

# Output of EIP Projects Template

**TITLE:** Farming for Biodiversity (KTIF/035/2020)

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## **PROJECT PARTNERS:**

### **Advisor**

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### **Farmers**

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3. Tony Bown, Newholland, Orkney, KW17 2SA
4. Robert Brewster, Easter Denoon, Forfar, Angus, DD8 1SY
5. Robert Campbell, Wester Logie Farms, Logie, Fife, KY15 4SJ
6. Lynn Cassells, Lynbreck Croft, Grantown on Spey, Highland, PH26 3NN
7. Doug Christie, Durie Farms, Leven, Fife, KY8 5RF
8. Heather Close, Littleton Farm, Girvan, S. Ayrshire, KA26 9JS
9. Sam Parsons, Balkaskie, Easter Kellie Farm, Anstruther, Fife, KY10 2RF
10. Katharine Sharp, Achpopuli, Inverness, Highland, IV3 8LB
11. Erlend Spence, Beaquoy, Dounby, Orkney, KW17 2HY
12. Charley Walker, Barnside Farm, Duns, Borders, TD11 3TX
13. James Yoxall, Howemill, Huntly, Aberdeenshire, AB54 4YL ("the Parties").

## **PRACTICE "ABSTRACT" SUMMARY**

This innovation project brought together a group of farmers, supported by a facilitator and expert advisors, to develop a benchmarking framework for 'mob grazing' (a type of regenerative grazing) and promote its environmental, social and economic benefits to more farmers in Scotland – helping wildlife, building business resilience and increasing farmer well-being.

A range of benchmarking techniques for monitoring have been developed and are easy to understand and implement. They also have the potential to generate useful data and are a good for assessing the biodiversity associated with grassland habitats. A key feature is that the benchmarking techniques can be used in a mob grazing situation or a more conventional grazing situation and have potential to link with parallel work on developing 'payment by results – outcome led' support schemes.

Supporting farmers to tell their story is incredibly powerful and farmer videos can have a wider reach than other types of content. View the project's 52 videos here on Soil Association Scotland YouTube's Mob Grazing [playlist](#) and visit the Mob Grazing in Scotland resource [hub](#).

**KEYWORD CATEGORY:** Agricultural production system

**PROJECT STATUS:** Completed

**MAIN FUNDING SOURCE:** Rural Development

**PROJECT PERIOD:** 1 June 2020 to 17 March 2021

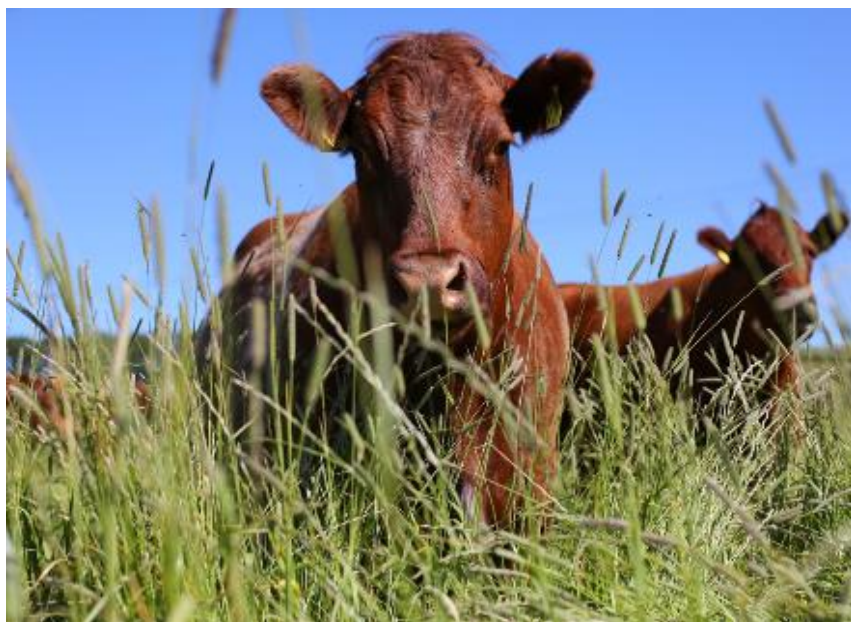
**GEOGRAPHICAL LOCATION:** City of Edinburgh, Aberdeenshire, Angus, Fife, Highland, Orkney, Scottish Borders, South Ayrshire

**TOTAL SPEND:** £52,535

**FINAL REPORT:** follows next



## **Soil Association Scotland Farming for Biodiversity Operational Group**



**Final Report for  
KTIF/035/2020**

**March 2021**

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## APPENDICES

Appendix 1: Meet the mob grazers

Appendix 2: Set of benchmarking tools (appended as a separate set of documents numbered 2.1 to 2.7)

Appendix 3: Video resource list

Appendix 4: Case study

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## 1. PROJECT TITLE/APPLICANT

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### 1.1 Title

Farming for Biodiversity Operational Group: KTIF/035/2020

### 1.2 Overview of Soil Association Scotland

[The Soil Association](https://www.soilassociation.org/)<sup>1</sup> established in 1946, is the UK's leading charity working for healthy, humane and sustainable food, farming and land use. The Soil Association is registered with the Charity Commission for England and Wales, charity number 206862 and with the Office of the Scottish Charity Regulator, charity number SCO39168.

The Charity has a wholly owned subsidiary Soil Association Certification Limited, the UK's largest organic certification body. This is run as a not-for-profit company that delivers parts of the Charity's strategy and generates financial returns that are put back into the Charity's wider work. It also audits other schemes including FSC and PEFC forestry standards. The Charity is a company limited by guarantee and governed by Articles of Association. The governing body of the Charity is the Board of Trustees, who are also the directors for the purposes of company law. The Soil Association (charity and certification body) currently employs around 240 people across the UK, with 22 full-time equivalent staff based in Scotland. Income to the Charity for the financial year 2019/20 was £9,208,000, with around 10% of that income attributable to Scotland. Income is received from a range of sources including government grants, trusts and foundations, programme partner organisations and private donations.<sup>2</sup>

[Soil Association Scotland](https://www.soilassociation.org/our-work-in-scotland/)<sup>3</sup> was created in 2002, to provide a focus for the Charity's work in Scotland. The Charity has a long and successful track record of working with the Scottish Government and partners organisations to deliver programmes of work for sustainable and healthy food, farming and land use. Our programmes are delivered in partnership with a wide range of public and non-governmental organisations. These programmes aim to demonstrate and enable practical solutions for transforming the way we eat, farm and care for the natural world to restore nature, a safe climate and health. Our current partnership programmes of work include:

- Recently completed 'Farming for the Future' - a three-year knowledge transfer, skills development and innovation programme which commenced on 1 September 2018 and completed on 31 December 2020. The purpose of the programme was to support farmers and crofters across Scotland interested in productive and profitable farming and land use, using low-input and sustainable approaches to build financial and environmental resilience in a changing climate.
- KTIF funded knowledge transfer 'Agroforestry in Action' project (KTIF/038/2020) which will increase interest in and adoption of agroforestry practices in Scotland by highlighting Scotland-specific best practice and resources and providing advice and support to increase tree planting on farms.
- Rural Innovation Support Service which brings the right people together to help farmers and crofters across Scotland to and get their innovative ideas for solving a business challenge or developing a new business opportunity off the ground. (Delivered as part of the Scottish Rural Network in partnership with Scotland's Agricultural Organisation Society (SAOS), SAC Consulting and Scottish Food and Drink.)
- Food for Life Scotland which supports local authorities across Scotland to put more local food on the table and serve fresh, healthy, and sustainable meals in their schools through the Food for Life Served Here award. (Funded by the Scottish Government.) Our UK-wide National Lottery Community Fund Food Get Togethers project supports and facilitates regular community activities that connect people from all ages and backgrounds through food.

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<sup>1</sup> <https://www.soilassociation.org/>

<sup>2</sup> <https://www.soilassociation.org/about-us/annual-review-and-finances/>

<sup>3</sup> <https://www.soilassociation.org/our-work-in-scotland/>

## 2. EXECUTIVE SUMMARY

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This was an innovation project which focused on the EU-RDR and KTIF theme *‘to restore, conserve and enhance biodiversity, habitats and ecosystems dependent on agriculture’ delivering benefits for nature, farming and people.* The project focused on the practice of ‘mob grazing’ to increase biodiverse habitat – unimproved grassland – within enclosed farmland and deliver management practices which can be translated into effective action and replicated across different types of farming enterprise and biogeographical and climatic settings in Scotland. This is a key innovation criterion which supports Scotland’s contribution to delivering its EIP-AGRI objectives:

- Increase biodiversity and ecological connectivity – enhancing and protecting ecosystem services including clean water, fertile soil, pollination and carbon storage.
- Increase business resilience and competitiveness – increasing resource efficiency by reducing external inputs, closing nutrient and waste loops and restoring soil health.
- Support farmers to protect and improve natural resources including soils – increasing resilience to economic and climatic events while transitioning to net zero, nature friendly systems.

Mob grazing is a type of rotational grazing that involves a high stocking density, frequent moving of livestock using electric fencing and a long rest period, leading to taller grasses with deeper root systems and greater sward resilience. The Operational Group comprised 14 pioneer farmers and key stakeholders supported by a co-ordinator/facilitator to:

- Benchmark the environmental and productivity benefits of mob grazing first-hand in the field in different farm settings. (Easy to use frameworks will be developed by the Operational Group.)
- Refine the practices to suit different enterprises (arable, livestock, mixed) and climatic and biogeographic locations.
- Produce resources (including toolkits, webinars, videos etc.) on implementing practices for farmers and advisory services (including Scotland principal provider – FAS) to enable effective practical action by farmers in the field.
- Disseminate project results and resources to generate interest in and encourage wider uptake of the practices – via websites, publications, press stories, workshops and field visits which can be virtual or in-person.

Delivery of the project yielded the following observations and insights which we and the farmers believe can be used to inform future Rural Knowledge and Innovation Services in Scotland, especially using the Operational Model to support farmer-led innovation.

- There is a high degree of enthusiasm for undertaking biodiversity benchmarking to assess the biodiversity benefits of mob grazing.
- A range of techniques for monitoring have been developed. These are easy to understand and implement. They have the potential to generate useful data and are a good methodology for assessing the biodiversity associated with grassland habitats.
- The techniques can be used in a mob grazing situation or a more conventional grazing situation. They have excellent potential to link with parallel work on developing ‘Payment by results – outcome led’ support schemes.
- Importance of investing in highly skilled facilitators. Farmers have huge demands on their time and need support to come together and exchange knowledge effectively.
- Supporting farmers to tell their story is incredibly powerful and farmer videos have a wider reach than other types of content.

### 3. PROJECT DESCRIPTION

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#### 3.1 Overview

The aim of the project 'Farming for Biodiversity' was to provide practical nature-based and climate smart farming solutions which can be adopted more widely across Scotland to improve agricultural competitiveness, resource efficiency, environmental performance and sustainability.

This was an innovation project which focused on the KTIF theme '*to restore, conserve and enhance biodiversity, habitats and ecosystems dependent on agriculture*' delivering benefits for nature, farming and people.' A key objective is to increase the environmental and business performance of agricultural businesses by enabling farmers, crofters, and land managers to respond and adapt to climate change, help restore biodiversity and ecosystem health, meet growing demand for nature and climate friendly food and be a key driver for Scotland's 'green recovery'.

The project focused on the practice of 'mob grazing' to increase biodiverse habitat – unimproved grassland – within enclosed farmland and deliver management practices which can be translated into effective action and replicated across different types of farming enterprise and biogeographical and climatic settings in Scotland. This is a key innovation criterion which supports Scotland's contribution to delivering its EIP-AGRI objectives.

- Increase biodiversity and ecological connectivity – enhancing and protecting ecosystem services including clean water, fertile soil, pollination and carbon storage.
- Increase business resilience and competitiveness – increasing resource efficiency by reducing external inputs, closing nutrient and waste loops and restoring soil health.
- Support farmers to protect and improve natural resources including soils – increasing resilience to economic and climatic events while transitioning to net zero, nature friendly systems.

The project commenced in June 2020 and completed all activity KTIF-funded activity on 17 March 2021. The project was designed to accommodate necessary measures during the Coronavirus pandemic.

