 23) disagreeing. The word cloud below provides an overview of the skills which have been brought into enterprises by working with the local community. Participants placed importance on the business and marketing advice they've received from their community, alongside the sharing of knowledge, expertise, and machinery.

'Our volunteers have many skills which have helped the organisation - woodland management, governance, growing. The organisation is made up of volunteers and we are lucky to have so many capable people working towards the same goals.'

return on investment could be gained as the costs of funding microbusinesses is likely to be considerably smaller than the funds already spent on larger food producers.

Table 2 shows that the current commitment to AES in England is lower than it has previously been amongst LWA members. There has been a particularly noticeable drop in ELS commitment. This is in line with national uptake; between 2015 and 2020, the number of environmental stewardship agreements declined from 38,000 to 10,000 (UK Government, 2021). In terms of future plans, over half of participants are undecided (53%, n = 50). Just 9 participants indicated that they may sign up for SFI, with another 9 interested in LNR. Just 2 participants plan to enter LR.

Table 2. Current and past commitment to agri-environment schemes (English participants).

Agri-environment scheme	Current commitment	Past commitment	% decrease
Basic Payment Scheme (BPS)	22% (n = 18)	30% (n = 29)	61
Entry-Level Stewardship (ELS)	4% (n = 3)	13% (n = 12)	300
Higher-Level Stewardship (HLS)	14% (n = 11)	19% (n = 18)	64

Those who are not in any agri-environment scheme were more likely to feel that they are doing badly or very badly in terms of current profitability. These microbusiness holders may become more financially resilient if they were able to secure funding, raising the potential for them to deliver more in terms of public goods.

Other sources of funding previously used by LWA members include the Countryside Stewardship water quality capital items grant, National Lottery, water companies, the Forestry Commission, Princes Trust, Veolia Trust, European Agricultural Fund for Rural Development, Resilience Foundation, Wildlife Trusts, and Areas of Outstanding Natural Beauty (AONB) grants.

Online survey participants were also asked how they believe running a local food business can provide alternative ways of accessing finance. Most participants either did not find this question applicable for their enterprises (33%, n = 43) or do not believe it helps them to access finance (28%, n = 36).

Of the participants who did believe the nature of their local businesses provide ways of accessing finance, the top five ways were:

1. Crowdfunding (25%)
2. Charitable or foundation funding (23%)
3. Community share offers (16%)
4. Private investments (15%)
5. Loans from customers or CSA members (14%)

Many participants (38%), however, have never received funding from any sources. As we demonstrate within our focus group findings, it appears this is due to a lack of awareness surrounding available funding alongside a lack of eligibility due to the size of these microbusinesses.

7. Findings: Focus groups

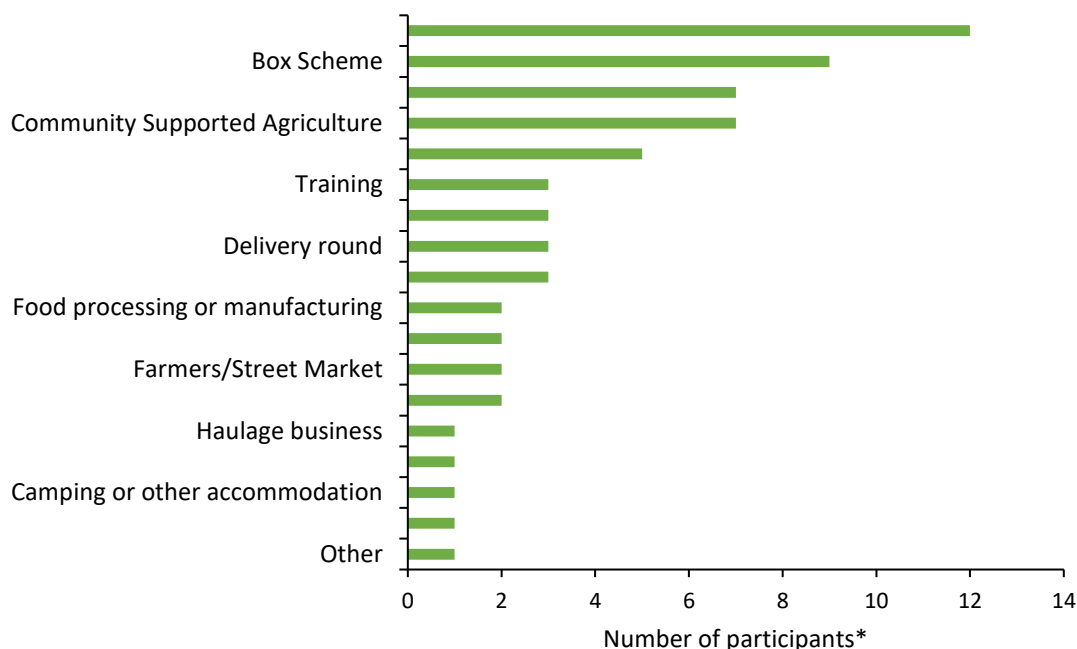
i. Focus group participant characteristics

22 LWA members were randomly selected to participate in one of three focus groups (see **Table 1**). 13 focus group participants were from England and 7 were from Scotland. Although 13% of the 132 survey participants were from Wales, there were no representatives from Wales in the random sample for the focus groups, indicating a gap for future research. Future research could aim to represent regions in the UK more widely.

The majority of focus group participants (n = 14) described their main farming or growing business as horticultural (vegetables or fruit). The remaining participants identified themselves as grazing livestock (cattle, sheep) enterprises (n= 3), or mixed (n = 3). Between the 22 focus group participants, a variety of 18 different enterprises were being operated, with each participant running between 1-7 enterprises (the majority ran between 2-4).

Figure 11 shows the enterprises operated by LWA members who participated in the focus groups; direct sales, box schemes, restaurant/catering, and Community Supported Agriculture (CSA) were among the most prominent. The nature of this diversity, as well as some key challenges and opportunities, became more apparent in the focus groups, as discussed in the following sections.

Figure 11. Enterprises operated by LWA members who participated in the focus groups.



In terms of age, just under half of the focus group participants were aged 55 and over, with the remainder aged between 35 and 54. Although a higher percentage of participants aged between 25-34 responded to the survey compared to national statistics (Defra, 2021), no participants aged below 35 were included in the random sample for the focus groups. Future research could aim to systematically represent the experiences of LWA members from younger age categories, particularly through in-depth qualitative methods.

ii. Delivering public goods through rural microbusinesses: Benefits and risks for economic, social, and environmental resilience

The online survey questionnaire showed that, in general, LWA members prioritised achieving social and environmental benefits over making a profit. This was explored in more depth in the focus groups, providing more context, detail, and real-world examples to illustrate the diverse experiences of LWA members. Members' passion, enthusiasm, and strong personal values for benefiting the environment and local communities came across powerfully in each focus group discussion. The focus group participants were acutely aware of wider, inter-related issues of climate change, food insecurity and food justice and how these relate to the governance and politics of the food system. This was accompanied by a sense of solidarity, shared goals, and mutual support between the participants. Throughout each of the three focus groups, participants shared knowledge openly and transparently (e.g., offering advice, answering questions, and sharing resources).

Three main themes emerged from the focus group which include the benefits, opportunities, risks, and barriers for microbusinesses achieving economic, social, and environmental resilience (see Figure 12). LWA members also highlighted several fundamental issues i.e., those which underpin the 'core' economic, social, and environmental themes. Potential solutions and future directions were also suggested, alongside key messages for policymakers. It is important to note that all themes are complex, interlinked, and will vary between different contexts.

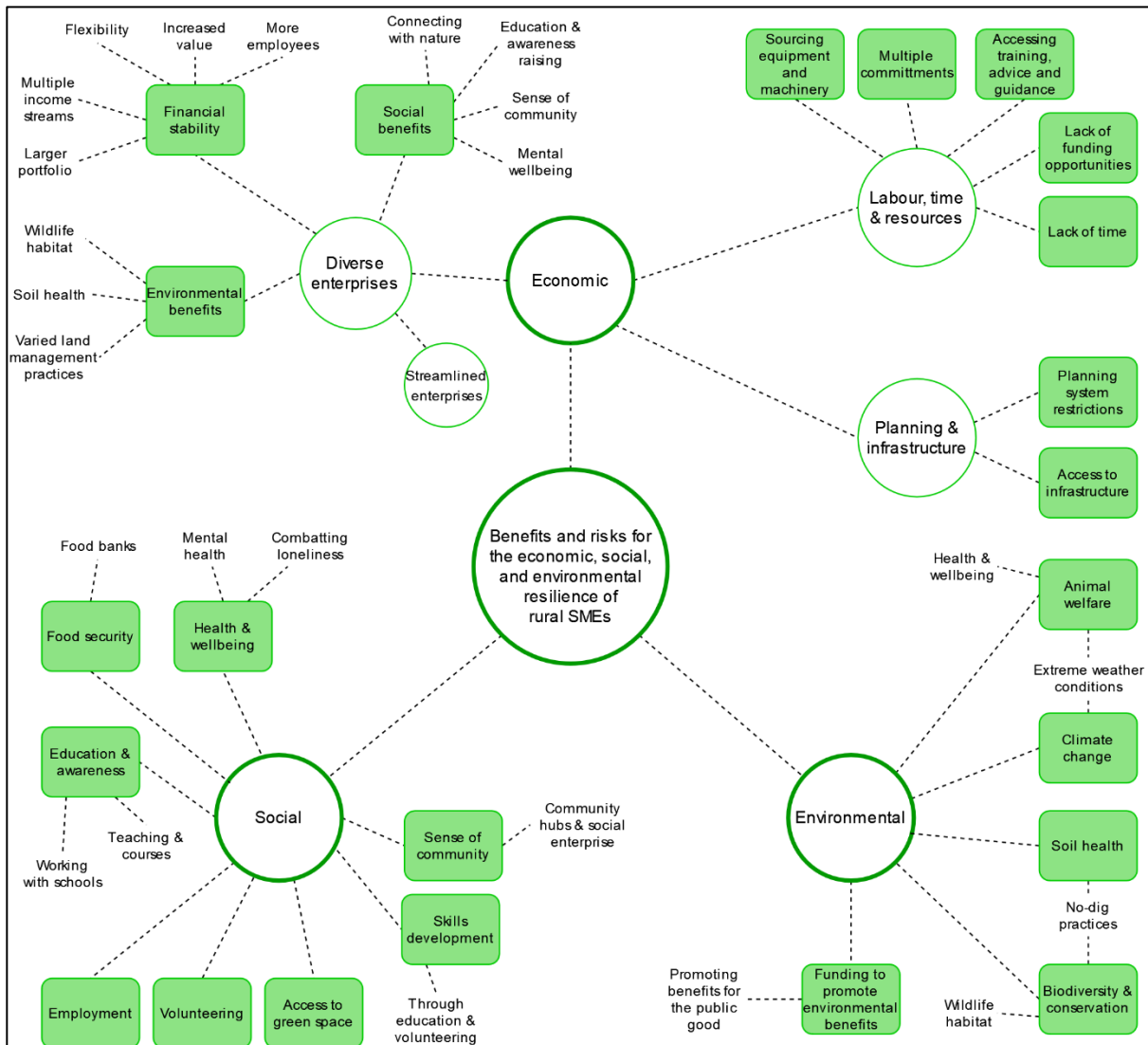


Figure 12. Benefits and risks for the economic, social, and environmental resilience of rural SMEs (focus group findings, N=3).

iii. Economic resilience: focus groups

This section explores the benefits, opportunities, risks, and constraints for microbusinesses achieving economic resilience and financial stability.

Diverse enterprises

The focus group participants provided in-depth information about the challenges and opportunities they faced when running multiple, diverse enterprises on their holdings. At the start of each focus group, participants were asked to introduce themselves. These introductions not only acted as an 'icebreaker' and enabled participants to get to know one another, but also provided rich insights into the diverse enterprises they were currently operating and areas for innovation. This provides a valuable context for the benefits, challenges, and opportunities discussed below. LWA members were very diverse and varied from self-sufficient (not-for-profit) intentional communities, and small-scale market gardens with one or two enterprises, to larger holdings with a multitude of different businesses operated throughout the year. Participants' enterprises and associated activities included box schemes (vegetables and/or meat), farmers' markets, selling to local businesses (e.g., pubs, shops, and restaurants), education and skills development (e.g., teaching on the farm and/or doing school visits), artisan products (e.g., made from wool and other animal products) and much more. Some focus group participants did not consider themselves to be businesses because they operated not-for-profit, self-sufficient communities.

Focus group participants explained why diversification is essential for financial stability and is linked to achieving wider social and environmental benefits. One reason for this is that if one enterprise fails (e.g., due to adverse weather conditions, changes in buying habits, or restrictions on working/volunteers), then there are multiple other enterprises to fall back on. The majority of focus group participants outlined the benefits of having diverse enterprises for economic resilience – describing diversification as 'just a matter of surviving' or 'not putting all of your eggs in one basket'. Others described the benefits of diversification as increasing the value of their produce, having a diverse portfolio to sell locally to customers, and being able to employ more people on the holding. In the excerpt below, one LWA member describes the benefit of growing multiple crops and having flexibility, particularly when faced with sub-optimal and unpredictable weather conditions:

Participant 5,
Focus Group 1: We're trying to diversify [...] by expanding and having more polytunnels, so we can grow more stuff early on in the season as a way to mitigate [the risk of crops failing]. By growing lots of different crops, then if something fails, like we haven't got French beans, so we'll stick in broad beans instead.