#### 3.2 Pioneering Mob Grazing in Scotland

Farmers involved in the mob grazing Field Lab have been trialling the system in different parts of Scotland and farming contexts, to improve their competitiveness, resource efficiency, environmental performance and sustainability. Mob grazing is a type of rotational grazing that involves a high stocking density, frequent moving of livestock using electric fencing and a long rest period, leading to taller grasses with deeper root systems and greater sward resilience.

Field Lab members have been establishing baselines to measure soil health and carbon levels and benchmarking their farms to track outcomes. Preliminary data have shown a range of changes including increase in biodiversity, improvement in soil health, improvement in animal welfare and reduced need for inputs. This Lab has been building an evidence base over the last 18 months with members in different parts of Scotland, operating different sized farms at different stages of implementation. The group also has a strong peer support element, and with support the members have been establishing baselines to measure soil health and carbon levels. The Operational group scaled-up this practice to trial the methods over a range of environmental and geographical scenarios.

#### 3.3 Operational group Activities

The Operational Group comprised farmers and other stakeholders supported by a co-ordinator/facilitator to:

- Benchmark, monitor and measure the environmental and productivity benefits of mob grazing first-hand in the field in different farm settings. (An Easy to use frameworks developed by the OG.)

- Refine these practices to suit different enterprises (arable, livestock, mixed) and climatic and biogeographic locations.
- Produce resources (including toolkits, webinars, videos etc.) on implementing practices for farmers and advisory services (including Scotland principal provider – Farming Advisory Service) to enable effective practical action by farmers in the field.
- Disseminate project results (using a Communications and Engagement Plan) to generate interest in and encourage wider uptake of the practices – via websites, publications, press stories, workshops and field visits which can be virtual or in-person.
- Apply the concept of mob grazing in a Scottish-specific context including breed selection and geographical and environmental settings. Current best practice is based on systems developed in England, which do not always translate easily into Scottish settings.

### 3.4 Innovation

The project demonstrated innovation in the following ways.

*KTIF criterion: “the KTIF scheme strongly supports innovative actions within the agricultural sector. Innovation is often described as a new idea that proves successful in practice.”*

We are working with a number of pioneering farmers and crofters who are making a success of mob grazing on their farms. This project will highlight these practices, develop a framework for benchmarking the system and explore and overcome challenges/barriers to increase uptake across Scotland.

*KTIF criterion: “innovation may be: technological, non-technological; organisational; or social. Innovation may be based on new practices, but also on traditional practices in a new geographical or environmental context.”*

The project supports practices to implement and benchmark mob grazing. These practices are new to the target beneficiaries (farmers and crofters) and in a new geographical and environmental context.

*KTIF criterion: “the new idea can, for example, be: a new product, practice, service, production process or a new way of organising things.”*

The project will showcase practices that can improve agricultural performance. Mob grazing has the potential to reduce input costs and improve animal welfare and biodiversity. The project will enable farmers and crofters in a range of systems to consider which practices would work best with their individual agricultural system.

*KTIF criterion: “Such a new idea turns into an innovation only if it is widely adopted and proves its usefulness in practice.”*

The project will aim to increase the uptake and successful adoption of mob grazing systems. A lack of Scottish-specific information has impacted on the level of uptake for these practices. The potential for wide-scale adoption is therefore high.

### 3.5 Members of the Operational Group

Profiles of the participating farmers, their businesses, and reasons for participating in the project can be viewed in Appendix 1: Meet the Mob Grazers. A Memorandum of Understanding (“MOU”) was signed by the Operational Group participants, setting out the group’s terms of reference and responsibilities of those participating:

1. Soil Association Scotland, 20 Potterrow, Edinburgh EH8 9BL (“Lead Partner”)
2. Richard Lockett, Old Knockbain Farmhouse, Dingwall, Ross-shire IV15 9TJ, on behalf of Scottish Farming and Wildlife Advisers’ Group
3. Johnnie Balfour, Balbirnie Home Farms, Freuchie, Fife, KY15 7JQ, on behalf of the Pasture Fed Livestock Association
4. Tony Bown, Newholland, Orkney, KW17 2SA
5. Robert Brewster, Easter Denoon, Forfar, Angus, DD8 1SY
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7. Lynn Cassells, Lynbreck Croft, Grantown on Spey, Highland, PH26 3NN
8. Doug Christie, Durie Farms, Leven, Fife, KY8 5RF
9. Heather Close, Littleton Farm, Girvan, S. Ayrshire, KA26 9JS
10. Sam Parsons, Balkaskie, Easter Kellie Farm, Anstruther, Fife, KY10 2RF
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13. Charley Walker, Barnside Farm, Duns, Borders, TD11 3TX
14. James Yoxall, Howemill, Huntly, Aberdeenshire, AB54 4YL (“the Parties”).

**Figure 1: location of farmers participating in the Operational Group**



### **3.6 Opportunities and challenges addressed**

The project will contribute to key Scottish Government policies for the environment, economy and society which support achievement of Scotland’s National Outcomes and UN Sustainable Development Goals.

#### **Biodiversity**

Scottish Biodiversity Strategy’s three key aims: ‘protect and restore biodiversity and to support healthy ecosystems; connect people with the natural world, for their health and well-being; and maximise the benefits for Scotland of a diverse natural environment and the services it provides, contributing to sustainable economic growth’. Pollinator Strategy for Scotland 2017-2027: ‘to make Scotland more pollinator-friendly, halting and reversing the decline in native pollinator populations’.

#### **Agriculture and the Climate Emergency**

Scottish Government’s policy ‘to reduce greenhouse gas emissions and support sustainable farming and land use’ and ‘improve the environmental sustainability of the sector by protecting and restoring natural habitats and building sustainability through business practices that encourage productivity, innovation and inclusion’.

#### **Food and Drink**

Good Food Nation and Scottish Government Work Programme commitments: ‘Scottish producers ensure that what they produce is increasingly healthy and environmentally sound’; ‘to promote and encourage

more local sourcing through public sector contracts'; and 'enable innovation and ensure that more people have the opportunity to benefit from the food we produce'.

## **ENVIRONMENTAL BENEFITS**

The environmental benefits of increasing wild plant diversity and abundance and linking habitats to create/enhance wildlife corridors are well-evidenced. (Key sources of evidence for this section include the Scottish Government, Scottish Natural Heritage, James Hutton Institute, SRUC, SEFARI, Plantlife and Buglife.)

### **Biodiversity**

Flower-rich fields can make a valuable contribution to the creation and enhancement of wildlife corridors by linking different habitats together – increasing ecological connectivity and biodiversity at a landscape/ecosystem scale.

Flower-rich grasslands and field edges increase the diversity and abundance of pollinators and other beneficial insects on farmland which have positive impacts on farming and wildlife. Increased insect numbers can improve crop yields through increased pollination and predation of agricultural pests. In turn, plant and invertebrate rich habitat provides vital refuge for birds and small mammals to shelter, forage, breed and move through the countryside.

Habitat management practices promoted by the project will benefit a range of wildlife (including species on the Scottish Biodiversity List which the Scottish Government consider to be of principal importance for biodiversity conservation) associated with farmed landscapes.

- Plants: examples of rarer grassland species include meadow cranesbill, yarrow, yellow rattle, kidney vetch, meadow cranesbill, red clover and bird's foot trefoil.
- Invertebrates: these include many species of pollinators – wild bees, hoverflies, butterflies, moths and beetles; and beneficial soil nutrient fauna such as earthworms and dung beetles.
- Birds: species associated with farmland include yellowhammer, grey partridge, skylark and kestrel.
- Small mammals: e.g. wood mouse, hedgehog and pipistrelle bat.

### **Ecosystem health**

Increasing ecological connectivity and biodiversity will have a positive impact on ecosystem functions (nutrient recycling, water infiltration, nitrogen fixing etc) essential for the provision of services beneficial to farming including fertile soil, water supply and pollination. Recent research has shown that the use of legumes (e.g. peas and clovers) in strips and forage fields can improve soil structure and fertility and reduce nitrous oxide (a greenhouse gas emission) by decreasing/minimising the use of nitrogen-based fertiliser. Biodiverse grassland soils contribute to carbon sequestration and tend to be more absorbent (improving water retention and drainage) and better at locking up pollutants than improved grassland soils.

### **Natural capital**

The project's longer-term impacts will contribute to re-building and maintaining Scotland's natural capital – the value of natural services to the well-being of the environment, economy and society. Good examples pertinent to this project include: insect pollination services which are estimated to be worth £43 million per year to Scotland; and soil management and pest control services provided by dung beetles which are estimated to save the UK cattle industry £376 million every year.

### **Animal health**

Species-rich pasture and hay can benefit grazing livestock by providing a wider range of minerals and amino acids than intensively managed pasture. Longer grass associated with mob grazing can also reduce habitat for the mud snail associated with liver fluke. Several Field Lab participants have reported reduced and fluke and worm burden since implementing a mob grazing system.

## **SOCIAL BENEFITS**

The health and well-being benefits of nature to people are well evidenced. Scotland has well-developed networks of public footpaths (especially in the central belt) which link villages, towns and cities to the wider countryside, providing green highways for people and wildlife. Agriculture accounts for around 75% of all land use in Scotland. Attractive farmed landscapes rich in wildlife are an invaluable asset for increasing public use, enjoyment and appreciation of the countryside – connecting more people with nature and sustainable food production.

Farmers participating in the mob grazing Field Lab have cited social benefits – having a network of like-minded farmers to share ideas, challenges and learning with, as well as access to peer mentors – as one of the unexpected benefits of being part of the group.

## **ECONOMIC BENEFITS**

### **Business resilience**

Our experience is that many farmers are increasingly seeking to reduce their dependency on external inputs to save costs and future-proof their business in a time of great change and challenges for Scottish agriculture.

At a farm level, practices promote reduced reliance on the use of costly external inputs which should result in financial savings in the longer-term. These practices aim to maximise the use of internal inputs and ecological processes – e.g. nitrogen fixation, soil nutrient cycling, biological control of pests and diseases – and reduce the need to purchase expensive external inputs including pesticides and fertilisers. The practices promoted by the project also require no or low levels of capital investment.

### **New markets**

Producing nature and climate friendly food opens-up new opportunities for Scotland's farmers (with the right policies and support) to increase access to new and growing markets.

Increasing public procurement of locally produced, sustainable and healthy food is a Scottish Government priority. For example, the Food for Life Served Here award (a voluntary certification scheme funded by the Scottish Government) is helping to increase local sourcing of sustainable Scottish produced food through public sector contracts.

More consumers want the food they buy to be ethical, environmental and transparent. A recent report (Lloyd's Register: UK Food Trend Report 2019) reveals that three quarters of UK shoppers want supermarkets to stock more food from sustainable and ethical sources.



*Outwintering: Balsar Glen, South Ayrshire. Photo: Heather Close*

#### 4. FINANCE

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KTIF grant awarded: £57,744\*

Total approved spend: £57,744

Spend on KTIF/011/2016 over lifetime of the programme: £52,535

KTIF award spent over lifetime of programme: £52,535

**Table 1: Detail of spend**

<b>Project development costs</b>	
6 x Operational Group meetings & practical sessions	£4,544
6 Operational Group meetings - Farmer OG members x 12	£4,200
<b>Project management, administration &amp; delivery costs</b>	
Programme manager / facilitator	£15,585
Project administration	£4,825
Project reporting	£570
Project M&E - benchmarking	£3,353
<b>Fees for speakers/facilitators</b>	
ScotFwag - expert advice on biodiversity	£4,748
Expert speakers (other)	£3,916
<b>T&amp;S for speakers/ facilitators</b>	
Facilitator & speaker x 4 meetings	£0
Facilitator & speaker x 2 practical sessions	£0
<b>Event venue costs</b>	
2 x Farm venue hire	£0
Practical session catering x 2	£0
<b>Materials and event costs</b>	
Production of supporting resources	£730
<b>Comms &amp; Publicity</b>	£0
Supporting resources produced, press and article writing	£5,263
Video production and editing	£4,802
<b>TOTAL SPEND</b>	<b>£52,535</b>

\* The Scottish Government were informed of the underspends and a new budget produced and approved.

#### **Reason for underspend**

The original budget was prepared in May 2020. We had anticipated that we may have been able to hold face-to-face events, meetings etc. later in the year. However, this was not possible as we had to comply with Soil Association guidelines and Scottish Government restrictions over the lifetime of the project which were implemented due to Covid-19. Consequently, the project has underspent on fees for speakers/facilitators, T&S for speakers/ facilitators and event venue costs.