Despite all our whingeing about veg boxes, [the benefit is] the flexibility that you have if something fails... [...] I sometimes substitute and I put in apricot rather than French beans, or cabbage... there's not many things that you can do where those things are equivalent. But for us, we measure things by portions.

So that flexibility, because we grow such a range of different crops, helps balance out at the moment [...] the challenges that the weather has been bringing, but [...] who knows how possible that's going to be in the longer term.

Almost all of the LWA members who participated in the focus groups were intensely aware of the wider social and environmental benefits of having diverse enterprises (discussed in more depth in the 'social resilience' and 'environmental resilience' sections). In the dialogue below, participants reflect on the benefits of having diverse, flexible enterprises for educating local community members about seasonal produce, connecting them with nature, and fostering a sense of community.

Participant 6,
Focus Group 2: I mean, there's a multitude of different benefits. The obvious one is not having all your eggs, metaphorically, preferably, in one basket.

Participant 1,
Focus Group 2: The whole eggs in one basket idea... [...] We grow loads of different vegetables, fruit, mushrooms, and also doing dried beans, and pots of plants [...]. And because we don't buy anything in, we try and make it as varied and interesting as possible. And by communicating that to the members, you get the buy-in from them that they're tied into the seasonality of it all [...] You're reconnecting people to food really, aren't you? [...] They feel like they're part of a community, even if that just means picking up veg every week.

The quotes below suggest that diverse enterprises are also important for combatting loneliness and improving mental wellbeing. This is particularly important for farmers and growers who may work in isolation for long periods of time, enabling them to meet others and maintain a social life.

Participant 6,
Focus Group 1: We've always diversified here, just as a matter of surviving really, [...] it was essential, really, to keep the place going. [...] The other thing that diversifying has brought is [bringing together] people, who are quote remote, and if you're just straight farming, quite often you might not see anyone else from one end of the week to the next. Whereas by having livery stables, a Bed and Breakfast, and now the direct

marketing, we have a much better social life and meet more people in the course of work. [...]

And so the community is sort of building off all these farms diversifying in different ways. [...] The more diverse operations there are on farms, the more other things get to happen. So it's both financial and social, I think, the benefits of diversifying away from just straight farming.

Participant 6,
Focus Group
3: And it's diverse work as well. [...] That diversity is kind of good for the soul... It's good for mental health is what it is, it's good for your stimulation. And it's good for customers.

Other LWA members (below) discussed the benefits of having diverse enterprises for the environment and biodiversity. For example, diversification involves varied land management practices, which can benefit the environment in numerous ways e.g., improving soil health and habitat for wildlife. It is clear that the benefits of diversifying are not just economic, and LWA members were often driven by strong personal values for achieving social and environmental benefits in their local communities.

Participant 5,
Focus Group
1: In terms of the veg production, what we've tried to do is have this relatively extensive system... [...] So what we try to do is, whatever we're producing, we try to think of it as sustainability and diversity in a bigger sense, rather than just thinking "How much money can we make from the whole thing?".

[...] [Instead] going "well, how can we build an agroecological system that supports lots of different kinds of sustainability?". It's not just about our lives and livelihoods, but it's also about thinking about the local environment and all the rest of it.

Participant 1,
Focus Group
1: [Our crops are] seasonal, all year round. Which means that, from a soil and biodiversity point of view, you have different crops at different times and at different stages. So you might have a bit of bare soil here, but you might have different vegetables going over and going to flower, so it becomes a mosaic of different crops at different stages.

From the perspective of LWA members, having diverse incomes coming into the household, as well as into business, was important for operating diverse enterprises on the holding. For example, having a partner or family member with a regular income from a job outside of the farm/holding, or being part of a Community Supported Agriculture scheme.

Participant 2,
Focus Group
2: I wonder if we should talk about financial viability a bit. I mean, several people here are from CSAs. I think it would be interesting to talk about how much free labour goes into those because that

obviously is an issue, if we're talking about financially viable short supply chains.

I think from my experience in Scotland anyway, it's very rare for vegetable growers to be able to make a living without some sort of significantly financially diverse operation. [...] I worked for the health service for many years, so I got a pension. I don't lose money, but I don't make a living out of it. And that's fine for me. I suppose that a lot of situations you find there's couples, or groups of people, who are bringing in money from elsewhere. So I don't know if that's what you count as diversity.

Participant 5,
Focus Group 2: [...] We also have an off-farm income, it's a lot less than it used to be, but certainly that's the thing that keeps us going.

Participant 3,
Focus Group 2: Yeah, we also have a diverse income stream as well, but not at the moment since Covid. But sometimes we work off the farm.

In contrast to LWA members who aimed to diversify, others (e.g., the quotes below) highlighted the value of streamlined enterprises and *reducing* the diversity of the enterprises on their holding. According to these business owners, having streamlined enterprises helped to improve their financial stability as well as avoiding the potential risks of diversifying. Benefits included focusing on one particular aspect of the business due to the nature of the business or profitability, and/or available equipment/infrastructure, reducing the workload required to run diverse enterprises, and avoiding risks associated with climate change and wider political issues. On the other hand, moving away from having multiple, diverse enterprises does not necessarily mean that the streamlined enterprise/s are not diverse in themselves e.g., having one market garden on the holding which grows diverse crops. Illustrated by the quotes below, several LWA members discussed the economic benefits of having streamlined and focused enterprises.

Participant 4,
Focus Group 2: I was going to counter the remark about eggs in one basket [...] because the whole point of being a CSA like ours is that we do have all our eggs in one basket. And that basket is the CSA, and it's our membership. [...] So there are advantages to having all your eggs in one basket in the economic sense.

Participant 6,
Focus Group 2: Yeah, obviously, you know, when I say all the eggs in one [basket] [...] I mean, you know, you haven't just got eggs have you? I mean, you're producing all sorts of different vegetables.

The quotes below highlight some of the challenges associated with having diverse enterprises, which included time, labour, and other resources such as funding and staff costs. It is important to recognise that diversifying is not economically sustainable for all LWA members and, if they did want to diversify (and thus potentially achieve the benefits

discussed above associated with diversification) then additional support (e.g., funding or increased access to machinery/equipment) may be required.

Participant 1,
Focus Group 3:

I think we're going slightly in the opposite direction and trying to streamline ourselves a bit. [...] We just sold the cows because we just don't have the infrastructure [...] And really trying to just focus on the market garden and things that will complement the market garden. Our major problem is time, being a family of two little kids. I think we want to really keep it that it's just us and we don't have to get into employing people.

So, it's a real balancing act of having just enough that we can manage it and earn a living, without getting so big that we have to start looking at taking on employees [because] that would be a headache, however great that might be.