## 5. PROJECT AIMS AND OBJECTIVES

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### 5.1 Aims and objectives

The Farming for Biodiversity Operational Group built on work done by Soil Association Scotland and partner organisations through a Field Lab focusing on the practice of ‘mob grazing’. This work has trialled and tested innovative practices to increase biodiverse habitats dependent on farmland.

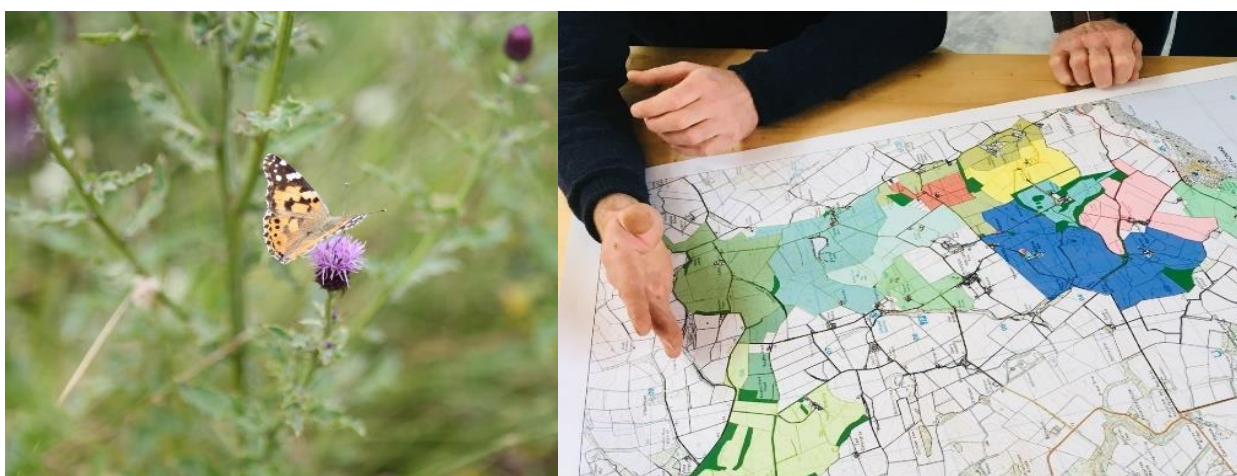
The aim of the project was to provide practical nature-based and climate smart farming solutions which can be more widely adopted across Scotland to improve agricultural competitiveness, resource efficiency, environmental performance and sustainability. Its long-term objectives are to:

- Restore, conserve and enhance biodiversity, habitats and ecosystems dependent on agriculture and deliver benefits for nature, farming and people.
- Enhance and protect ecosystem services including clean water, fertile soil, pollination and carbon storage.
- Increase business resilience and competitiveness – increasing resource efficiency by reducing external inputs, closing nutrient and waste loops and restoring soil health.
- Support farmers to protect and improve natural resources including soils – increasing resilience to economic and climatic events while transitioning to net zero, nature friendly systems.

### 5.2 Activities to deliver Operational Group objectives

The Operational Group comprised farmers and other stakeholders supported by a co-ordinator/facilitator to:

- Benchmark, the environmental and productivity benefits of mob grazing first-hand in the field in different farm settings. (Easy to use frameworks will be developed by the OG.)
- Refine the practices to suit different enterprises (arable, livestock, mixed) and climatic and biogeographic locations.
- Produce resources (including toolkits, webinars, videos etc.) on implementing practices for farmers and advisory services (including Scotland principal provider – FAS) to enable effective practical action by farmers in the field.
- Disseminate project results and resources to generate interest in and encourage wider uptake of the practices – via websites, publications, press stories, workshops and field visits which can be virtual or in-person.



*Supporting biodiversity; Making a grazing plan at Balcaskie Estate. Photos: Clem Sandison*



## 6. PROJECT OUTPUTS/OUTCOMES

### 6.1 Outputs

**OUTPUT 1:** Work with OG members in facilitated meetings to develop a simple framework for benchmarking, monitoring and measuring mob grazing practices, including biodiversity changes/impacts, that can be easily adopted by farmers in a range of settings across Scotland. This can be delivered in both virtual and in-person formats and will be supported by professional input from ScotFWAG, SRUC, and environmental and farming organisations.

**TIMESCALE, MILESTONES & TARGETS:** Framework and toolkit resources produced by March 2021

#### Summary of what was achieved with biodiversity benchmarking

The group identified the impacts they wanted to see which were an improvement to the diversity and health of their farm ecosystems, to the financial performance of the business, and improved mental wellbeing and resilience of the farmers participating. The measures used as indicators were identified for all three impacts.

An initial online meeting with the farmer group was held to discuss biodiversity benchmarking and potential ideas. The ScotFWAG team took these ideas away and developed them into more formalised range of techniques. As well as developing the techniques themselves, the ScotFWAG team developed an app to allow farmer members of the group to record the information. The techniques and app were presented to the group in a follow up meeting and farmers were encouraged to go out into the field and trial the app and techniques.

Two follow-up discussion meetings were held. These covered farmer experience of the techniques and potential refinements and improvements. Ongoing WhatsApp discussions were held between the farmers and ScotFWAG advisers in addition to the on-line meetings.

#### Biodiversity benchmarking techniques

A number of techniques were integrated into the biodiversity benchmarking. The techniques were divided into 'above ground' and 'below ground' techniques. Above ground techniques were sub divided into 'species diversity' and 'structural diversity' sections. Techniques were devised that were repeatable and relatively quick to carry out. They were also developed on the basis that they would provide useful information / data. See Appendix 2.1 and 2.2 for testing methodology, and Appendix 2.3 for instructions on where and when to sample.

Above ground biodiversity measures focused on sward species and structural diversity. This was on the basis that these have the most potential to be modified by mob grazing and are good grassland biodiversity indicators. Other techniques such as inveterate / bird monitoring were discounted on the basis that there are likely to be too many other variables influencing results and challenges associated with producing useful, meaningful data. Table 2 below summarises the techniques used.

**Table 2: above ground and below ground biodiversity benchmarking measures**

Above Ground	Below Ground
Species diversity: % cover of grasses, clover and forbs	Infiltration rate
Species diversity: % cover of flowers	Earthworm count
Species diversity: Number of non-grass species	
Structural diversity: Vegetation height measurements and overall structural assessment.	
Recording indicator species	
Photographs	

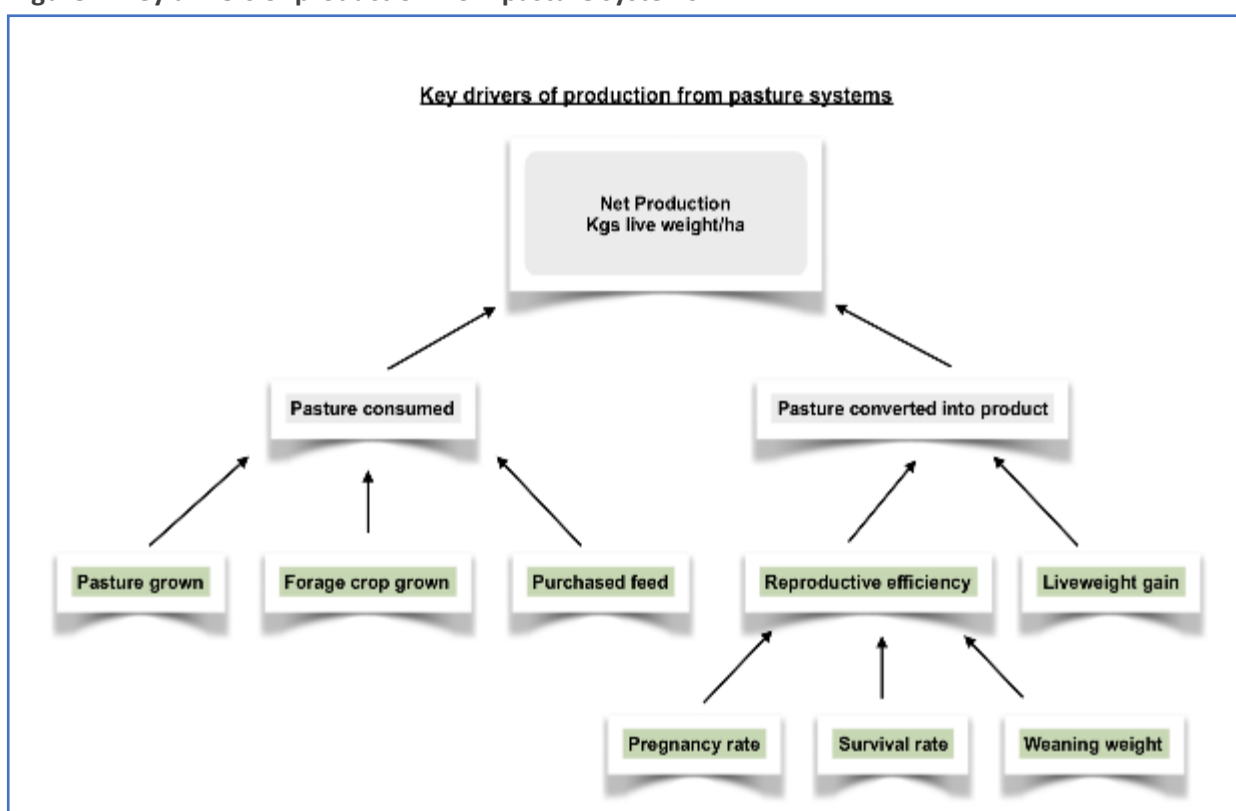
## App development

The app was developed using free, open access software (ODK Collect). The app enables users to enter information quickly and easily in the field and submit the data to a central server for further analysis. Clear, step by step guidelines were developed to make it as easy as possible for group members to upload and use the app. See Appendix 2.4 for App Instructions

## Financial benchmarking techniques

Agricultural Consultant Emily Grant worked with the group to test out ways to monitor KPIs and profitability of their grazing systems to inform management decisions (see Appendix 2.6) All ruminant systems utilise the same resource, the pasture that they have grown. However, it is difficult to judge how effectively that resource is being used. Financial and KPI benchmarking can help focus on effective resource use. It provides the link between your management and your financials. But with the ability pinpoint the key production drivers and focus in on specific areas. These are shown in green in the figure below.

**Figure 2: key drivers of production from pasture systems**



Benchmarking is most effective when it can be linked to the management process. The spreadsheet developed for this group was designed to be simple to use, whilst gain as much management effect data as possible.

### The spreadsheet

To allow benchmarking, a spreadsheet was developed to allow data collection (See Appendix 2.7)

The data collected includes:

- The resources available - the grazing area, the number of stock
- The management - calving or lambing %, growth rates, nitrogen used, concentrates fed
- The financials - all costs are taken directly from the accounts, both fixed and variable

The net production - or the total weight of animals grown per hectare - calculates from the data put into the spreadsheet. This is a key indicator of how the resource (pasture) is being converted into product (liveweight). To allow comparisons between similar farms, and make the information more meaningful,

all the data collected is divided by this net production figure. So, if fertiliser or concentrates are purchased, then can easily see how much N or feed contributed to each kg of liveweight grown. This can be split by species as shown below.

From the data entered, other valuable KPI (Key Performance Indicator) data is automatically generated, such as lamb survival, cow efficiency, weaning weights etc. The spreadsheet does much of the leg work in drawing out valuable information from minimum amount of data entered. This data can then be compared with others in the group, or wider industry targets.