Participants 2
and 3, **Focus Group 3:**

We started with sheep, pigs, geese, and turkeys... And we just reduced down. What we've had to do is really focus in on the growing. [...] It is very apparent that financially, it's just not economically sustainable at all. And that's one of the reasons we branched out into education.

Labour, time, and resources

The majority of LWA members in the focus groups described labour and time inputs, as well as other resources like costs and equipment, as barriers to the economic resilience of their farm. Labour was often highlighted as a significant barrier for diversification or growth, with participants reflecting that although they had considered expanding their enterprises, the work involved would be too much to realistically achieve; if one person tries to do everything, they risk spreading themselves too thinly. Having diverse enterprises naturally requires a lot of time and resource input. Most of the focus group participants had a variety of different jobs and responsibilities. For example, the quotes below illustrate how some LWA members were balancing growing and selling produce with managing employees and volunteers, administration work, financial bookkeeping, marketing, running websites and social media, working jobs outside the farm/holding, as well as other personal commitments.

Participant 6,
Focus Group 3:

[...] The challenge is time. I think we're probably all in similar positions here [the LWA members in the focus group], the challenge is time, and you have to wear a lot of different hats. You have to be the farmer, and the salesperson, and the everything.

Participants 2
and 3, **Focus Group 1:**

Because it's a one person business, I want to keep it small, because I want to keep it manageable in a way. And that can be a problem. [...] The difficulty is to make everybody [their customers] happy, everyone would like me to grow more for them, but I can't. If I wanted to, I could find the land, but then it means I would need to employ people.

And at the moment, I don't earn enough money with what I do myself. [...] So I feel a bit stuck. And again, we want to stay small as well.

Sourcing equipment and machinery was described by several of the focus group participants as a way to reduce time and labour inputs (e.g., the quote below). Finding and operating machinery was frequently cited as a barrier to diversifying and expanding the enterprises on their holding. For example, it is often not easy for small-scale growers to get the equipment they need, knowing where to source it can be difficult, it's often expensive to buy and operate, and some equipment requires specialist training/skills to operate. Others suggested that having more access to cooperatives for equipment where equipment and skills are shared could help significantly with growing, processing, and selling their produce.

Participant 5,
Focus Group 1: We'd reached the point where I was like "we're not going to grow any more beans until I can mechanise the process". Because we can't grow enough to make it worthwhile to stick a combine on there. [...] Unless you've got people who can build those bits of gear for you, or source that bit of kit, that actually becomes really difficult. [...]

We could have more cattle, we could maybe grow a heritage grain for Hodmedods as well, or something like that. You know, it'd be easier to do those kinds of things. But the thing that's stopping us scaling up like that is those extra specialised bits of kit that we would need to be able to do that and make it a viable thing to do.

Similarly, accessing skills and education can be a barrier to running diverse enterprises. This is illustrated by the quote below. Although LWA members expressed interest in expanding their business, they expressed that developing the necessary knowledge, skills, and expertise can require a significant amount of time (equally, it can be difficult to access training). Some participants described diversifying as learning new skills. Others, such as the LWA member below, pointed out that class and education inequalities were inherent to this issue:

Participant 5,
Focus Group 1: [...] It's something that's never talked about, and I think it's really important, [is] the issue of class in all of this. You know, to be a successful grower... [...] it's hard to do these things by yourself. The people, I think, who do the best diversification are the people who have perhaps already got the land and a whole bunch of stuff behind them.

These challenges can also be linked to the lack of funding opportunities to support diverse enterprises in small-scale growing businesses:

Participant 5,
Focus Group 3: I think, especially for diversification, the capital costs compared to the amount of money they bring in from enterprises. It's just a lot for people to afford. We did have some Young Farmers support... But

once you're out of that [Young Farmer] category, then then getting the funding set up was really challenging.

Democratising land use (for example, by being part of CSAs or running community farms) was raised as another solution for sharing labour, skills, resources, and costs. For example, in the excerpt below, one LWA member describes the benefits of being part of a community farm:

Participant 5, **Focus Group 3**: [...] We're a community farm. So, we have a whole load of different projects, [...] we have the market garden, we have someone who does apple trees and plum trees, someone to do flowers, someone to do basket willow... And then we collaborate, we pool resources, we share workdays, we share open days, we share a little shop.

In our scenario, people can really focus on their thing, they can help guide the other person when they need it, or we can get together... And so I do think having all the different people on our farm, and the amount of employment that it's generating [...] feels really great.

Having volunteers working on the farm/holding was also frequently mentioned as a way to pool labour and skills, achieving mutual benefits for both the owners of small businesses and the volunteers. However, from the perspective of the business owner, this brings up more challenges with regard to the time and commitment needed for effectively managing volunteers, including a lot of administrative work, and ensuring that they are having a valuable, productive, and comfortable experience. From a health and safety perspective, others raised the issue of obtaining the right insurance to have workers and volunteers on their holding (e.g., participants swapped experiences and advice regarding insurance for workers, volunteers, visitors, etc., during the focus groups). With regard to paid workers, there were yet more complexities as business owners were concerned that they may not be able to adequately support their workers, for example by paying a living wage and providing on-site accommodation, particularly within the context of rapidly rising living costs in the UK.

Planning and infrastructure

LWA members frequently discussed the impact of infrastructural and planning issues on their ability to achieve/maintain economic resilience (e.g., the quote below). This included access to abattoirs and processing sites, as well as wider, more systemic issues relating to the UK planning system. Bureaucracy, restrictions, regulations, and legislation were inherent in? these problems.

Participant 4, **Focus Group 3**: One of the problems we have as well, locally, is that we used to have three abattoirs within the eight-mile radius. And now our nearest abattoir is 18 miles away, [also] when we want to take anything to get butchered, you're never even sure that you're getting back what you've taken in, because there's that much going through the abattoir.

Not only were abattoirs difficult to access, but there can also be restrictions on what animal products can be retrieved. This caused further issues for diversification and economic resilience of small-scale farmers:

Participant 5,
Focus Group 2: [...] We're using fleeces, we're now moving into doing felted rugs which are quite popular. We're trying to get the horns back so we can do crafting to make horn work and stuff like that. But that's very hard, to get the horns back from the abattoir.

Participant 6,
Focus Group 2: [...] Trying to get horns from the abattoir was just ridiculous. [...] The legislation, even with the sheepskins, which did get slightly better, but there's so much bureaucracy nowadays which is a real brake on all sorts of initiatives.

The planning system was also a significant barrier to small-scale growers and farmers. These issues are illustrated by the quotes below. Gaining planning permission for on-farm buildings, accommodation for workers, polytunnels and other infrastructure for growing was described as unclear and problematic. Precarious renting contracts were also an issue, for example achieving long-term economic, social, and environmental benefits is difficult when leases for land are short-term and/or have break clauses. Wider issues included the amount of agricultural land and other green space being sold to housing developers, which could have otherwise been used for food production.

Participant 1,
Focus Group 1: The biggest challenge we've got [...] is being able to retain people working on the farm. Not because they don't want to, but they just can't afford to. And the cost of renting a property has [...] gone up astronomically. [...] I put in a planning application three years ago to convert a barn for accommodation [...] for someone working on the vegetable farm. And it got turned down because they said, "you're not a livestock farm, you don't need someone living on the farm".

Participant 7,
Focus Group 2: Planning for things like polytunnels and infrastructure for growing [is an issue], because they're just not sympathetic to that around here and there isn't enough grown... We can't grow enough tomatoes if you don't let us put up some polytunnels.

iv. Social resilience: focus groups

In addition to the benefits (discussed in the previous sections) that operating diverse enterprises brought for local communities, LWA members highlighted the wider social benefits that can be achieved through small-scale farming and growing. These included reducing food insecurity through food donations (e.g., contributing to food banks), increased opportunities for employment, promoting the development of skills (e.g., through on-farm teaching and volunteering), fostering a sense of community (e.g., through community hubs and other social enterprises), and improving the health and wellbeing of local community members (e.g., by producing healthy food, encouraging working outside, combatting isolation and poor mental health). Some focus group participants worked closely with local schools, for example, by running farm visits and teaching sessions. Others offered opportunities for groups of adults, who otherwise may not have good

access to green space and work/volunteer opportunities, to come and work outside on their land.

All of the focus group participants had an awareness of, and passion for combatting, social-environmental issues in their local area and more widely. The excerpts below highlight the array of social benefits that can be achieved through supporting small-scale growing and farming, such as for improving food security and transforming social relationships.

Participant 7,
Focus Group 1: [...] Sometimes when we've got more tatties [potatoes] than we can use, any surplus we have, we give it away. And recently, we realised we could ask people and invite them to come and dig their own, rather than us doing it. And of course, with Covid, [...] that's when we started taking food to the local food banks and stuff.

Participant 5,
Focus Group 1: We've also [...] started working with the local food bank. There's both a local school and a couple of community kitchens where we just deliver stuff twice a week that's surplus and good quality. [...] You know, it feels like everybody should be having access to this stuff, it shouldn't just be middle class people who can afford nice vegetables. [...]

For us, it's always about trying to think about how to make it a real possible thing for everybody. Which is, again, why we never have any money, you know, but because we don't just sell expensive salads to restaurants. And I know that's the way that you can make much more money. But for us, the politics behind it has always been really important.

Participant 6,
Focus Group 1: [...] Spare food from the community garden is free to anyone who helps there. [...] And? very little money's been involved. And it's completely transformed the society and relationships between farmers in the local town. And it's just been amazing to see.

Diverse social benefits achieved by rural microbusinesses also included teaching, facilitating on-farm tours and visits, and developing skills with workers, volunteers, and members of the local community. For example, the LWA member below worked with local schools to educate children and young people about the benefits of growing and healthy food.

Participant 4,
Focus Group 1: [...] On this sort of local community involvement, I work part time at the local primary school and in various other schools in the area. So, our local school really benefits from just growing stuff there. I donate seedlings or teach the kids [growing] skills [...] so they know what grows, when and how to do it. [...] I want to add to that with the vegetables I grow, and create a "Grow, Cook, Eat" club for families after school so they can learn as well.

The LWA member in the excerpt below demonstrates how funding is essential for achieving public goods for people and nature. They ran a questionnaire with their volunteers to measure what benefits were gained from their experience, including improvements to their social life, health, and wellbeing.

Participant 7, Focus Group 3: [...] We provide training, and community [the community hub], and food for people. And by doing all those public goods, and goods for biodiversity, has helped our business loads because that's what we're funded to do. So yeah, that's absolutely intrinsic to what we do. [...] And we have seen that people are benefiting from coming and volunteering with us, and their mental health might have improved, or they've made friends, or they're eating better. So we're measuring those things [by running a questionnaire], which is really good, because we've proven where we're making a difference.

Access to funding for achieving public goods was raised an issue. As discussed in previous sections, labour and time constraints are a significant barrier to achieving wider social benefits. In addition, not all LWA members were living in areas with close-knit communities with easy access to colleagues and neighbours, which can be a barrier to collaborative working and sharing the benefits of small-scale growing/farming:

Participant 2, Focus Group 2: And there are huge social benefits as well, in terms of increased employment, [and offering] different sorts of employment. But certainly, where I am, the number of organic and small-scale enterprises is incredibly low. And I'm always very jealous of people in the Southwest of England, because they have colleagues and neighbours and things, which, you know, are thin on the ground around here.

v. Environmental resilience: focus groups

Focus group participants discussed a variety of challenges and opportunities for small-scale farmers and growers achieving environmental benefits. These are discussed, to an extent, in previous sections in relation to the benefits of operating diverse enterprises (e.g., that diversification offers more flexibility and resilience in the wake of environmental challenges). This section includes some additional considerations for improving the environment, including benefits for biodiversity and conservation, animal health and well-being, creating habitat-rich environments, improving soil health, and so forth.

One of the main environmental benefits raised in the focus groups was improving biodiversity and species conservation. This was achieved through a variety of different, mostly organic, agricultural practices. For example, LWA members were creating diverse habitats for wildlife by planting trees, growing diverse crop types, letting land lie undisturbed to promote grass and wildflower growth, as well as monitoring species. The majority of participants viewed biodiversity and environmental conservation as intrinsic to their agricultural practices.

Participant 3, Focus Group 2: We almost can't do what we do without biodiversity. It's endemic, I think in our practice, and the better the biodiversity is, the better our growing experience is.

Participant 1, Focus Group 2: [...] We [engaged with the academic community to] put a bat detector in the field for three days. And of the 14 different types of bats in the UK, nine different varieties were found on the field, which was pretty awesome. I thought it was a pretty cool indicator that what we're doing is good for the bats. Obviously, being organic, and even though we do plough and things, there's plenty of bits of ground so that there's hedgehogs and all sorts of things about.

Just under half of the LWA members in the focus groups used 'no dig' practices - a way of growing food, with a rich and complex history, which avoids digging and disrupting the soil life. Many choose to grow no-dig to help protect important microorganisms, worms, and fungi, improve soil and plant health, as well as keep nutrients and carbon locked in the soil. In the excerpt below, one participant highlights some of the benefits gained from improving soil health and biodiversity:

Participants 2 and 2, Focus Group 3: [...] When we first came here, the land had been running sheep for decades, [...] with chemicals and fertilisers and all the rest of it. We now operate no dig, and we planted trees, and all sorts of different things. And the range [of] biodiversity is just unbelievable. We just stand there open-mouthed sometimes... The different types of birds that come through, and the quantity of worms that we've got, and all this sort of thing. It just makes us so happy; we just want to sort of roll around in the soil because it's that healthy. But it's taken a long time to get there.