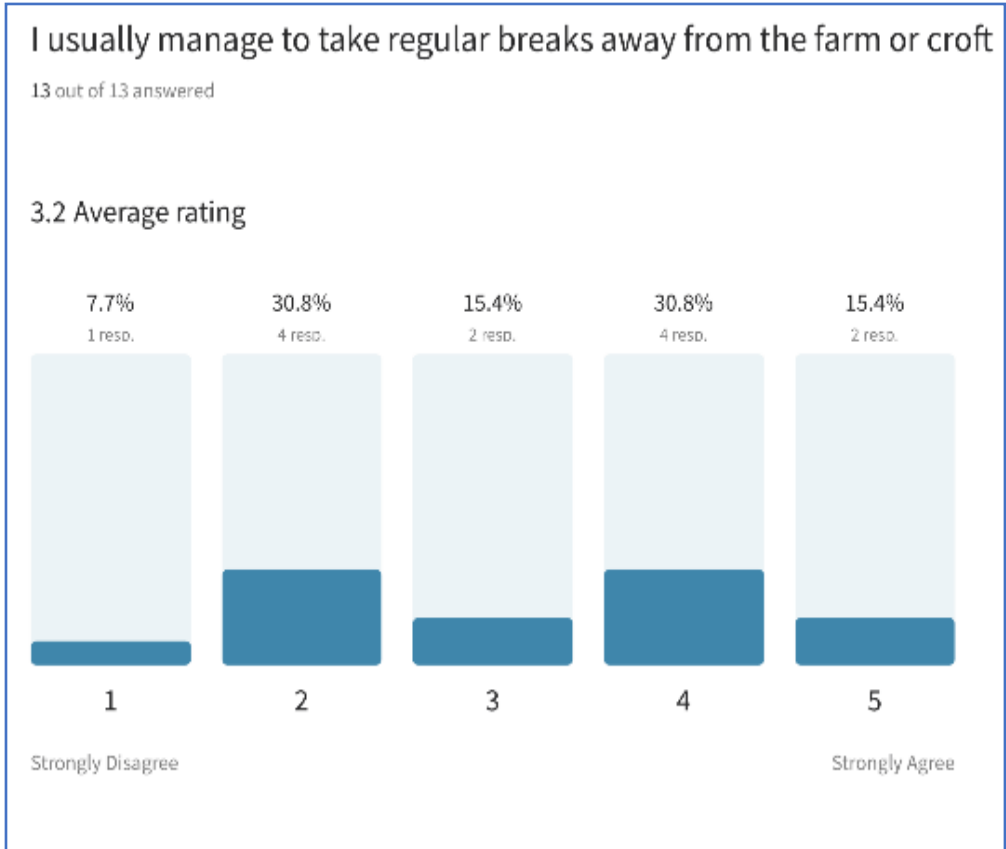
Finally, financial data is collected. To keep things simple, the financials are just lifted directly from the accounts. This information is then, as with the performance data, divided by the total kilos of liveweight grown. This gives a cost of production per kilo liveweight. Again, this makes comparison with others easier, and directly relates to sale price, which is also expressed in the same £/kg manner.

A report is then generated. This allows comparison of data both year on year, to allow trends to be tracked, but also with group members to allow peer to peer comparison. An example for the report is given below. Note this data is just for a cattle enterprise (all of the Operational Group had cattle). A similar report for sheep enterprises can also be generated. Cost of production is the final report.

**Social wellbeing benchmarking techniques**

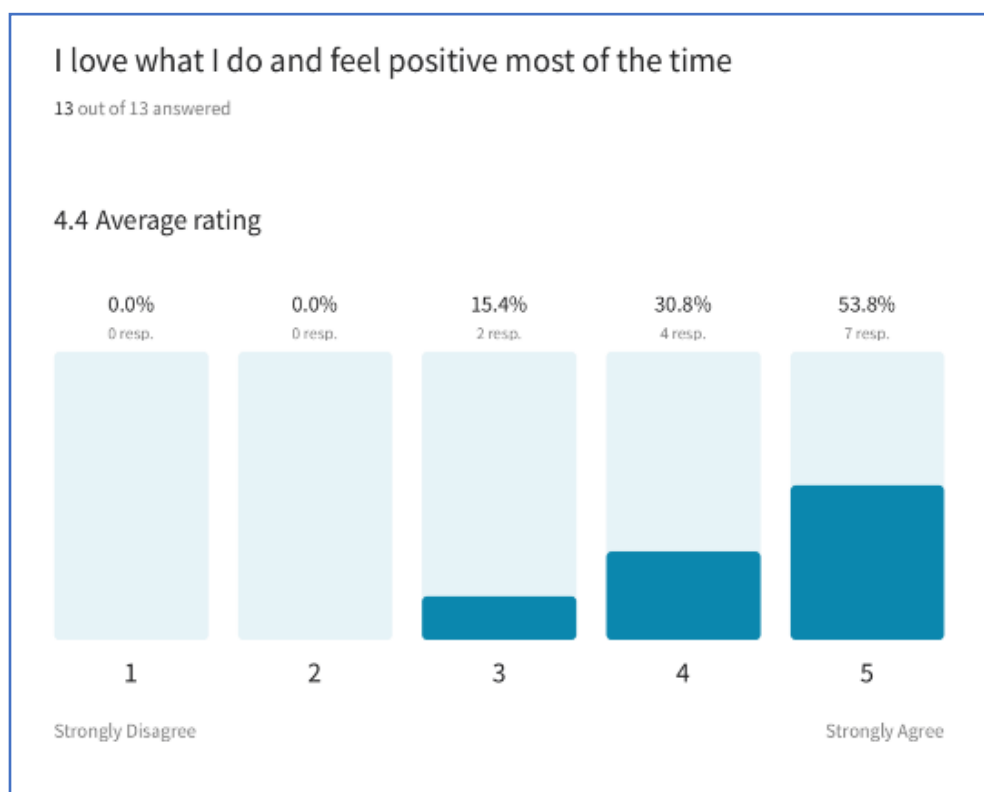
An online survey was developed, and questions drawn up, to help the farmers think about and measure their well-being. They were based on the themes mentioned above. They were designed to be both positive and link to the farm business. The outputs aren't for comparing between group members, but to help track changes over time. Importantly to get the group to think about how what they are doing on farm is influencing how they are feeling. Essentially to consider making happiness part of their farming aims and objectives. (See Appendix 2.5 for more details about methodology behind the survey.) The questions were scored 1-5 based on the level of agreement they had with the statement, 5 being strongly agree. Two sample questions are shown below in figures 3 and 4 below.

**Figure 3: social wellbeing sample question 1**





**Figure 4: social wellbeing sample question 2**



#### **Summary of Operational Group meetings held**

Six online meetings of the Operational Group were held, the early stages July-September involved developing ideas with the group in partnership with ScotFWAG and independent agricultural consultant Emily Grant. There was also a strong focus on the best methods to support peer-to-peer learning.

**Meeting 1: 23 July 2020:** Clem Sandison made introductions, noting that David Michie (Soil Association Scotland), Richard Lockett (Lockett Agri-Environmental) and Emily Grant (Forrit) would be supporting the benchmarking. Farmers introduced themselves and noted what had worked well for them as part of the group to date. Clem highlighted that the operational group is a KTIF funded 'Farming for Biodiversity' aiming 'to provide practical nature-based and climate smart farming solutions which can be more widely adopted across Scotland' with a focus on ecological and business benefits of mob grazing. Discussion of farmer ideas and what they would like to measure on-farm.

**Meeting 2: 18 August 2020:** Using information from previous farmer meeting to identify what to measure as part of benchmarking: pasture diversity; insect population; earthworms; infiltration; rooting depth. More in depth conversation about the practicalities of farmers doing these measures in the field and experimenting with different techniques. Richard Lockett (ScotFWAG) used this discussion to develop proposals for the September meeting.

**Meeting 3: 27 August 2020:** Resources meeting led by Clem Sandison (Soil Association) to discuss the best ways to engage with other farmers and share practice. We explored different thematic topics such as soil health & biodiversity, assessing forage and pasture quality, outwintering, animal health, and profitability. The group members agreed on the idea of making short videos on different themes and started to develop a schedule with the SA Comms team, with a series of daily videos over a 3 week period followed by a webinar Q&A with the farmers. 'Pasture Power' was developed as the theme for October. Equipment purchased for farmers and video guidance developed following this meeting.

**Meeting 4: 15 September 2020:** Three strands of benchmarking were agreed upon:

1. Environmental (led by Richard Lockett)
2. Economic (led by Emily Grant)

### 3. Social (led by David Michie)

Metrics for consideration:

- Biodiversity metrics (above ground)
- Biodiversity metrics (below ground)
- Financial & Performance metrics
- Social wellbeing & resilience metrics.

During the next phase of the project (from September – November) ScotFWAG developing biodiversity tests based on input from the group.

**Meeting 5: 9 November 2020:** Above Ground Biodiversity Measuring presentation by Richard Lockett (Scot FWAG) including video tutorial; introduction to ODK Collect app with a walk through downloading and using the app by Chris York (ScotFWAG); Below ground biodiversity monitoring techniques and guidance. Presentation on Social Well Being indicators by David Michie (Soil Association Scotland) and discussion about how these could be used by the group. Introduction to financial benchmarking by Emily Grant and discussion of the template to test out in January.

A Biodiversity Whatsapp Group was set up for members to share questions and troubleshoot while testing the app and starting to collect data in the field. Farmers tried the tests throughout November 2019, however the time of year made some of the tests challenging.

**Meeting 6: 18 February 2021** Final wrapping up with feedback on all the benchmarking measures and the impact of farmer videos/resources over the course of the project. Members provided feedback on value of group, and talked about next steps for the biodiversity tests, peer support and desire to influence policy. Feedback on how important facilitation role has been to the group, and consensus that they would like the group to continue with a look at creating a mentorship scheme for farmers who are new to mob grazing and need 1:1 support.

Benchmarking methods have been developed for all three identified areas: environmental, social and financial. The biodiversity tests and app are ready to go but still need to be tested in the field during the growing season (late Spring – late Summer 2021) to demonstrate benefits/impacts of grazing practices.

**OUTPUT 2:** Deliver on-farm meetings or video webinars to develop and refine best practice. These will be practical sessions for OG members, which will link to and inform development of the toolkit resources.

**TIMESCALE, MILESTONES & TARGETS: One or two sessions delivered by September 2020**

In the absence of farm visits due to travel restrictions, the ScotFWAG team developed a series of resources to help group members with the monitoring. These included the following which are also provided as an appendix to this report:

- Above ground monitoring techniques summary (Appendix 2.1)
- Below ground monitoring techniques summary (Appendix 2.2)
- A [short video](https://www.youtube.com/watch?app=desktop&v=ILtmd7yYp8M)<sup>4</sup> explaining the above ground techniques
- A summary of where, and how often, to carry out monitoring techniques (Appendix 2.3)
- Instructions on installing and using the app (Appendix 2.4)

**OUTPUT 3:** Produce resources (including toolkits, webinars, videos, case studies etc.) on implementing practices for farmers and advisory services (including Scotland's principal provider – Farming Advisory Service) to enable effective practical action by farmers in the field.

**TIMESCALE, MILESTONES & TARGETS: Suite of supporting resources produced by March 2021**

<sup>4</sup> <https://www.youtube.com/watch?app=desktop&v=ILtmd7yYp8M>

## **Mob Grazing resource hub**

A [hub](#)<sup>5</sup> has been created on Soil Association Scotland website with sections on what mob grazing is, the benefits of mob grazing, how to start mob grazing, and who the mob grazers involved in the operational group are. These sections contain a mixture of professionally produced video content, farmer-created video content, written interviews, case studies, other written content, and signposting to online resources. The pages sitting in the new mob grazing hub have been viewed 5,707 times between October (when the hub was launched) and March; a significant improvement on the previous mob grazing information on the Soil Association website which saw 1,691 views in the six months prior to the hub launch. The most popular content on the hub has been that on what mob grazing is and how to get started.

## **Farmer-created video content**

Our team worked with farmers from nine farms to develop and share a series of videos on their mob grazing practices and the impact they have in their land and on their work. These farmers were also the main speakers in our Q&A series, so before each event the relevant videos were shared on social media (both their own and Soil Association Scotland's): this proved to be an extremely effective way to drive audiences awareness and attendance to the events. These videos have also been added to Soil Association Scotland YouTube's Mob Grazing [playlist](#)<sup>6</sup>. In total 52 farmer-shot videos are currently available to audiences (see Appendix 3) and have over 5,000 views so far.

## **Professional video content**

A set of 9 professional videos were shot in two farms addressing some of the topics identified by farmers as among critical aspects when adopting mob grazing: building soils, supporting biodiversity, pasture cropping, water management and feeding animals (see Appendix 3). These were also shared through social media, including the Mob Grazing Facebook group and the Soil Association Scotland's Twitter, and have been viewed over 1,600 times.

## **Webinars**

Three webinar Q&As were delivered in November, February and March. These webinars were facilitated by Emily Grant and Clem Sandison, and explored a variety of topics through conversations with some of the Operational Group farmers:

- 2nd November 2020: Mob Grazing Q&A: Moving animals and assessing forage  
Speakers: Charley and Andrea Walker of Barnside Farm, Doug Christie of Durie Farm and Nikki and James Yoxall of Grampian Graziers
- 4th February 2021: Mob Grazing Scotland Q&A: Outwintering in wet conditions  
Speakers: Heather and Philip Close of Balsar Glen, Katharine Sharp of Achpopuli Farm and Roger Dixon-Spain of the Sailean Project
- 4th March 2021: Mob Grazing Scotland Q&A: Outwintering to reduce inputs  
Speakers: Andrew and Robert Brewster of Easter Denoon Farm, Johnnie Balfour of Balbirnie Home Farms and Lynn Cassells and Sandra Baer of Lynbreck Croft

A total of 324 attendees from around the globe participated in these events. Of them, 179 are located in Scotland, while 145 logged in from other countries (UK, the US, Ireland, Canada and Australia). The webinars were recorded and uploaded to the Mob Grazing playlist, where they have already been viewed over 650 times (see Appendix 3).

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<sup>5</sup> <https://www.soilassociation.org/our-work-in-scotland/scotland-farming-programmes/mob-grazing/>

<sup>6</sup> [https://www.youtube.com/watch?v=toDc\\_Itdi9g&list=PLiWAozVmDLEk9VhHiOWXYKileLGGYNHg](https://www.youtube.com/watch?v=toDc_Itdi9g&list=PLiWAozVmDLEk9VhHiOWXYKileLGGYNHg)

**Figure 5: Location of attendees of the programme's Q&A webinars**

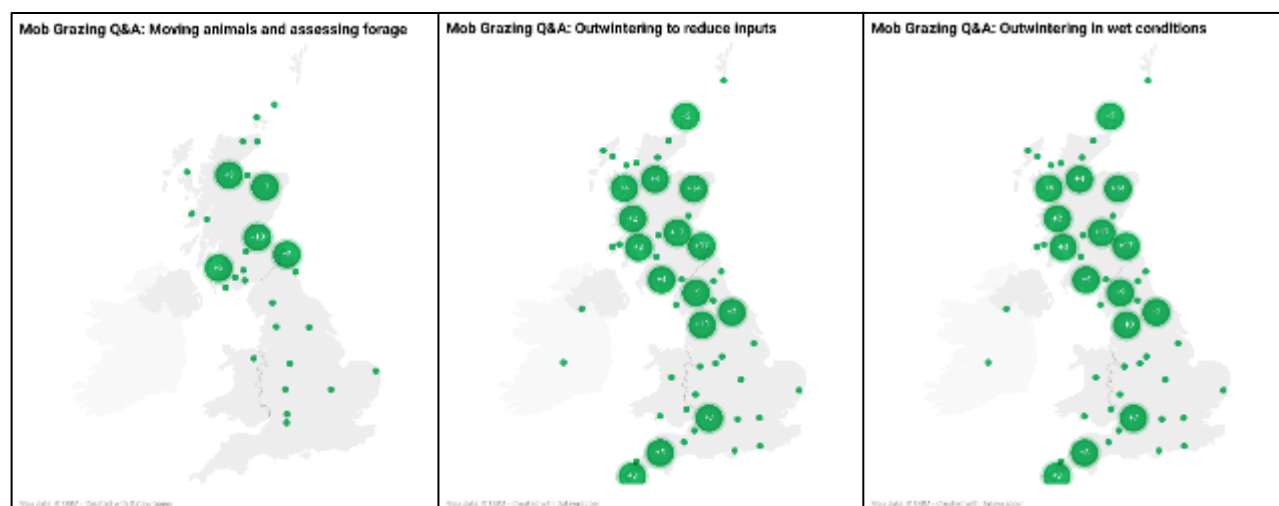


Table 3 sets out monthly themes and related outputs produced by farmers participating in the Operational Group.

**Table 3: Practical resources produced for farmers**

Theme	Outputs	Farmers who produced content	Timeline
<b>Pasture Power:</b> assessing forage, paddock size and rest period, getting started with mob grazing	<ul style="list-style-type: none"> <li>Farmer-made video once a day (Mon-Fri)</li> <li>Shared on Twitter and in Mob Grazing Scotland Facebook group. #pasturepower</li> <li>Pasture Power Q&amp;A chaired by Emily Grant</li> </ul>	Charley Walker Nikki Yoxall Doug Christie	12 <sup>th</sup> - 16 <sup>th</sup> Oct 19 <sup>th</sup> - 23 <sup>rd</sup> Oct 26 <sup>th</sup> - 30 <sup>th</sup> Oct Q&A - Mon 2 <sup>nd</sup> Nov, 7pm
<b>Soil health &amp; biodiversity:</b> above and below ground benefits	<ul style="list-style-type: none"> <li>Web: launch resource list – highlight soil/biodiversity resources</li> <li>Videos x 5 – Easter Dunoon and Lynbreck on soil health and biodiversity</li> </ul>	Lynbreck Croft Easter Dunoon	NOVEMBER
<b>Social wellbeing:</b> time, labour, quality of life, satisfaction	<ul style="list-style-type: none"> <li>Interview/blog: Katharine on how she makes the farm fit with her own wellbeing</li> </ul>	Case-study on Katharine Sharp, Achpopuli Farm	DECEMBER
<b>Outwintering in wet conditions:</b> water cycle, breeding, infrastructure, animal health #outwintering	<ul style="list-style-type: none"> <li><b>Self-made farmer videos</b> – Heather – infrastructure, grazing during the cold, wet season, bale unwrapper, batt latch gates</li> <li>Kat – sheep – fencing, water, foot health, fluke, poaching/wet pasture, hay meadow development</li> <li>Roger – profitability, water, infrastructure incl. ram pump, outwintering in the wet</li> </ul>	Heather, w/c Jan 11 Kat, w/c Jan 18 Roger, w/c Jan 25	JANUARY Outwintering in areas of high rain fall  Q&A: Thursday 4 <sup>th</sup> Feb, 7-8.30pm
<b>Profitability - outwintering to reduce inputs:</b> water, fencing, bale grazing, agroforestry #outwintering	<ul style="list-style-type: none"> <li><b>Self-made farmer videos</b> tbc – demo videos of kit, bale grazing systems, tree hay, outwintering, water, fencing</li> </ul>	Balbirnie, w/c 8 Feb Easter Dunoon, w/c 15 Feb Lynbreck Croft, w/c 22 Feb	FEBRUARY Outwintering to reduce inputs  Q&A: Thursday 4 <sup>th</sup> Mar, 7-8.30pm

**OUTPUT 4:** Disseminate project results and resources through a Communications and Engagement Plan to promote and generate wide-scale interest in uptake of the practices. Examples include:

- Supporting resources (e.g. case studies, videos, webinars, toolkits etc.) posted on relevant websites and distributed/shown at events.
- Social media: tweeting links to news, resources (including videos and recorded webinars) and project highlights.
- Articles in the industry and local press: highlighting project news, case studies, project results etc.

**TIMESCALE, MILESTONES & TARGETS: Dissemination of project materials complete by March 2021.**

The launch of the project was featured in Farmers Weekly, Farming Scotland magazine, Oban Times, Press and Journal, and the [Scottish Farmer](#)<sup>7</sup>. We have additionally seen press coverage from group members mentioning mob grazing. There is an interest in mob grazing from the farming community, with searches for mob grazing consistently bringing the most traffic to our website. This traffic has doubled since we launched the new web hub. We have had 5,707 visits to the hub since it was launched in October with users spending an average of 5:47 minutes on each page, which is a significant amount of time in website terms (standardly, you would expect this to be between 2-3 minutes).

We're also seeing positive engagement on social media. Our "Mob Grazing Scotland" [Facebook](#)<sup>8</sup> group has grown from 192 to 673 members between October and March, and engagement with posts in the group has increased by 1900% compared to the previous five months. As well as seeing farmers post questions on the videos our group members made, we have also seen farmers starting to post questions with other farmers then replying with advice. On Twitter, the videos created and shared by farmers in the group were viewed more than 30,000 times. We see the success of this as due to the focus on video and using a genuine peer-to-peer approach in which farmers were encouraged to talk directly to each other.

## 6.2 KPIs and outcomes

Three key outcomes were identified for the project in the original KTIF application. Outcomes 1 and 3 have been achieved. Due to seasonality, Outcome 2 should be achieved later in 2021. By the time Group had the necessary benchmarking tools to gather data in the fields, it was too late in the season to get meaningful results. However, all participants have expressed they will use these tools to benchmark in the summer of 2021.

Outcome	KPI	Achieved
(1) More farmers in Scotland implementing mob grazing practices	Number of farms implementing practices: 12	12 farms implementing practices
	Number of visits to on-line resources: 1,000	7,600 plus visits to access farmer and professional videos and event recordings.
(2) Farmers in Scotland have a simple benchmarking framework for mob grazing	Number of farmers benchmarking: 10	6 farmers have already trialled benchmarking tests in November 2019, but all group members fed into the process that led to the identifying key aspects to benchmark.
(3) Farmers engaged in developing best practice for benchmarking, monitoring and measuring	3 sessions over the course of the project	6 sessions with farmers held over the course of the project to deliver these activities.

<sup>7</sup> <https://www.thescottishfarmer.co.uk/news/18644013.mob-grazing-boosts-biodiversity-saves-money/>

<sup>8</sup> <https://m.facebook.com/groups/175966953250642?view=info>

## **7. LESSONS LEARNED**

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### **7.1 Developing biodiversity benchmarking tools**

#### **Challenges**

The main challenge associated with this part of the project was the inability to meet group members face to face and discuss the techniques in the field due to Covid19 Government guidance. This made progress on developing the techniques slower and more challenging. The techniques, and associated support materials, were not finalised until the autumn which left a very limited field season for group members to trial the techniques.

#### **Lessons learned**

A number of lessons were learned as a result of this project including:

- A longer time frame for the project (of at least 1 year) would have allowed for more testing in the field during the grass growing season.
- There is a high degree of enthusiasm for undertaking biodiversity benchmarking to assess the biodiversity benefits of mob grazing.
- A range of techniques for monitoring have been developed. These are easy to understand and implement. They have the potential to generate useful data and are a good methodology for assessing the biodiversity associated with grassland habitats.
- The techniques can be used in a mob grazing situation or a more conventional grazing situation. They have excellent potential to link with parallel work on developing 'Payment by results – outcome led' support schemes.

### **7.2 Developing practical resources for peer-to-peer learning**

#### **Lessons learned**

- Supporting farmers to make their own videos was one of the few positives to come out of the lockdown restrictions, and while videos can't replace farm events entirely it proved to be an incredibly effective engagement tool.
- Farmers need training, support and the right equipment to make effective videos
- The model of video sharing followed by a Q&A at the end of the month was very effective. Farmers are more responsive to hearing the first-hand experiences of other farmers rather than getting advice from consultants, researchers or organisations. We saw significantly higher reach and engagement on our social media channels in the months where we shared user-generated video.
- Farmers are actively looking for ways to learn about regenerative grazing and other agroecological methods, however there is very little information/training available through mainstream education or the agricultural advisory sector.

### **7.3 A successful model for working with farmers**

#### **Challenges**

Not being able to meet up in person on-farm has impacted on the depth of practical knowledge that can be shared, particularly in terms of assessing biodiversity, animal health, forage quality etc. However due to the high level of commitment and enthusiasm of group members, there has been meaningful engagement in online meetings and frequent communication via Whatsapp channels.

#### **Lessons learned**

- The group members had already established strong bonds through their work together on the Mob Grazing Field Lab over the previous two years, which meant they had more commitment to the

Operational Group. Establishing an Operational Group from scratch solely through online meetings would have been more challenging.

- The benefit of online meetings has been that farmers can take part regardless of their geography. In future a blended model of virtual meetings and farm visits is likely to be adopted.
- Strong facilitation of the group is key to its success. Clem Sandison (Soil Association Scotland) has been facilitating the group for 3 years and the passion and skills she brings to the work has helped to keep farmers engaged and highly motivated.
- Ensuring the meetings are participatory and everyone is given an equal voice is extremely important. Clem used virtual facilitation tools such as mentimeter polls, jamboard brainstorming, and breakout rooms to support active participation in meetings. Having separate social meetups such as the Mob Grazing Christmas party also added to the enjoyment of being part of the group.
- Group size is incredibly important: 12-20 people (max) attending meetings is the ideal number for impactful conversations and exchange of knowledge.
- Having a diversity of members (in terms of gender, age, farming experience, scale and geography) has also been highlighted by the group as unique and part of its success.
- The partnership approach with ScotFWAG and Emily Grant was highly successful – it brought in new expertise and a collaborative approach to the project.
- The group are keen to continue meeting long term. They have built strong relationships and see this peer-support group as essential to their ongoing learning, confidence and ability to innovate. They are also very interested in the development of a structured mentorship scheme to support farmers who are new to mob grazing.

### **The value of benchmarking**

When comparing with others, it's important to benchmark similar systems. Hill and low ground farms will have different production characteristics. But benchmarking isn't just about copying the best performing. It gives valuable insight into understanding the system you have, and then learning from others about what works for them. Farmers can then decide if others' performance is replicable on their own unit. It's important to note that the aim of financial benchmarking is to allow profit to be maximised through optimising inputs and outputs. This isn't the same as maximising output.

Collecting data and benchmarking helps provide clarity about what's working well and not so well in their business, to track progress over time, particularly if they are changing management. It also gives better understanding of costs and how they relate to what farmers do on the ground, and importantly allows them to take decisions about how to optimise the utilisation of the main resource they have - pasture. Sharing data with others also allows a mentoring process to happen, to learn from others how they may be able to reach a similar success for their own farm.

The farmers really valued being made to think about their well-being. The question about taking regular breaks away from the farm received the lowest score across the group. Thinking about it can challenge them to take steps to change it. How farmers manage their system can make a big difference to their time spent. The financial and KPI spreadsheet also gives an indication of time spent on their cattle and sheep enterprises. This is where we can start to draw together the whole picture, to put 'time away from the farm or croft' as a key business aim and link it to other areas of the business.

### **What farmers said was the most valuable about being part of the group**

*"Meeting and building relationships with supportive, likeminded, innovative people. Sharing ideas, successes and failures. Safe space. No silly questions"*

*"Normalising the choices we make and a sounding board / expertise for discussing choices and learning."*



*“Meeting people doing the same thing and learning from their ideas and also giving me the motivation to research new ideas and tell others about the benefits of mob grazing and how it leads into regenerative farming.”*

*“Having other people to go to for support and advice. Having access to such experienced farmers and land managers has been amazing - and what a lovely bunch!”*

*“Having had a couple of open days at Beaquoy organised by the Soil Association to highlight the importance of the soil to farmers round about, I have come to see the Soil Association as having the best outreach program in Scotland. Also having thought about doing tighter rotational grazing for years the launch of their group coincided with me making the decision to kit up for mob grazing and really go for it. So it was just obvious to apply to join the group for support and guidance as well as to demonstrate to farmers round about that organic/regenerative farming can work well”*



*Lynbreck Croft, Granton-on-Spey; New Holland Farm, Orkney. Photos: Clem Sandison*



## 8. COMMUNICATION AND ENGAGEMENT

### 8.1 Publicity

Farming for Biodiversity Operational Group online Q&As were marketed and advertised to the target audience using a wide range of sources (see below) including Farming Advisory Service (FAS). Monitoring and evaluation of the marketing methods used to attract and engage farmers helped to ensure we used the most cost-effective methods.

**Table 4: Sources of promotion and reach for Farming for Biodiversity online Q&A events**

Source of promotion	Reach/readership	Events promoted
Soil Association Scotland <a href="#">Twitter</a>	8,000+	All Q&A events
Soil Association Scotland <a href="#">Facebook</a>	780+	All Q&A events
Soil Association Scotland <a href="#">website farming page</a>	1,800+	All Q&A events
Soil Association Scotland "What's On" and emails contact list comprising individuals, industry bodies, park authorities, land management organisations, NGOs etc (list is GDPR compliant)	Estimate: 2,000+	All Q&A events
Rural Matters (Twitter account for the Scottish Government's Agriculture and Rural Economy Directorate)	7,000+	All Q&A events
Farm Advisory Service website & twitter	Twitter: 3,000+	All Q&A events
Scottish Rural Network	Twitter: 3,000+	All Q&A events
Community newsletters	Estimate: <1,000	All Q&A events

### 8.2 Engagement with other farmers

Details of how the project findings are being disseminated are provided in section 6.1 under output 4.

#### **Farmers' ideas about how to widen the reach of the group and involve new members**

*"Continue group's good work on articles in the press, your films, social media etc"*

*"Having a structured but relatively informal training / 'onboarding' scheme. Build up some resources for new farmers, as we are doing. Then maybe monthly informal (webinar) handholding sessions where a few of us from the group are there to answer questions. The aim would be, as I see it, to give them some support until they are more confident, and then they can help another farmer ... etc. Following one or two farm transitions (monitor farm idea) would work well for tv, collecting data etc"*

*"Could there be another group formed for new members - almost having a beginners group, so that the groups don't get too big and old ground isn't gone over with the same people. Maybe members of our group could attend meeting of the beginners group to talk about certain topics and answer questions? And love the mentor idea! "*

*"Mentorship plus public on-farm demonstration days/pasture walks by members of the group. More promotional videos, articles etc. Create more stories to share with farmers and the wider public"*

## 9. KEY FINDINGS, RECOMMENDATIONS & CONCLUSION

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### 9.1 Key findings

#### **Biodiversity benchmarking next steps**

Delivery of the Farming for Biodiversity has yielded the following observations, insights and outcomes which we and the farmers believe can be used to inform future Rural Knowledge and Innovation Services, especially services which use the Operational Model to support farmer-led innovation.

- There is a high degree of enthusiasm for undertaking biodiversity benchmarking to assess the biodiversity benefits of mob grazing.
- A range of techniques for monitoring have been developed. These are easy to understand and implement. They have the potential to generate useful data and are a good methodology for assessing the biodiversity associated with grassland habitats.
- The techniques can be used in a mob grazing situation or a more conventional grazing situation. They have excellent potential to link with parallel work on developing 'Payment by results – outcome led' support schemes.
- Importance of investing in highly skilled facilitators. Farmers have huge demands on their time and need support to come together and exchange knowledge effectively.
- Supporting farmers to tell their story is incredibly powerful and farmer videos have a wider reach than other types of content.

#### **The value of groups like this**

Although members of the group refer to their farming approach with the shorthand 'mob grazing', most of the farmers see what they are doing as 'whole systems change' with many adopting Holistic Management as a framework for decision making. This involves not just tweaks to grazing practices, but huge levels of complexity in planning, observing and changing what they do to ensure a balance between environmental, social and financial outcomes. For many this includes revising their business goals, changing their breeding regime, introducing agroforestry systems, marketing their products differently, adapting work patterns or staffing structures, integrating conservation and biodiversity priorities, constant learning and experimentation.

Members of the group may be seen as 'experts' within the field of mob grazing but as many of them will say – "every day's a school day" and they are still in need of peer-networks to share their ideas, challenges and burning questions. Finding solutions to the multiple crises we face in terms of climate change, biodiversity loss, health inequalities, and the urgent need to produce food agroecologically is not an easy matter.

We need groups of innovative farmers who have strong peer support networks as they continually adapt their practices in response to new ideas, scientific research and policy changes. The potential to use regenerative grazing techniques to enhance biodiversity and sequester carbon may not be proven through rigorous peer-reviewed studies but the need for farmers to share their vast knowledge, experience and observations is more vital than ever.

See Appendix 4 for a case study of farmers who participated in the Operational Group.

#### **What the farmers hope for the Mob Grazing Group going forward (beyond March 2021)**

*"More of what we have done so far. Learning from each other, farm walks, discussions, forum"*

*"I would love for us to continue to share knowledge so that we can demonstrate as a group that this style of grazing is commercially viable over a wide range of farm types. By doing this we will encourage more farmers to make the transition, which I think is the most important thing. I was wondering whether it*

*would be possible to have a mob-grazing focus group (this group essentially) within the PFLA Scotland group (if that is where this leads). I would also love it if we could get mob grazed meat into Scottish schools as standard and work with the schools so that the kids can learn where food comes from and about nature friendly farming. Catch them young! :-)* “

*“I think the group should include other environmental/ policy groups such as SEPA to highlight the benefits of mob grazing to the wider countryside”*

*Farm visits!*

*“It would be great if we can get back to meeting again. Farm visits seeing how things are done doing etc. The trip to Orkney and the Brewsters were a disappointing consequence of the necessary lockdown”*



*Fencing system, Easter Denoon Farm, Angus; Balcaskie Estate, Fife. Photos: Clem Sandison*

## Appendix 1: Meet the Mob Grazers



*Johnnie Balfour - Balbirnie Home Farms, Cupar, Fife*

Johnnie farms 1300 hectares of mixed cereals, vegetables, beef cattle and forestry, with a team of six farm staff including a farm manager.

**Johnnie says: “I started mob grazing because I want to grow more grass and extend the grazing season, as well as reduce costs, for my beef herd. To talk to like-minded people in the group and to work through the issues associated with mob grazing is really useful.”**

Follow Balbirnie Home Farms on [Twitter](#) or [Facebook](#)



*Doug Christie- Durie Farm, Leven, Fife*

Doug farms 500 acres of organic beef and arable crops: conventional linseed, wheat, barley, oats, peas, beans and oilseed rape. He’s also involved in a range of intercropping crop trials with the James Hutton Institute and SRUC, in addition to trialling organic oil seed rape.

**Doug says: “I’m interested in mob grazing to reduce costs, for its environmental benefits, for resilience (both business and weather proofing) and cattle health, and for its potential to increase output. The group allows me to get together with like-minded farmers.”**

Follow Doug on [Twitter](#)



### *Heather and Philip Close- Balsar Glen, Girvan, South Ayrshire*

Heather joined her father, Phil, in 2019, to farm 117 hectares of lowland grazing and 15 hectares of woodland, having previously been an engineer. They have a suckler herd of around 40 cows, plus followers - a mixture of pedigree Aberdeen Angus and Original Population Herefords.

**Heather says: “Mob-grazing just makes sense to us. We are able to keep input, machinery, housing and labour costs low while our cows have the freedom to express natural behaviours, live outside all year round and select what they want to eat from the pastures and hedgerows. Mob grazing is as much an art as a science, there is no single approach that works in every field at every time of the year. At those times when you are trying something new, or feeling your way, it is great to have a bit of support and the occasional hand hold: this group has been that for us.”**

Follow Balsar Glen on [Facebook](#)



### *Sam Parsons - Balcaskie Estates, Anstruther, Fife*

Sam is estate manager at Balcaskie – a mixed lowland farm with beef, sheep and cereals. He is a breeder-finisher with a 300-strong suckler herd of Luing, Lincoln Red and Simmental Cross cows, and will outwinter the lot this year. He also has a lambing flock of Scotch mules and Texel cross ewes, producing fat lambs.

**Sam says: “Extending the grazing season and reducing costs, at the same time as improving soil health, is a win-win for us. I joined the group to share knowledge and gain confidence in a system**



which has little external expertise, as it does not rely on purchased inputs. Peer-to-peer learning has been crucial.”

Follow Bowhouse on [Twitter](#) or Balcaskie on [Facebook](#)



### *Katharine Sharp- Achpopuli Farm, Bathach, Inverness*

Katharine farms 70 acres in a little hanging valley in the hills of Abriachan, on the north side of Loch Ness. She farms sheep, cattle, ducks and geese (focussing on native breeds like Shetland), producing pasture-fed meat, fleece and eggs. She is the sole farmer, but her family helps out sometimes.

**Katharine says: “I love the way mob grazing provides fresh grazing for the livestock, leaves parasites behind, and how you can tailor the impact for different areas depending on what you want to encourage. I am focussing on increasing biodiversity, especially of wildflowers and legumes, in the pasture. As a lone farmer, to have like-minded people to discuss ideas with is great!”**

Follow Achpopuli Farm on [Facebook](#)



### *Erland Spence - Beauquoy Farm, Dounby, Orkney*

Erland farms 300 acres of grass, plus 200 acres of rough grazing. He keeps 75 beef cows for store, mainly Aberdeen Angus Cross and Shorthorn Cross (but moving towards Stabilisers), and he also finishes lambs from 150 Easycare ewes. He farms alone, with one regular part time worker.

Erlend says: “In 2016 I was looking for a way to keep the same stock on less land. I’d read about mob grazing, and it looked like it could conserve and improve soil fertility, help reduce injurious weeds while increasing plant diversity, mitigate the effects of drought and wet spells, as well as extend the grazing season. The launch of the Soil Association Scotland group coincided with me making the decision to kit up for mob grazing and really go for it.”



*Charley and Andrea Walker - Barnside Farm, Duns, Berwickshire*

Team Walker (with their children Tom, 18 and Jessica, 15) are tenants on a 625-acre upland beef and sheep farm. They run 540 wool-shedding ewes and 110 Welsh Black beef cows on a low input, grass fed, organic farming system, integrated with their commitment to rural stewardship.

Charley says: “We operate a rotational paddock grazing system which mimics the migratory grazing behaviour of nature’s herds and flocks. Over the last four years, this system has increased our stocking rate by 30% and generated a 48% increase in output without increasing operational costs. As well as providing an abundance of quality grazing, it promotes much better plant root development and growth, thereby improving soil structure, organic matter content, water retention and carbon capture.”

Follow Barnside Farm on [Twitter](#) or [Facebook](#)



*James and Nikki Yoxall - Grampain Grazers, Huntly, Aberdeenshire*

James and Nikki have a herd of Shetland and White Galloway cattle but are currently farming without a farm! They have 18 acres at home but work as graziers across 200 acres of other people's land. They outwinter their cattle, using agroforestry and holistic planned grazing.

**James says: "Mob grazing is one of the closest ways we can mimic nature in a farmed landscape with ruminants. It helps us to plan grazing across the year and promote biodiversity by resting the ground for long periods of time. As new entrants, the group is an invaluable resource for us, supported by a fantastic group of people."**

Follow Grampian Grazers on [Twitter](#), or Howemill on [Twitter](#)



*Sandra Baer and Lynn Cassells - Lynbreck Croft, Grantown-on-Spey*

Lynn and Sandra farm a 150-acre croft in the Cairngorms National Park. They produce beef from Highland Cattle, pork from Oxford Sandy and Black pigs, eggs from laying hens and honey from bees.

**Lynn says: "We believe in farming in symbiosis with nature. By using mob grazing as part of our holistic planned grazing context, we are able to work with our animals and with nature to improve the health of our soils and our environment. We are involved with the group to learn from others and to share positive, nature-friendly farming stories."**

Follow Lynbreck Croft on [Twitter](#) or [Facebook](#)



*Robert Campbell and Kate Elliott- Fife Dexters, Fife*



Robert & Kate have a herd of about 50 (mainly) pedigree Dexter cattle on their small, organically managed farm in North East Fife near St. Andrews. Their Dexter beef is certified as being 100% grass fed by the Pasture-Fed Livestock Association & they are organically certified by the Soil Association. **Find out more** [here](#).

**Follow them on Instagram** [@fifedexters](#)



*Andrew and Robert Brewster- Easter Denoon Farm, Angus*

Robert & Andrew's family have been livestock farmers at Easter Denoon farm in Angus since 1946. They've been organic since 1990, mobgrazing since 2012 and now pasture cropping since Autumn 2018.

**Find out more** [here](#).



*Tony Bown - New Holland Farm, Orkney*



*Clem Sandison, Farming for Biodiversity Operational Group Facilitator*

During Clem's time as Farming & Land Use Manager at Soil Association Scotland she was instrumental in setting up and facilitating the Mob Grazing group. She has a passion for regenerative agriculture and helps farmers to share their stories through films, events, and other creative means. She also works at the Pasture-Fed Livestock Association as one of the Regional Facilitators for Scotland.

Alongside working with farmers, she manages a community food forest in the east end of Glasgow and dreams of starting an urban micro-dairy one day!

Clem will be continuing work with the group now that it has concluded with Soil Association Scotland.

For more information please contact: [clem.sandison@gmail.com](mailto:clem.sandison@gmail.com)

Alternatively, follow her on Twitter (@ClemSandison) or Instagram (@la\_jardinera)

### Appendix 3: Video resources list

Mob grazing events recordings	Links
Mob Grazing Q&A: Moving animals and assessing forage	<a href="https://www.youtube.com/watch?v=tygoKQBB3jg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=61">https://www.youtube.com/watch?v=tygoKQBB3jg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=61</a>
Mob Grazing Scotland Q&A- Outwintering in wet conditions	<a href="https://www.youtube.com/watch?v=mMpCUvOY4yo&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=62">https://www.youtube.com/watch?v=mMpCUvOY4yo&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=62</a>
Mob Grazing Scotland Q&A Outwintering to reduce inputs	<a href="https://www.youtube.com/watch?v=M2-IG0_ghfY&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=63">https://www.youtube.com/watch?v=M2-IG0_ghfY&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=63</a>

Professional video recordings	Links
Easter Denoon Farm - Farming to build soils	<a href="https://www.youtube.com/watch?v=Bv71YOWIWAM&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=47">https://www.youtube.com/watch?v=Bv71YOWIWAM&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=47</a>
Easter Denoon Farm - Mob grazing for soil health and biodiversity	<a href="https://www.youtube.com/watch?v=40K9Jq_vFUc&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=48">https://www.youtube.com/watch?v=40K9Jq_vFUc&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=48</a>
Easter Denoon Farm - Pasture cropping	<a href="https://www.youtube.com/watch?v=Fi7iozpMuvs&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=49">https://www.youtube.com/watch?v=Fi7iozpMuvs&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=49</a>
Mob Grazing Scotland: Water management at Easter Denoon Farm	<a href="https://www.youtube.com/watch?v=V59F2jjRqgc&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=50">https://www.youtube.com/watch?v=V59F2jjRqgc&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=50</a>
Mob Grazing Scotland: Tree hay at Lynbreck Croft	<a href="https://www.youtube.com/watch?v=TO1U8trzDUo&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=54">https://www.youtube.com/watch?v=TO1U8trzDUo&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=54</a>
Mob Grazing Scotland: Water systems at Lynbreck Croft	<a href="https://www.youtube.com/watch?v=FFmmRV0ft6c&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=56">https://www.youtube.com/watch?v=FFmmRV0ft6c&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=56</a>
Mob Grazing Scotland: Regenerating the land with pigs at Lynbreck Croft	<a href="https://www.youtube.com/watch?v=8Tv7OO5oV_E&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=58">https://www.youtube.com/watch?v=8Tv7OO5oV_E&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=58</a>
Lynbreck Croft - Animals to regenerate the land	<a href="https://www.youtube.com/watch?v=Ns8FVPIB3BQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=59">https://www.youtube.com/watch?v=Ns8FVPIB3BQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=59</a>
Lynbreck Croft - Bale grazing for pasture diversity	<a href="https://www.youtube.com/watch?v=cnqYznexOws&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=60">https://www.youtube.com/watch?v=cnqYznexOws&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=60</a>

Farmer video recordings	Links
Mob Grazing Scotland - Barnside Farm introduction	<a href="https://www.youtube.com/watch?v=toDc_ltdi9g&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg">https://www.youtube.com/watch?v=toDc_ltdi9g&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg</a>
Mob Grazing Scotland - Barnside Farm on moving the mob	<a href="https://www.youtube.com/watch?v=2VYtkP4hdlg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=2">https://www.youtube.com/watch?v=2VYtkP4hdlg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=2</a>
Mob Grazing Scotland - Barnside Farm on why to mob graze	<a href="https://www.youtube.com/watch?v=-wFRDzYkfm4&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=3">https://www.youtube.com/watch?v=-wFRDzYkfm4&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=3</a>
Mob Grazing Scotland - Barnside Farm on fencing and water management	<a href="https://www.youtube.com/watch?v=vJqgtqvWW38&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=4">https://www.youtube.com/watch?v=vJqgtqvWW38&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=4</a>
Mob Grazing Scotland - Barnside Farm's majestic mob	<a href="https://www.youtube.com/watch?v=epC9TN0qCTo&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=5">https://www.youtube.com/watch?v=epC9TN0qCTo&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=5</a>
Mob Grazing Scotland - Howemill and the wee mob	<a href="https://www.youtube.com/watch?v=Gn0r2NMoSgA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=6">https://www.youtube.com/watch?v=Gn0r2NMoSgA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=6</a>
Mob Grazing Scotland - Howemill on moving the mob	<a href="https://www.youtube.com/watch?v=Q-OvXqG4fQA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=7">https://www.youtube.com/watch?v=Q-OvXqG4fQA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=7</a>
Mob Grazing Scotland - Howemill on how managing for nature impacts the sward	<a href="https://www.youtube.com/watch?v=4Ne-TmCz0YU&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=8">https://www.youtube.com/watch?v=4Ne-TmCz0YU&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=8</a>
Mob Grazing Scotland - Howemill on animal nutrition, health and wellbeing	<a href="https://www.youtube.com/watch?v=9jEHNOmebDc&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=9">https://www.youtube.com/watch?v=9jEHNOmebDc&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=9</a>
Mob Grazing Scotland - Howemill on fencing and water systems	<a href="https://www.youtube.com/watch?v=Mzg-bE-VVD8&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=10">https://www.youtube.com/watch?v=Mzg-bE-VVD8&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=10</a>



Mob Grazing Scotland - Durie Farm introduction	<a href="https://www.youtube.com/watch?v=oWKbBLCVOUg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=11">https://www.youtube.com/watch?v=oWKbBLCVOUg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=11</a>
Mob Grazing Scotland - Durie Farm on moving the mob	<a href="https://www.youtube.com/watch?v=zUPzimDtxKU&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=12">https://www.youtube.com/watch?v=zUPzimDtxKU&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=12</a>
Mob Grazing Scotland - Durie Farm on reasons to extend the grazing season	<a href="https://www.youtube.com/watch?v=4Rp20E_iwO8&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=13">https://www.youtube.com/watch?v=4Rp20E_iwO8&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=13</a>
Mob Grazing Scotland - Durie Farm on deciding to start mob grazing	<a href="https://www.youtube.com/watch?v=L6KbjLnSINw&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=14">https://www.youtube.com/watch?v=L6KbjLnSINw&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=14</a>
Mob Grazing Scotland - Durie Farm on bulls and calves	<a href="https://www.youtube.com/watch?v=7Na0OBytHrg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=15">https://www.youtube.com/watch?v=7Na0OBytHrg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=15</a>
Mob grazing Scotland - Balsar Glen introduction	<a href="https://www.youtube.com/watch?v=v2d2LrVaAl8&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=16">https://www.youtube.com/watch?v=v2d2LrVaAl8&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=16</a>
Mob Grazing Scotland - Balsar Glen on the benefits and challenges of the soggy southwest!	<a href="https://www.youtube.com/watch?v=aX_cXbFvUwA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=17">https://www.youtube.com/watch?v=aX_cXbFvUwA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=17</a>
Mob Grazing Scotland - Balsar Glen on breeding and genetics	<a href="https://www.youtube.com/watch?v=Ge3A1w80iJg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=18">https://www.youtube.com/watch?v=Ge3A1w80iJg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=18</a>
Mob Grazing Scotland - Balsar Glen on moving calves and cows	<a href="https://www.youtube.com/watch?v=bZHp1EVV9BM&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=19">https://www.youtube.com/watch?v=bZHp1EVV9BM&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=19</a>
Mob Grazing Scotland - Balsar Glen on moving bulls	<a href="https://www.youtube.com/watch?v=CvUtl0US2ss&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=20">https://www.youtube.com/watch?v=CvUtl0US2ss&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=20</a>
Mob Grazing Scotland - Balsar Glen on kit for mob grazing	<a href="https://www.youtube.com/watch?v=hqijHa_KQ_I&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=21">https://www.youtube.com/watch?v=hqijHa_KQ_I&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=21</a>
Mob Grazing Scotland - Balsar Glen on experimenting with grazing	<a href="https://www.youtube.com/watch?v=rz9gX_dHgXg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=22">https://www.youtube.com/watch?v=rz9gX_dHgXg&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=22</a>
Mob Grazing Scotland - Achpopuli Farm introduction	<a href="https://www.youtube.com/watch?v=l_SKHmpxtGU&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=23">https://www.youtube.com/watch?v=l_SKHmpxtGU&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=23</a>
Mob Grazing Scotland - Achpopuli Farm on their mob grazing system	<a href="https://www.youtube.com/watch?v=d0Y7iJPxg68&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=24">https://www.youtube.com/watch?v=d0Y7iJPxg68&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=24</a>
Mob Grazing Scotland - Achpopuli Farm on outwintering sheep	<a href="https://www.youtube.com/watch?v=okuvXCGMJh4&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=25">https://www.youtube.com/watch?v=okuvXCGMJh4&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=25</a>
Mob Grazing Scotland - Achpopuli Farm on kit	<a href="https://www.youtube.com/watch?v=N7VO6EKYJ4M&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=26">https://www.youtube.com/watch?v=N7VO6EKYJ4M&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=26</a>
Mob Grazing Scotland - Achpopuli Farm on fencing	<a href="https://www.youtube.com/watch?v=xyn9uopqP8k&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=27">https://www.youtube.com/watch?v=xyn9uopqP8k&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=27</a>
Mob Grazing Scotland - Achpopuli Farm on minerals and water	<a href="https://www.youtube.com/watch?v=ozgawA_zKio&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=28">https://www.youtube.com/watch?v=ozgawA_zKio&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=28</a>
Mob Grazing Scotland - Achpopuli Farm on what they wish they'd known	<a href="https://www.youtube.com/watch?v=cUMApTc5nl4&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=29">https://www.youtube.com/watch?v=cUMApTc5nl4&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=29</a>
Mob Grazing Scotland - Achpopuli Farm on fluke	<a href="https://www.youtube.com/watch?v=a5UTX_UQJA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=30">https://www.youtube.com/watch?v=a5UTX_UQJA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=30</a>
Mob Grazing Scotland - Achpopuli Farm on foot health	<a href="https://www.youtube.com/watch?v=TFHaBGf02TQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=31">https://www.youtube.com/watch?v=TFHaBGf02TQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=31</a>
Mob Grazing Scotland - Welcome to The Sailean Project	<a href="https://www.youtube.com/watch?v=208qOsFfvs&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=32">https://www.youtube.com/watch?v=208qOsFfvs&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=32</a>
Mob Grazing Scotland - The Sailean Project on winter grazing	<a href="https://www.youtube.com/watch?v=FozPSdAeSUQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=33">https://www.youtube.com/watch?v=FozPSdAeSUQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=33</a>
Mob Grazing Scotland - a farm detail overview of the Sailean Project	<a href="https://www.youtube.com/watch?v=2NofGJi2kAM&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=34">https://www.youtube.com/watch?v=2NofGJi2kAM&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=34</a>
Mob Grazing Scotland - Context to the Sailean Project	<a href="https://www.youtube.com/watch?v=7ldFEb1I0uE&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=35">https://www.youtube.com/watch?v=7ldFEb1I0uE&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=35</a>
Mob Grazing Scotland - the Sailean Project on finding out what works	<a href="https://www.youtube.com/watch?v=PcJ73BMECrA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=36">https://www.youtube.com/watch?v=PcJ73BMECrA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=36</a>
Mob Grazing Scotland - the Sailean Project on managing water	<a href="https://www.youtube.com/watch?v=kAPKx5Er8xQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=37">https://www.youtube.com/watch?v=kAPKx5Er8xQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=37</a>
Mob Grazing Scotland - the Sailean Project on outwintering	<a href="https://www.youtube.com/watch?v=3bj0vxCbATQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=38">https://www.youtube.com/watch?v=3bj0vxCbATQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=38</a>
Mob Grazing Scotland - the Sailean Project on the practicalities of outwintering	<a href="https://www.youtube.com/watch?v=TUIWtDZm7mk&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=39">https://www.youtube.com/watch?v=TUIWtDZm7mk&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=39</a>
Mob Grazing Scotland - concluding words from the Sailean Project	<a href="https://www.youtube.com/watch?v=vWPmO99UBqQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=40">https://www.youtube.com/watch?v=vWPmO99UBqQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=40</a>

Mob Grazing Scotland: Introduction to Balbirnie Home Farms	<a href="https://www.youtube.com/watch?v=wi2OVMX-Hpw&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=41">https://www.youtube.com/watch?v=wi2OVMX-Hpw&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=41</a>
Mob Grazing Scotland: Balbirnie Home Farms on planning for winter in the summer	<a href="https://www.youtube.com/watch?v=RJ_kK-WunKU&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=42">https://www.youtube.com/watch?v=RJ_kK-WunKU&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=42</a>
Mob Grazing Scotland: Balbirnie Home Farms on the kit you need to get started	<a href="https://www.youtube.com/watch?v=iCZpytNoDuE&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=43">https://www.youtube.com/watch?v=iCZpytNoDuE&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=43</a>
Mob Grazing Scotland - Easter Denoon Farm introduction	<a href="https://www.youtube.com/watch?v=FTf4pPpsn24&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=44">https://www.youtube.com/watch?v=FTf4pPpsn24&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=44</a>
Mob Grazing Scotland - Easter Denoon Farm on managing water over the winter	<a href="https://www.youtube.com/watch?v=0VdxPfk5eHA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=45">https://www.youtube.com/watch?v=0VdxPfk5eHA&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=45</a>
Mob Grazing Scotland: Easter Denoon Farm on frosty pipes	<a href="https://www.youtube.com/watch?v=9ZEjLQeQ1PQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=46">https://www.youtube.com/watch?v=9ZEjLQeQ1PQ&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=46</a>
Mob Grazing Scotland: Water management at Easter Denoon Farm	<a href="https://www.youtube.com/watch?v=V59F2jjRqqc&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=50">https://www.youtube.com/watch?v=V59F2jjRqqc&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=50</a>
Mob Grazing Scotland: Lynbreck Croft introduction	<a href="https://www.youtube.com/watch?v=KR-8hazBV6w&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=51">https://www.youtube.com/watch?v=KR-8hazBV6w&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=51</a>
Mob Grazing Scotland: Lynbreck Croft on tree hay (part 1)	<a href="https://www.youtube.com/watch?v=M0mNTh5b8no&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=52">https://www.youtube.com/watch?v=M0mNTh5b8no&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=52</a>
Mob Grazing Scotland: Lynbreck Croft on tree hay (part 2)	<a href="https://www.youtube.com/watch?v=U7PQmSSaAfs&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=53">https://www.youtube.com/watch?v=U7PQmSSaAfs&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=53</a>
Mob Grazing Scotland: Lynbreck Croft on fencing and water	<a href="https://www.youtube.com/watch?v=hWkRCfWeC20&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=55">https://www.youtube.com/watch?v=hWkRCfWeC20&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=55</a>
Mob Grazing Scotland: Lynbreck Croft on regenerative grazing with pigs	<a href="https://www.youtube.com/watch?v=YcjmHNT0JJ4&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=57">https://www.youtube.com/watch?v=YcjmHNT0JJ4&amp;list=PLiWAozVmDLEk9VhHiOWXYKileILGGYNHg&amp;index=57</a>

## Appendix 4: Case study

### James and Nikki Yoxall share how Soil Association Scotland's mob grazing field lab has been a great source of information and support as they started mob grazing their own herd

- James and Nikki Yoxall are new entrants to farming. They moved from agricultural college in West Sussex to a 7.2-hectare farm in Aberdeenshire. They have a small herd of Shetland cattle.
- Agroecological principles are central to how they farm. They're applying agroforestry principles and a mob grazing system to their land and herd. It's early days but they're starting to see some success, such as outwintering the herd.
- They say Soil Association Scotland's mob grazing field lab has been a huge source of information and support during their transition to farming. As all members of the group are exploring the benefits of mob grazing principles together, they've had the benefit of learning from everyone's successes and challenges.
- After two years, James and Nikki are launching a business, Grampian Graziers, which will allow them to work in collaboration with other farmers to graze their land.



*Picture: Since moving to Scotland as new-entrant farmers, the Yoxalls have found support and community in Soil Association Scotland's mob grazing field lab. CREDIT: James and Nikki Yoxall.*

James and Nikki Yoxall are small-scale Shetland cattle farmers on an 18-acre/7.2-hectare farm in Aberdeenshire. Two years ago, they moved 650 miles from West Sussex to Scotland to pursue their dream of nature-friendly farming. They were lured by the outdoors and the slower pace of life, as well as a desire to farm organically. James and Nikki first came across rotational grazing principles while working at agricultural college in West Sussex, thanks to a forward thinking and innovative Farm Manager. "The farm manager there was a proper pasture geek!" says Nikki. "He had really well-planned

rotations. We've had a good insight into a more progressive way of thinking – even if we didn't know it so much at the time."

Nikki and James take an agroecological approach to their land, underpinned by their consciousness of the effects of climate and environmental change. "Taking a more environmentally conscious and embedded approach to farming just absolutely makes sense to us," says Nikki. "We're working to promote wildlife and biodiversity, and soil health is central to our whole approach. We live here; we want it to be beautiful, to have amazing wildlife – and we don't want to disturb the natural balance. I can't think of any other way of working."

### ***Learning from the mob grazing experts***

The couple, who are new to farming, have sought expertise from people who are already doing mob grazing and nature friendly farming. James went to Soil Association Scotland's event at Lynbreck Croft in 2018 and heard mob grazing expert Rob Havard speak. "Everything he said just made sense," says James.

After this, James and Nikki decided to take a year to observe the ground before making any big decisions about what to do with it. This included not even getting any chickens. "That was really hard," says Nikki. "We'd left chickens behind down south. I was counting down the hours until the end of the year so we could go out and get some chickens!" But the process gave James and Nikki time to read up on mob grazing, mull it over and decide if it was right for them.

At the end of that first year, they bought two cows and got to work, putting mob grazing principles into practice. "I've just become more and more obsessed," says James. "I've gone back to university to study agriculture, and we're growing the herd. We've got three cows now, and we'll have at least four in September. We're just exploring other options for building the herd and securing additional land so that we can do that. The 18 acres at home acts as a base, and then we're looking to get small plots of even quite big patches of ground, as locally as possible, and as rough and as mixed as we can get."

### ***The benefits of community spirit***

While there aren't many other farmers nearby using mob grazing principles, James and Nikki say Soil Association Scotland's mob grazing field lab has been a huge source of support. "The field lab and the community around mob grazing has been so welcoming and supportive," says Nikki. "Absolutely phenomenal."

The field lab is made up of 16 farmers and crofters who are mob grazing cattle across Scotland. It's designed as a peer-to-peer learning group, through which members can share best practice and learn from each other's challenges. James and Nikki joined in 2019 and have found it invaluable.

"If there's 16 people in the field lab, it gives you an opportunity to learn the lessons of 16 mistakes but only make one yourself, which is brilliant" says Nikki. "We're all learning from each other. There's a sense of community, where you can ask about problems you have, or things you're thinking about trying and hear views from the whole group." This has included sharing ideas on mobile water trough design, sharing photos of grass recovery and grazing plan decision making.

### ***Grazing the herd through the trees***

James and Nikki have had some successes combining mob grazing and agroforestry. Their land includes a 15-year-old woodland of native broadleaf and conifer. They've found that they can successfully graze their cattle all the way through the trees. "One of the great things about mob grazing is you can be really flexible with your paddocks," says Nikki. "It was just really lovely to see the cows in the woods and they've naturally lifted the canopy, too. They've kind of nibbled their way through the lower



branches, helping us to manage the understory. The amount of wildlife and stuff that we're seeing and the different plants coming through is just beautiful."



*Picture: The Yoxalls use a mob grazing system combined with agroforestry, which allowed them to successfully outwinter their cattle. CREDIT: James and Nikki Yoxall.*

Grazing through the trees allowed James and Nikki to outwinter the cows last. "When the snow came and we had these really awful storms, we just changed the paddocks so that they could get right in under the conifers," says Nikki. "We saw their natural behaviour really coming out. They knew where to go. They knew where to be sheltered. They knew to eat the different trees when they needed them. The integration of agroforestry and mob grazing has been a real success."

## **Grampian Graziers**

Like the rest of the UK, James and Nikki have been at home much more during the coronavirus lockdown. This has meant more time with the cows, and more time to focus on their new grazing business, Grampian Graziers. They're looking at opportunities to graze other peoples' land, negating the need for owning a big land holding themselves. "We realised we would be better off grazing other people's ground. We're using our land as a base and then working out of other areas. The lockdown has given us the opportunity to set that up formally. And from here, we'll be networking, working on some case studies and building relationships and trust."

For James and Nikki, as new entrants to farming, being part of a supportive group like the mob grazing field lab has given them the confidence to try new things and move forward. They say one of the main benefits of the group is that members approach it from a knowledge-sharing point of view. "It's a community that wants to share things," adds James. "We all want to see better soil health for wildlife and better wellbeing for people. It's that thinking that makes the group such a positive thing to be a part of."