Others described the importance of funding for expanding and monitoring enterprises which promoted benefits and services for the public good. For example, one participant, who was part of the ELM test and trials, was able to document the benefits that their land use practices were achieving for people and the environment.

Reflecting the survey findings, many focus group participants were concerned about increasingly extreme and unpredictable weather and climate change. Issues relating to weather and climate were also linked to economic resilience, for example adverse weather conditions increased the likelihood of crop failures, changing growing speeds and qualities, and poor animal health. This often necessitated more financial, labour, and time inputs. Some of these issues are illustrated by LWA members in the excerpts below.

Participant 4,
Focus Group
2:

I think, the most difficulties [we have] is with climate change. And with the weather systems. We always have extreme weather in Cornwall [...] but we are having real problems with frosts when we shouldn't get them, gales when we shouldn't get them, heat waves when we might get them, and so on. [...] One of the things we are suffering from is vegetables reacting in a funny way, [...] the other day we harvested a whole lot of spring cabbages which shouldn't have been ready until about March.

[...] It'll affect the variety of what we can grow at the moment, because we do grow 60 or 70 different varieties of vegetables. So climate change, I'd put at top of the list when it comes to resilience and having to be adaptable.

Participant 5,
Focus Group
2:

[...] The climate here up in North Devon [...] is wet at the best of times. And it's got wetter. That affects the ground, that affects the sheep, that affects the sheep's feet... We're seeing the parasite burden get bigger and be around for longer, which means you then end up using more wormers. It's more expensive, [and] you don't want to use wormers because that's basically an insecticide. And so, you kind of get stuck.

vi. Key considerations for the future: food systems, politics, and power

As demonstrated by the previous sections, LWA members were passionate about achieving economic, social, and environmental resilience through diverse and integrated practices. More fundamental issues relating to the wider food and political systems in the UK were raised as a significant barrier to the sustainability of small-scale enterprises. The underlying issues raised by participants included the need to educate the public and promote more positive attitudes towards small-scale, locally produced food, and to provide more funding and investment opportunities. They felt that small-scale enterprises need to have a larger role and more power in UK food markets, which are currently dominated by supermarkets and imported produce. It was also important to lift constraints and obstacles put in place by the planning system and related regulations/legislation. Furthermore, LWA members valued the opportunity to share knowledge with like-minded individuals, hear what others were doing to mitigate risks and overcome obstacles. As such, the need for more opportunities for collaboration, developing support networks, and mentorship was emphasised as a key priority for the future (as supported by Winter et al, 2016). Some of these underlying, fundamental issues are highlighted in the bullet points below, supported by quotes from LWA members.

Changing attitudes towards small-scale, local, and seasonal food

LWA members highlighted the need to educate members of the public and help change prevailing attitudes towards small-scale, local, and seasonal food. For example, the quote below describes issues with selling imported and out-of-season food, emphasising the need to "introduce seasonality back into the public consciousness".

Participant 6,
Focus Group 2: [...] education is key, I think, to getting people to realise that there's more to life than going to the supermarket, where there might be lots of choice, but it's only the choice that you're provided with. [...] You've got supermarkets in this country that are selling asparagus from Peru in the height of the asparagus season. I'm sorry, that is just ridiculous. We need to introduce seasonality back into the public consciousness.

In quote below, another LWA member raises food prices as a key challenge for small-scale enterprises, which can make it difficult for them to make a profit (thus impacting their long-term resilience). This highlights the importance of small-scale and local growers/farmers being able to receive a fair price for their produce.

Participant 1,
Focus Group 3: The biggest, hardest thing for a lot of people doing stuff like us is the price of food. [...] It's just a product of the cheap energy that's swirling around the world at the moment. [...] The biggest obstacle for us is making a decent living, rather than just a living, off farming [considering] how cheap it is in this country to go to the supermarket and buy obscene amounts of really cheap imported food, or really cheap British food as well.

The need for government funding and support

The focus group participants emphasised the need for funding for small-scale growers. In the quote below, the LWA member describes the importance of recognising the value of smaller scale businesses and increasing their eligibility for support through government (or EU) funding schemes.

Participant 4, Focus Group 2: There's lots of... so many things you can do on a smaller scale. And what we need is recognition, as someone said, and we need grant funding, because those of us operating under, you know, on under 10 acres or so or four hectares, or five hectares, or whatever it is, haven't received any funding from the government, or from the EU for that matter, to do that kind of thing.

The quotes below provide one example of how funding can be essential for supporting small and diverse businesses. In this situation, funding through the Big Lottery and European Union was essential for developing the business and increasing its resilience (e.g., through having more diverse enterprises, more employees, and volunteers). However, the LWA participant below reflects that this funding will come to an end, which means that their business must find new ways to adapt to remain resilient.

Participant 7, Focus Group 3: So we initially started out with lots of funding from Big Lottery and from the European Union. The reason why we're starting up is the CSAs, these small businesses, is so we can become resilient because all that funding is going to come to an end at some point. [...]

[...] So Big Lottery has been incredibly important for us, and the European Union as well. And that funding because [of what] we provide, they're called social programmes. And so that we've created ourselves and they're often centred around, because we're a permaculture site, to just teaching people how to grow their own food, or sustainable lives, and just build more wellbeing. And we've been really successful in [that], but when we get funded to do those programmes, we're often able to employ more people, and also get more volunteers sort of through our doors, and have really good outcomes. And [...] the European Union funding is going to come to an end soon, obviously. And as yet, we can't see anything. But there is this possibility in social prescribing is one way we might be able to continue getting funding. But the training and education looks like a really good way forward.

Food systems, politics, and economic markets

The LWA participants highlighted constraints on small-scale food production caused by a lack (and/or reductions to) food markets. For example, the quote below describes how a lack of markets is one of the biggest obstacles for farmers and growers selling locally.

Participant 1,
Focus Group 1: The main barrier for us, or any farmer selling their stuff locally, is a complete lack of markets. I've just brought up the grocery market share [data] by Kantar. The reality is that 95% of all groceries are sold through the nine retailers, and [around] 2% sold through singles and independents, and 2% other outlets...

In the quotes below from Focus Group 2, the LWA members raise issues regarding the "critical mass" of agriculture and the impact of Brexit on food markets.

Participant 5,
Focus Group 2: There's another issue for us, which is around what I'd call the "critical mass" of certain types of agriculture. Brexit is already biting here, [...] we could see the mass lamb market wiped out and farmers up here will not be able to compete.

To help mitigate the risks to food markets, another LWA member reflects that a system-wide change is needed which values small-scale businesses as well as larger ones. This links with points made by other participants regarding the lack of recognition from government and policymakers of the important role of smaller-scale enterprises.

Participant 2,
Focus Group 2: We need to make a system-wide change in which small-scale enterprises have a role, and also the larger ones. [...] I don't think we need to set the two things against each other, I think they're complementary. [...] I think there's a danger of policymakers thinking [rural microbusinesses are] all very pretty and maybe nice for tourists occasionally, but it's not really shifting the system as a whole. And to me, that's what I think is needed.

The LWA member (below) reflects how small-scale businesses are also overlooked by (local) planning systems, emphasising the importance of providing land for small-scale growers to provide food for their communities.

Participant 7,
Focus Group 3: [...] I wish planners would give us more land [to allow us to] grow more food for our communities. I think that's a big challenge, getting them to see that it's not about just putting a supermarket in, it's leaving space for small-scale growers to provide for their community. [...] We need these growers in place to connect people with their food.

Climate change and environmental resilience

As discussed in previous sections of this report, climate change was perceived to be a significant challenge for the resilience of small-scale growers and their wider communities. LWA members highlighted key considerations for the future. For example, the participant below describes the need for a radical change within food/agricultural systems.

Participant 7,
Focus Group 1: [...] The reason we've got climate change is because of capitalism, neoliberalism, big corporations, people thinking they can just use what Mother Earth gives them and make money from it. And they don't care that it's leading to the death of probably all species on the planet. And maybe that's all a bit radical. But it's exciting for me to hear that people are actually almost being forced to do something different because, as our own government seems completely intransigent. [...]

Why is it legal [...] [to destroy] the land, to plough it up, to pull up every piece of soil, to dig it up so all the carbon goes into the atmosphere...?

Collaboration, mentorship, and support networks

LWA members highlighted the benefits of collaborating and sharing knowledge with their peers, which could include being part of an organisation like the LWA. For example, the quotes below highlight the importance of training (e.g., on the specific skills needed for small-scale growing), mentorship (e.g., learning new and alternative practices from others), building a sense of camaraderie (e.g., between those who share experiences), and providing a framework for political action (e.g., helping to create change by coordinated action and working together).

Participant 5,
Focus Group 3: There's a lot of [training opportunities] [...] like "introduction to marketing" and stuff, but they're really low quality courses, and having some proper training that has some depth and quality to it [would be useful]. I certainly think it would be an area where Landworkers' Alliance could focus on, because marketing for producing food is quite specific.

Participant 8,
Focus Group 3: I would like to be able to find some mentors, people that have walked this path before. [...] Finding mentors of people who are doing things differently... that's the thing I'm finding really hard. It's just finding a network of people with more experience who are willing to share their experiences. [...] I'd love to find people who are trying to do what we're doing, or maybe a few years ahead, who could say what worked and what didn't. But it's not easy to find.

Participant 5,
Focus Group 1: One thing that I really appreciate about being part of the Landworkers Alliance is that it provides and articulates the political framework that a lot of us feel that we're working within. [...]

We need to, at a really deep level, think through the structures that underpin our agricultural production [...]. And I think the LWA has been really good at articulating all those different steps and making a political case for that.

8. Key conclusions

Our report provides a range of data-informed insights significant to developing rural food systems, agricultural sustainability, and rural innovation. We have found that the participants from the LWA tend to be younger than their farming peers and run smaller enterprises. They are more likely to be new entrants and do not necessarily identify as 'farmers' having started to produce sustainable, healthy, local food. Most operate a portfolio of enterprises diversified mainly in the food system, processing and retailing food rather than selling along the food chain or servicing the agricultural sector. To that extent, they are members of the local food sector, with 90% selling their products within 25 miles of their business and 40% within five miles. Although many are owner-operators, a sizeable minority employ others. Given the scope and demands of these portfolios of enterprises, diverse skills and a highly entrepreneurial outlook are standard requirements.

These businesses' social and environmental engagements are the primary motivation for the business operators, with profit as means to these ends. Volunteering opportunities are a crucial offer from these businesses, which brings a cascade of benefits to all those involved. Improving and regenerating the farmed environment is an equal priority, with aspirations to protect the soil, deepen the resilience of the farm biodiversity and minimise pollution. In these ways, these diverse, complex and sophisticated clusters of small enterprises are making a distinctive contribution to the rural economy.

The challenges reported are accessing appropriate finance, under-developed markets, insufficient targeted business support, inflexible planning arrangements, and agri-environmental schemes that do not (yet/much?) embrace this group. This group falls between many policy stools, as they are not traditional or conventional farmers, but not just food or catering businesses. Yet, it is clear that they are focused on delivering many of the public goods to which government policy is now committed. The resilience and innovation they bring to rural areas are essential to this diversity of businesses that is helping rural areas to thrive.

9. Recommendations for action

Governance in rural areas is a complex network of state, private and civic actors, all of whom can and should act. As this report notes much of the innovation this research highlights has been achieved with very little support other than the mutual assistance of those in the local food network. An infographic outlines our recommendations, followed by a detailed overview of each suggestion.

NICRE
National Innovation Centre
Rural Enterprise

Land Workers Alliance

CCRI

DEVELOPING RURAL FOOD SYSTEMS, SUSTAINABILITY & INNOVATION: 10 RECOMMENDATIONS FOR ACTION

1. Eligibility for agri-environmental support for smaller farms & holdings
2. Support businesses that benefit wellbeing & the 'green mind'
3. Expand permitted development for farm & horticulture buildings
4. Provision of affordable rented property for agricultural workers
5. Business support packages focused on environmental and social outcomes
6. Machine rings focused on small-scale agriculture and food processing
7. Support initiatives to provide regional Dynamic Procurement Systems (DPS) schemes
8. Increased renting out of small parcels of land for smaller enterprises
9. Framework for developing novel skills to future-proof businesses
10. Supporting opportunities for local producers to supply good quality staples into food justice and solidarity networks

Source: Chivers, C., Hafferty, C, Reed, M., Raseta, S. Exploring the socio-economic innovation capacities of rural food, farming and forestry small-medium enterprises. NICRE Research Report: August 2022

Detailed recommendations for action

1 - **Eligibility for agri-environmental support.** With the UK's new approaches to agriculture and environmental policies, there is an opportunity to direct more support to smaller farms and holdings. This group of farms focused on sustainable food production would appear to be **an ideal target group for multiple public goods delivery and engagement.**

2 - It is clear that **working closely with nature and gardening have positive mental health benefits.** Public Health bodies could consider furthering their existing use of social prescribing and foster additional approaches for supporting growing and farming businesses that provide public opportunities to participate in activities that benefit the 'green mind'.

3 - Planning guidance and practice should look to extend permitted development to all farm and horticultural holdings, with a focus on infrastructure - specifically polytunnels, packing sheds and barns, whilst ensuring they do not result in significant degradation of rural landscapes, a key part of British heritage.

4 - A fundamental brake on all agricultural development is the availability of appropriate housing for workers. Housing associations should provide **affordable rented properties specifically for agricultural workers.**

5 - **Business support packages** often fail to focus on businesses looking to optimise public goods rather than maximise profits, although the latter fulfil key policy goals. Enterprise support should be available to advise, upskill and guide those entrepreneurs focused on social and environmental outcomes.

6 - For small businesses, the equipment can prove to be a barrier; significantly, with a portfolio of enterprises, equipment needs can rapidly multiply. **Machinery rings focused on small-scale agriculture, and small-scale food processing** could be formed on a county basis to help businesses in their first steps.

7 - Many of the **problems of small markets can be overcome through technologies such as Dynamic Procurement Systems**, as identified in the English National Food Strategy. These systems allow small volume aggregation, selection against criteria other than price alone, and efficient delivery options. Public authorities and sympathetic businesses should support initiatives to provide regional DPS schemes (see [Dynamic food procurement in the UK](#)).

8 - Access to land and the chance to start a food-producing business are closely linked, with many people excluded from the opportunity by price and/or a lack of collateral assets. There is a clear opportunity for local authorities, charitable landholders such as the National Trust, and private estates to consider **renting out parcels of land for smaller-than-usual agriculture-based enterprises.** There is a desire by many in this movement to operate businesses at a smaller scale and in ways that provide meaningful social and environmental benefits.

9 - An explicit component of these businesses is transformative resilience, with a need to adapt during the various stages of adaptation: growth, equilibrium, collapse and reorientation (see SUREFARM, 2022). Therefore, **future-proofing businesses requires a framework for developing novel skills**, which should be the basis of a specific training programme.

10 - In response to the domination of the supermarkets, many small food businesses have focused on the niche and artisanal, whilst sustainability and public health goals seek to address the production of staple foods. There is an **opportunity for local producers to supply more good quality staples to the food justice and solidarity networks** of food banks, community fridges, food projects and kitchens, whilst being mindful of their own need to remain financially viable.

References

Birtalan, I.L., Neulinger, A., Racz, J., & Bardos, G. (2019) Community supported agriculture membership: The benefits of spousal involvement. *International Journal of Consumer Studies*, **44**, 172-180.

Defra (2018) Business management practices on farms, England 2016/17. [Online]: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/682764/fbs_businessmanagement_statsnotice_22feb18.pdf. [Accessed 15/12/2021].

Defra (2020) Farming statistics – land use, livestock populations and agricultural workforce at 1 June 2020 – England. [Online]: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/928397/structure-landuse-june20-eng-22oct20.pdf [Accessed 15/12/2021].

Defra (2021) Agriculture in the United Kingdom, 2020. [Online]: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1034693/AUK-2020-19nov21.pdf [Accessed 07/12/2021].

Hayward, M.W., Scanlon, R.J., Callen, A., Howell, L.G., Klop-Toker, K.L., Blanco, Y.D., *et al.* (2019) Reintroducing rewilding to restoration – rejecting the search for novelty. *Biological Conservation*, **233**, 255-259.

Ingram, J., & Kirwan, J. (2011) Matching new entrants and retiring farmers through farm joint ventures: Insights from the Fresh Start Initiative in Cornwall, UK. *Land Use Policy*, **28**, 917-927.

Jisc (2021) Online surveys. [Online]: <https://www.onlinesurveys.ac.uk/> [Accessed 17/11/2021].

- Lobley, M., Butler, A., & Reed, M. (2009) The contribution of organic farming to rural development: An exploration of the socio-economic linkages of organic and non-organic farms in England. *Land Use Policy*, **26**, 723-735.
- Mills, J., Gaskell, P., Ingram, J., & Chaplin, S. (2018) Understanding farmers' motivations for providing unsubsidised environmental benefits. *Land Use Policy*, **76**, 697-707.
- Morris, C. & Buller, H (2003) The local food sector: A preliminary assessment of its form and impact in Gloucestershire. *British Food Journal*, **105**, 559-566.
- National Food Strategy (2021) National Food Strategy. *Chapter 16: the plan*. [Online]: <file:///C:/Users/s2117566/Downloads/National-Food-Strategy-Chapter-16.pdf> [Accessed 16/12/2021].
- Nye, C., & Lobley, M. (2021) Farm labour in the UK: Accessing the workforce the industry needs. *University of Exeter Technical Report*.
- Pettorelli, N., Barlow, J., Stephens, P.A., Durant, S.M., Connor, B., *et al.* (2018) Making rewilding fit for policy. *Journal of Applied Ecology*, **55**, 1114-1125.
- SUREFARM (2022) The project. [Online]: <https://www.surefarmproject.eu/about/the-project/> [Accessed 13/05/2022].
- State of Rural Enterprise report (2022) The effects of the Covid-19 pandemic on rural businesses: experiences and resilience. *Report to NICRE*, 1-61.
- Sutherland, L-A., Barlagne, C., & Barnes, A.P. (2019) Beyond 'hobby farming': towards a typology of non-commercial farming. *Agriculture and Human Values*, **36**, 475-493.
- UK Government (2021) 22. Agricultural and forest area in environmental management schemes. [Online]: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1025324/22_Agri-environment_and_forestry.pdf [Accessed 08-12-2021].
- Taylor, L (2020) Successful succession. *Land*, p24. [Online]: <https://www.proquest.com/openview/e3f6516bbfb08bf9fd0e118e2c972b57/1?pq-origsite=gscholar&cbl=2028823> [Accessed 16/12/2021].
- Thorsøe, M., Noe, E., Maye, D., Vigani, M., Kirwan, J., Chiswell, H., . . . Loveluck, W. (2020). Responding to change: Farming system resilience in a liberalized and volatile European dairy market. *Land Use Policy*, **99**, 105029. doi:<https://doi.org/10.1016/j.landusepol.2020.105029>
- Winter, M., Lobley, M., Chiswell, H., Howe, K., Wilkinson, T., & Wilson, P. (2016) Is there a future for the small family farm in the UK? A report to the Prince's Countryside Fund.

Other Research Reports are available on the NICRE website www.ncl.ac.uk/nicre/research/publications The views expressed in this review represent those of the author and are not necessarily those of NICRE or its funders.

For further information about NICRE:

Email: nicre@newcastle.ac.uk

Visit: www.ncl.ac.uk/nicre

Twitter: [@NICRErural](https://twitter.com/NICRErural)

LinkedIn: [National Innovation Centre for Rural Enterprise](https://www.linkedin.com/company/nicre)

Facebook: [@NICRErural](https://www.facebook.com/NICRErural)

Founding research partners:



Funded in partnership with:



Founding business partners:

