

AGROECOLOGY: FACILITATING MINDSET CHANGE

Final Report For
KTIF/005/2021

March 2022



A partnership project



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1 Applicant

Nourish Scotland, on behalf of a partnership including:

- Nature Friendly Farming Network
- Landworkers' Alliance
- Soil Association Scotland
- Pasture For Life
- Food, Farming and Countryside Commission

[Nourish Scotland](#) is a charity focused on food and farming policy in Scotland. Nourish chairs Scottish Environment Link's food and farming group. We also convene the Scottish Food Coalition, a partnership of around 40 civil society organisations. Nourish Scotland initiated and organised the Farming for 1.5 inquiry which brought together farmers, scientists and environmentalists to develop a consensus report 'From here to 2045'.

The [Soil Association](#) established in 1946, is the UK's leading charity working for healthy, humane and sustainable food, farming and land use. Soil Association Scotland 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

The [Landworkers' Alliance \(LWA\)](#) is a union of farmers, growers, foresters and land-based workers with a mission to improve the livelihoods of our members and create a better food and land-use system for everyone. We operate across the UK and represent more than 1500 agroecological farmers and landworkers. Our policies, representation and training come from farmers, growers, crofters, foresters and land-based workers who have direct experiences of the issues we work on. Projects include mentoring, support for peer-to-peer networks, knowledge exchange and policy-related activities. The LWA has been active in Scotland since 2018 and published a manifesto in 2021 with financial support from the Pebble Trust.

[The Food, Farming & Countryside Commission \(FFCC\)](#) was set up to think afresh about where our food comes from, how we support farming and rural communities and how we invest in the many benefits that the countryside provides. Since producing our recommendations and report in July 2019, and with the support of our funders Esmée Fairbairn Foundation, we've shifted gear to turn these into practical actions and sustainable change. We are focusing wholeheartedly on our core mission – connecting food, farming and the public's health, for a just transition to a greener, fairer economy, in response to the climate, nature and health emergencies.

The [Nature Friendly Farming Network \(NFFN\)](#) is a farmer-led, independent UK organisation established in November 2017 with a growing farmer and public membership. NFFN unites farmers and crofters who are committed to managing their land for wildlife and the delivery

of public goods, as well as growing and providing healthy and nutritious food. The membership covers a range of backgrounds big and small, organic and conventional and seeks to secure positive changes in policy, including how farming is supported by the public. With an established NFFN Scotland Steering Group and a dedicated Scotland Sustainable Farming Lead, NFFN works to raise awareness of nature friendly farming in Scotland, shares insights and experience and works in collaboration with others for better policies for food and farming.

[Pasture For Life](#) (PFL) is the UK's only certification body for 100% Pasture-fed beef, lamb and dairy products. With over 800 members, paying an annual fee each year and more than 130 certified farms, PFL is the home of grass-fed ruminant agriculture in the UK. The organisation promotes the unique quality of produce raised exclusively on pasture, and the wider environmental and animal welfare benefits that pastured livestock systems represent. PFL is at the cutting edge of new grazing management techniques, is a platform for regenerative farmers to learn and succeed and is committed to providing support for farmers transitioning to more sustainable production methods. With a strong research focus, PFL is a highly networked organisation promoting the interests of its members and ensuring a secure and robust future for them.

2. EXECUTIVE SUMMARY

This collaborative project was designed, delivered and facilitated by a unique partnership of organisations, Nourish Scotland, Nature Friendly Farming Network, Landworkers' Alliance, Soil Association Scotland, Pasture for Life and the Food, Farming and Countryside Commission. The aim of the project was to promote the concept of agroecology, foster a better understanding of agroecology and ensure the adoption of agroecological practices among farmers, crofters and growers in Scotland.

The project's objectives were to:

- Foster agroecological knowledge transfer in agriculture
- Develop the knowledge base in rural areas
- Foster lifelong learning and vocational development in agriculture
- Fill a gap within existing knowledge in this area (agroecology)
- Facilitate ongoing peer-to-peer learning beyond the lifetime of this project
- Encourage agricultural practices that preserve and enhance ecosystems and restore biodiversity

The project delivered the following activities:

- The design of **5** themed farmer, crofter and grower-led learning programmes focused on how to introduce/strengthen agroecological approaches and techniques facilitated by individual project partners:
 1. Low-input livestock – Landworkers' Alliance
 2. Integrating Livestock into Agroecological Systems in the Borders – Pasture For Life
 3. Arable Systems– Soil Association Scotland & Food, Farming and Countryside Commission
 4. Market Gardening – Landworkers' Alliance
 5. Crofting – Nature Friendly Farming Network
- A total of **15 learning events** were held - **10** were hosted on farms/crofts and market gardens and **5** were hosted online.
- **28** farmers, crofters and growers were supported to host the events with **305** Scotland- based farmers, crofters and growers engaging and participating (**377** in total) - well exceeding the target of 9 hosts and 50 participants.
- Raising wider awareness - **43,000 impressions**. of tweets were recorded (exceeding the target of at least 10,000 impressions)
- Development of a series of **video resources** as a legacy output (*dissemination stats will be gathered after launch in April - target 500 views*)

What was achieved

- **Participating farmers trial/adopt agroecological practices- 105** farmers, crofters and growers who participated indicated a commitment to change practice/ try other practices (exceeding the target of at least 10)
- **Participating farmers have a positive experience of shared learning and are more likely to take up future opportunities-** Almost **100%** of participants stated that the events were useful and they left with new learning and wanting more peer to peer opportunities like these available in the future
- **The operational group deepen their understanding of agroecology and of how to communicate agroecological approaches** - All the partners report back a deeper understanding of agroecology and how to better communicate agroecological approaches for different audiences.
- **Wider industry bodies are interested in the results of the project and the methods used, and are more likely to recommend agroecological approaches to their networks-** We had engagement from NFUS, RSPB and SCF in promoting and attending some events
- **Hundreds of farmers, advisors, students and interested citizens learn about the project through the partner organisations' dissemination channels-** The dissemination stats to date already evidence the reach to be in the thousands, not just hundreds.
- **This method is refined and adopted more widely in future knowledge transfer and exchange projects-** The partners are currently designing the next phase of the learning programme, recognising that collaboration is more powerful in having a significant impact across a range of farm types and stakeholders.
- **Policymakers have additional evidence on the potential for adoption of agroecological practices-** This report provides clear evidence that farmers engaging with this type of activity want to implement agroecological practices on their own farms. Where appropriate support is offered, and examples of agroecology in action are shared, almost all attendees indicated they would implement change on their own holdings. Not only does this demonstrate a potential for adoption of agroecology, it shows the positive impact of this approach to knowledge transfer.

Lessons learnt/what might have been delivered differently

Fuller engagement of wider sector stakeholders - NFUS, SRUC, FAS - would have helped promote the events and embed learning: and we plan to do this in the next stage of the project.

Dissemination

Extensive social media to promote and comment on the events. Short videos have been made - further dissemination planned when these are launched in April

3. PROJECT DESCRIPTION

The essence of this project was to demonstrate the potential **agroecology** holds for the future of food and farming in Scotland. It aimed to involve more farmers/crofters and growers in agroecological transition and to build the skills, networking capacity and resilience of those who are already part of the agroecological journey.

Agroecology is a science and a practice for improving food and farming systems, which supports regenerative farming, and puts people - farmers, food producers, citizens – at the heart of solutions. It applies ecological principles to agriculture to create more beneficial relationships between plants, animals, humans and ecosystems - and because of this, can enable land to provide multiple production and ecosystem service benefits.

Agroecology holds great potential for increasing ecosystem resilience and empowering food producers and local communities. It is unique because it is based on a bottom-up approach and acknowledges the importance of knowledge creation and exchange to find contextualised solutions to local problems. It is **increasingly being accepted as a solution** which could ensure sustainability and resilience to environmental pressures and climate change are at the heart of long-term growth and competitiveness of the food and farming sectors.

Adopting agroecological practices also enables farm, croft and market garden businesses to become more resilient economically, typically by making better use of biological nitrogen fixation; designing beneficial plant-plant and plant-animal interactions; improving the soil's ability to store nutrients and make them available to plants and to respond to both heavy rainfall and drought conditions, increasing on-farm animal and plant diversity and the diversity of enterprises.

However, despite this growing acceptance of the potential of agroecology as a science and practice, **It is only just creeping into the mainstream in Scotland**. Currently farmers, crofters and growers who use agroecological practices are very much in the minority in Scotland.

SRUC reported in [‘Agroecological Practices Used in Scottish Farming: Evidence from a Survey of Farming Businesses’](#) that some Scottish sectors (livestock) lag behind EU counterparts when it comes to the adoption of agroecological practices signalling clear scope for improvements. However the same study found that with regard to other sectors Scotland is slightly ahead of the EU (arable.) There are opportunities here to learn what has driven adoption in this group and how learning can be transferred to the livestock sector. Furthermore, The James Hutton Institute [recently reported](#) that *“agroecological approaches provide a broad pathway to sustainability in agriculture and are being practiced by many Scottish farmers and crofters, largely without financial subsidies”*.

In answer to all of this a **unique partnership of organisations** came together through the [Scottish Environment LINK](#) Food and Farming Group - The Landworkers’ Alliance, Nature-Friendly Farming Network, Pasture For Life, Soil Association Scotland, The Food, Farming & Countryside Commission (FFCC) and Nourish Scotland. These organisations are working

collaboratively towards embedding the concept of agroecology, fostering a better understanding of agroecology and the adoption of agroecological practices among farmers and crofters in Scotland.

Each partner organisation has skills and experience in delivering agroecological training, facilitation and mentoring and KTIF funding has supported them to combine these and work in collaboration.

Agroecology: Facilitating Mindset Change is a **farmer to farmer/ crofter to crofter/ grower to grower cooperative learning programme**. It has been designed using the principle set out by The Food and Agriculture Organisation of the United Nations (FAO), that agroecology depends on context-specific knowledge, rather than offering fixed prescriptions as it looks to fit the environmental, social, economic, cultural and political contexts of each individual farm and croft. As such, the co-creation and sharing of knowledge plays a central role in the process of developing and implementing agroecological innovations to address challenges across food systems including adaptation to climate change.

By supporting agroecological producers and helping others be part of the agroecological transition, this project has worked towards helping farmers, crofters and growers achieve climate change and biodiversity restoration targets, whilst building local food systems that benefit Scottish communities.



KTIF Agroecology: Facilitating Mindset Change on-farm and croft sessions

4. PROJECT AIMS/OBJECTIVES

Aims: To promote the concept of agroecology, foster a better understanding of agroecology and ensure the adoption of agroecological practices among farmers and crofters in Scotland. To support the shift towards a low-carbon and climate-resilient economy in the agriculture, food and forestry sectors

Objectives

- Fostering agroecological knowledge transfer in agriculture
- Development of the knowledge base in rural areas
- Fostering lifelong learning and vocational development in agriculture
- Filling a gap within existing knowledge in this area (agroecology)
- Facilitating ongoing peer-to-peer learning beyond the lifetime of this project
- Encouraging agricultural practices that preserve and enhance ecosystems and restore biodiversity

Why sought

The aim and objectives of this project were sought because of the current lack of opportunity in Scotland for farmers, crofters and growers to learn about the science and practice of agroecology in Scotland. Despite the potential of agroecology as a solution gradually becoming more accepted, there is a huge gap in farmer, crofter and grower-led agroecological lifelong learning and vocational development opportunities. Agroecology and nature -friendly farming is not part of our mainstream advisory service and is not currently being taught within our learning institutions. Agroecology is recognised as being knowledge intensive, so support for developing knowledge and the confidence to apply that knowledge in an adaptive and context specific way is key to enabling the agroecological transition.

As stated above, the design of this farmer to farmer/ crofter to crofter/ grower to grower cooperative learning programme was equally important. Currently much of what is offered to farmers, crofters and growers in terms of agricultural innovation is designed around the one to many concept, the traditional in-person advice from 'experts', such as agricultural advisers, to inform farm management. This certainly has its place, but it is accepted now that, like other sectors, learning and innovation in agriculture happens within trusted peer networks. This is the essence of agroecology as it acknowledges the importance of knowledge creation and exchange to find contextualised solutions to local problems.

This project allowed the partners to develop a farmer to farmer/ crofter to crofter/ grower to grower co-created learning programme in answer to this gap in Scotland. This allowed farmers, crofters and growers to dip their toes in the water and learn something new. It also supported the existing farmers, crofters and growers who are pioneering agroecological practices in Scotland currently. This project allowed them to not only share their knowledge and learning but to test this with peers in a safe environment and get invaluable feedback and support.

5. PROJECT OUTCOMES

5.1 How aims/objectives were achieved

When initially designing the learning programme for this project, the intention was to recruit five, locally-based small farmer, crofter, grower learner groups (10 people max each) hosted by local farmers/crofters/growers already using agroecological practices within that area (Oct/Nov.) With the groups regionally organised this would build important peer to peer relationships and secure the agroecological knowledge base within local contexts. The project partners would then help facilitate the co-design of three visits/events (between Dec- Feb 2022) and further discussions with these groups to introduce and strengthen agroecological approaches and techniques. It was hoped that by initially facilitating supportive peer group relationships, these would continue after the life of the project, supporting lasting change.

Based on this, the project set out to deliver the following outcomes:

- Participating farmers trial/adopt agroecological practices
- Participating farmers have a positive experience of shared learning and are more likely to take up future opportunities
- Participating farmers maintain connections with other group members, providing support for lasting practice change
- The operational group (six organisations plus the 9 farms which host visits) deepen their understanding of agroecology and of how to communicate agroecological approaches
- Wider industry bodies are interested in the results of the project and the methods used, and are more likely to recommend agroecological approaches to their networks
- Hundreds of farmers, advisors, students and interested citizens learn about the project through the partner organisations' dissemination channels
- This method is refined and adopted more widely in future knowledge transfer and exchange projects
- Policymakers have additional evidence on the potential for adoption of agroecological practices

However, this design had to be revised due to both the project timescales (we could not publicly start the recruitment until early January after the KTIF awards were announced) and the unknown impact at the time of the Omicron variant of COVID-19 over Dec 21 and early Jan 22.

The project and partners had to pivot towards a more open, flexible learning programme which had to be designed & delivered within three months. As a result of this, the local focus of the learning programme was diluted (though retained by the Pasture-fed in the Borders theme group.) The pressure on time also impacted the ability of the learning programmes being able to be co-designed. This role was taken up by the lead partner organisation, in dialogue with their members and other partners.

The initial step was setting up the project steering group in November then confirming the five focus themes and partner leads- see below:

- 1. Low-input livestock – Landworkers’ Alliance**
- 2. Integrating Livestock into Agroecological Systems in the Borders – Pasture For Life (with support from NFUS)**
- 3. Arable Systems– Soil Association Scotland & Food, Farming and Countryside Commission**
- 4. Market Gardening – Landworkers’ Alliance**
- 5. Crofting – Nature Friendly Farming Network**

Each partner then developed a facilitated learning programme under each theme based on a series of three farmer, crofter and grower-led events per theme which ran over February/ March (with registration for events running through the project.) Clarity also came through in January that in-person events would be possible so the partners proceeded on that basis. A total of **15 learning events** were held - **10** were hosted by farmers, crofters and growers on their farms/crofts and market gardens and **5** were hosted online.

28 farmers, crofters and growers were supported to host the events with **305** Scotland-based farmers, crofters and growers engaging and participating (377 in total) - exceeding the target of 9 hosts and 50 participants.

The partner steering group also met bi-monthly through the project collaboratively designing and supporting the project as it developed. This provided a continuous feedback loop into the project which enabled the partners to respond and pivot as circumstances changed. This also acted as support for the partners themselves and helped them jointly design the facilitation, structure and evaluation of the whole event programme.

Documenting the project has also evolved over the timeframe. Initially the partners had aimed to both produce a video series as well as a short public facing report. Based on a longer timeframe it was hoped that the learning programme would be completed by the end of February which would have allowed a sufficient amount of time to reflect, write up and design a short report. Unfortunately this has not been possible due to the learning programme having to run right up to the middle of March and capacity impacts as a result of this.

However the video series has proceeded to plan and a total of **7** learning videos will be produced. These will be launched in April 22.

Despite the re-design, the learning programme has successfully met most and exceeded some of the project outcomes:

- **Participating farmers trial/adopt agroecological practices**
Based on the initial design of the learning programme the partners had aimed that at least **10** farmers would commit to trialling/adopting at least one new agroecological practice. Based on the events feedback and evaluation undertaken, **105** farmers,

crofters and growers who participated indicated a commitment to change practice/ try other practices (*see detailed feedback in Section 6.2 Impacts*)

- **Participating farmers have a positive experience of shared learning and are more likely to take up future opportunities**

Almost 100% of participants who responded to the individual event evaluations stated that the events were useful and they left with new learning and many stating they would like to see more peer to peer opportunities like these available in the future (*see detailed feedback in Section 6.2 Impacts*)

- **Participating farmers maintain connections with other group members, providing support for lasting practice change**

As a result of moving away from the smaller, more regional/local groups and the timescale of the project, this outcome is challenging to measure. Follow-up evaluation may be possible with the 'Integrating Livestock into Agroecological Systems in the Borders' peer group to measure how/if these peer group relations have been maintained. In this cohort, **7** attendees participated in both on-farm visits and **2** in both farm visits and the online webinar.

- **The operational group (six organisations plus the 10 farms/crofts/ market gardens which host visits) deepen their understanding of agroecology and of how to communicate agroecological approaches**

All the individual staff from the partner organisations report back a deeper understanding of agroecology and how to better communicate agroecological approaches for different farmer, crofter and grower audiences. This has been honed both for facilitating the events as well as for communicating and promoting the project (on social media and through involvement in the film series.) It is not currently in mainstream thinking or practice in Scotland. The name itself can be tricky to pronounce and being so unfamiliar can be a stumbling block in events aimed at farmers, crofters and growers looking at changing practice and mindsets. Much of the focus as a result, was on the practice at the events rather than discussing the science.. Before the project began there was a reluctance in Scotland to use the term but there has been huge progress even through the short life of this project. This is due to the work of the project partners and other institutions and organisations of bringing agroecology into the mainstream and encouraging discussion and debate around it as a solution in Scotland.

- **Wider industry bodies are interested in the results of the project and the methods used, and are more likely to recommend agroecological approaches to their networks**

All partners report back that there is interest in the results of this project from the wider industry bodies (including from those organisations directly involved including NFUS, SCF and RSPB Scotland.) This interest will only continue to grow bolstered also by the recent agroecology research reports published in Scotland.

- Hundreds of farmers, advisors, students and interested citizens learn about the project through the partner organisations' dissemination channels**

Again this will be something which cannot be finally measured until after the life of the project once the report is published and the film series disseminated. However social media stats have been captured between the launch in January and events completion in mid- March. Through Twitter alone, between the partner accounts, tweets promoting the project received over **43,000 impressions**. NFFN also promoted the project through their Instagram and Facebook accounts (with 1,521 reach and 8,800 reach respectively.) The partner's dissemination reached thousands, not just hundreds, enabling more to learn about the project.
- This method is refined and adopted more widely in future knowledge transfer and exchange projects**

The partners have already begun this process and are designing the next phase with the intention of submitting an Inception Note to the next round of the Knowledge Transfer and Innovation Fund (KTIF) and securing wider interest and funders.
- Policymakers have additional evidence on the potential for adoption of agroecological practices**

Due to the interest detailed above and the impact of the project outlined below, the partners are confident that this project offers policymakers evidence of the potential for the adoption of agroecological practices in Scotland. The partners are keen to keep building this evidence by developing this practical learning programme further, increasing its reach among and impact on farmers, crofters and growers in Scotland. It is hoped that this along with the research provided by scientists, institutions and organisations like SRUC, James Hutton Institute, SEFARI Gateway, SAOS and project partners FFCC and the Soil Association Scotland will influence policy making as we move through agricultural transition in Scotland.

5.2 Milestones

Date	Milestone
10/11/21	Project begins
10/11/21	Steering group convened and regular bi-monthly meetings held and scheduled until 31st March
Dec 21	Online survey undertaken by LWA and PFLA to guide the design of the learning programme- 43 respondents
05/01/22	Scottish Government announces successful KTIF projects
24/01/22	Official project and webpage launch- https://www.nffn.org.uk/ktif-farmer-crofter-agroecology/ https://www.nourishscotland.org/projects/agroecology-mindset-change/
25/01/22 10am - 4pm	Theme: Integrating Livestock into Agroecological Systems in the Borders – PFL On farm: Pasture-Fed in the Borders with Matt Griffin, Edston Farm, Peebles. Attendees: 27 Filming on farm - farmer story
3/02/22 3pm- 4.30pm	Theme: Arable Systems - SA/FFCC Online: Integrating livestock into arable systems with Johnnie Balfour Attendees: 16 -Scotland (12) Wider UK (3) Outside UK (1)
3/02/22 7-9pm	Theme: Low-input livestock – Landworkers’ Alliance Online: Low input sheep health & nutrition with Poppy Frater, Vic Ballantyne and Katharine Sharp Attendees: 48
8/02/22 7-9pm	Theme: Market Gardening – Landworkers’ Alliance Online: Soil health for growers with Audrey Litterick and Scottish farmers Attendees: 60 - Scotland (40) Wider UK (20)
22/02/22 5- 6.30pm	Theme: Integrating Livestock into Agroecological Systems in the Borders – PFL Online: Agroforestry in the Uplands with Andrew Barbour and Nikki Yoxall Attendees: 40- Scotland (24) RUK (16)
24/02/22 10.30am to 4pm	Theme: Arable Systems - SA/FFCC On farm: Growing apples and barley together in a silvoarable system with Roger Howison. Parkhill Farm, Newburgh, Fife Attendees: 2 note: cancellations due to heavy snow Filming on farm - farmer story
27/02/22 10.30am to 4pm	Theme: Low-input livestock – Landworkers’ Alliance On Farm: Introduction to Holistic Grazing for women with Nikki Yoxall, Grampian Graziers, Dingwall Community Centre/ Blackwells farm Attendees: 8 Filming on farm - farmer story

02/03/22 10am to 3pm	Theme: Integrating Livestock into Agroecological Systems in the Borders – PFL On Farm: Livestock within an agroecological farming system with Stuart Mitchell, Whitriggs farm, Hawick Attendees: 22
03/03/22 10.30am to 4pm	Theme: Market Gardening – Landworkers’ Alliance On Market Garden: Composting and Fruit Tree Care with Audrey Litterick, Clem Sandison and Tom and Connie Hunter, East Neuk Market Garden, Bowhouse, Fife Attendees: 15 Filming on garden - grower story
04/03/22 2-5pm	Theme: Crofting – Nature Friendly Farming Network On croft: Crofting and Grazing - Using NoFence Collar Technology hosted by Domhnall MacSween (Air An Lot) and Shona Morrison, RSPB Comunn Eachdraidh Nis, North Dell and Swainbost, Isle of Lewis Attendees: 13 Filming on croft- crofters story
05/03/22 10am to 4pm	Theme: Crofting – Nature Friendly Farming Network On croft: The Green Bowl: running a crofting township food hub hosted by Helen O’Keefe and Tessa Dorrian, Elphin Attendees: 9 Filming on croft- crofters story
10/03/22 1 to 4pm	Theme: Arable Systems - SA/FFCC On farm: Future Proofing the Farm: Reducing Inputs and Improving Soil Health with Douglas Christie, Prof. Lorna Dawson and Dr Alison Karley from the James Hutton Institute, Durie Farms, Leven, Fife Attendees: 11
10/03/22 7-9pm	Theme: Low-input livestock – Landworkers’ Alliance Online: Setting up a small-scale pastured poultry enterprise with Gilly Dixon-Spain from The Sailean Project on the Isle of Lismore, Jenny Macdonald from Woodside Arran Farm on the Isle of Arran, and Jill Russell from Ramstane Farm in East Ayrshire. Attendees: 85 Scotland (48) RUK (37)
11/03/22 10am to 3pm	Theme: Crofting – Nature Friendly Farming Network On-croft: Managing for Biodiversity with Phil Knott, Wildlife Croft, Sleat Peninsula on the Isle of Skye Attendees: 8
17/03/22 12.30 to 4pm	Theme: Market Gardening – Landworkers’ Alliance On-farm: Agroforestry for Growers in Scotland with James Reid and Rosa Bevan, Tap o’ Noth Farm , Rhynie, Aberdeenshire Attendees: 18
31/03/22	Final report and claim submitted
week beg 18/04/22	‘Agroecology: Facilitating Mindset Change’ film series launched



Integrating Livestock into Agroecological Systems in the Borders – PFL with Matt Griffin, Edston Farm, Peebles, 25 Jan 2022



Growing apples and barley together in a silvoarable system with Roger Howison. Parkhill Farm, Newburgh, Fife, 24 Feb 2022

6. LESSONS LEARNED

6.1 Issues/Challenges

One of the biggest challenges running the project was timescale. Ideally, a KTE programme focusing on mindset change would have at least a year to run. The KTIF timeframe of six months was shortened further due to the event recruitment not able to begin publicly until January and the programme itself not being able to get started until the end of January. This changed the design of the project to a more open, flexible learning programme run rather than the focused local/regional farmer, crofter and grower-led groups originally planned.

The limited timeframe also meant that although the project made some connections with and secured some support from other organisations that have a role in Scotland's agricultural transition, there was not enough time for in-depth engagement.

The Integrating Livestock into Agroecological Systems in the Borders – PFL learning programme was delivered with support from NFUS (see section 5: Project Outcomes above.) The Crofting learning programme was in part delivered in partnership with RSPB and promoted by the Scottish Crofting Federation to its members. The Arable Systems was in part delivered with the James Hutton Institute.

The project would have benefited greatly from more lead-in time to develop effective stakeholder engagement in the planning and promotion of the learning programme. Engagement and buy-in by the wider sector is essential if agroecology is to be mainstreamed in Scotland.

The impact of the Omicron variant of COVID 19 was another unknown to deal with in terms of delivery. Fortunately when the events began at the end of January, the partners were able to run in-person events (within COVID guidelines.) However not one event escaped from COVID-related late cancellations. Running an on-farm/croft events programme in the winter was also challenging, but fortunately only one event was badly affected by snow with the rest escaping relatively unscathed.

We could have used more lead-in time to improve consistency of event evaluation and data collection. In the event, the partners erred on the side of caution due to GDPR.

Although the communications and promotion was successful (the events were all well attended) more time would also have allowed the partners to plan the promotion campaign around the project more effectively.

However all the partners acknowledge that this was essentially a pilot project and one where the learning will be used to shape and develop the next phase.

6.2 Impacts

As this project was designed to support peer to peer knowledge exchange, the primary measure of success has been the **feedback from the farmers, crofters and growers who participated and those who hosted the events.**

Participant feedback

Each partner organisation collected feedback from the events in the themes based on the following questions:

- What did we learn?
- How have I changed my views as a result? How have I changed my practices? How do I plan to change my practices?
- How useful/well-run/enjoyable were the sessions?/ Would I like to see more opportunities for peer to peer learning?

As stated above, the feedback on participating in a learning programme designed like this has been overwhelmingly positive.

What did we learn?

Almost 100% of participants who responded to the individual event evaluations stated that they left with new learning.

‘This event has made me look at our farm in a different way, there are some things to change.’

‘Learned lots of new info and it was nice to realise that others go through similar struggles to my farm’

‘This event has shown me that farmers can reduce their dependence on fossil fuels’

Further feedback on learning can be read in Annex 1



Event: Composting and Fruit Tree Care with Audrey Litterick, Clem Sandison and Tom and Connie Hunter, East Neuk Market Garden, Bowhouse, Fife, 3 March 2022

How have I changed my views as a result? How have I changed my practices? How do I plan to change my practices?

We aimed for at least **10** farmers to commit to trialling/adopting at least one new agroecological practice. Based on the events feedback and evaluation undertaken, **105** farmers, crofters and growers who participated indicated a commitment to change practice/try other practices.

'I would definitely like to establish some hedgerows and shelterbelts of trees on our wee bit of land. I kind of ran out of steam this year, but I'm re-inspired. So lovely seeing cows enjoying woods'

'Monitoring faeces for dietary efficiency'

'I'm looking at the potential for input reduction from alternative cropping. I will think about reducing tillage and got some ideas for composting.'

'I feel confident to go away and start a local food hub'

'Yes, the incorporation of willow/shrub planting in amongst food growing areas. And goats!'

Lots: including using electric fencing to divide the croft and move livestock around. You don't necessarily need to lime. It is possible to croft/farm without input from machinery."

'Look to get more detailed soil analysis undertaken'

Further feedback on practice change can be read in Annex 1



Event: Crofting and Grazing - Using NoFence Collar Technology hosted by Domhnall MacSween (Air An Lot) and Shona Morrison, RSPB, 4 March 2022

How useful/well-run/enjoyable were the sessions?/ Would I like to see more opportunities for peer to peer learning?

Again almost **100%** of participants who responded to the individual event evaluations stated the sessions were useful/well-run/enjoyable. When asked, most would like to see more opportunities for peer to peer learning being offered. This reflects the popularity of the events (both in-person and online.)

'This was one of the most inspiring webinars I have attended in the past 2 years'

“Really useful to see the way others approach the design of their farms / land. The value of farm visits! Many thanks”

‘These events are very valuable. It would be good to see more long-standing crofters in attendance. Perhaps reach out to common grazings committee clerks, and frame the event content as helping them to build future resilience?’

‘Opportunity for discussion where there were no right or wrong answers, but space for everyone to share their ideas.’

‘There are so many individuals trying to succeed and events like this help them meet and learn and make them more likely to succeed.’

Further feedback on the events and learning opportunities can be read in Annex 1



Event: The Green Bowl: running a crofting township food hub hosted by Helen O’Keefe and Tessa Dorrian, Elphin, 5 March 2022

6.3 The importance of hosts

One of the main highlights of this project was the role of the farmer, crofter and grower hosts. It was a hugely positive impact that the learning programme in the end involved **28** farmers, crofters and growers hosts rather than the 10 as initially planned.

The partners all reflected how integral these innovative farmers, crofters and growers who are currently practising agroecology are in Scotland. As one participant stated, *‘It is so important to have farmers who are willing to go against the grain.’* Supporting, highlighting and celebrating these people and recognising the value of their expertise and experience is a key role of the partner organisations through their own work. This project allowed the partners to further develop and build this support and enabled these farmers, crofters and growers to not only share their knowledge and learning as hosts and experts but to test this with and be supported by peers in a safe environment and get invaluable feedback and support.



Event: Agroforestry for Growers in Scotland with James Reid and Rosa Bevan, Tap o' Noth Farm , Rhynie, Aberdeenshire, 17 March 2022

6.4 Reaching women farmers and crofters

There is some evidence that women are underserved by existing systems of farm advice.

The Scottish Government's evaluation of FAS

<https://www.gov.scot/publications/evaluation-farm-advisory-service-one-many/>

comments that the 30:70 ratio of women:men attendees is comparable to the wider gender imbalance in agriculture, it also notes the success and impact of women-only events and calls for an inclusive approach to design and delivery of advice.

A recent review of on-farm events also remarks on the tendency for these to attract men rather than women

<https://www.tandfonline.com/doi/pdf/10.1080/1389224X.2020.1828115>

While our programme of 15 online and in-person events only included one women-only event, most of the individual events and the programme as a whole attracted a high proportion of female participants. (More detailed statistics available if required)

This reflected the make-up of the partner staff involved in designing and delivering the project (8 female, 2 male) and of the hosts (18 female, 10 male)



Event: Introduction to Holistic Grazing for women with Nikki Yoxall, Grampian Graziers, Blackwells farm

6.5 Food Matters

Food served at the events reflected local provenance and encouraged informal conversation

“Excellent event and the presence of good food is important as a connection to what is trying to be achieved by growers and farmers.”



6.6 What we'd do differently next time

In the partner review meeting these were the immediate reflections. We will be building on these as we develop the inception note for the next stage of the project

- Have a consistent set of graphics and messages on agroecology to explain it, clear simple and on-brand messaging
- Build a face-to-face group in a specific geographic region /catchment area, then keep in touch online, need a minimum of a year to build a strong peer-to-peer group
- Have a hashtag for all activities to make tracking on social media better
- Build in a link with FAS and SEFARI from the start
- Consider catchment / RLUP geographical groupings/clusters - this is important for KTIF in general. Agroecology cuts across types of farmers - this is a strength for local/regional groupings!
- Make sure a significant number of hosts are from under represented/marginalised groups
- Travel bursaries for marginalised groups to enable participation Paying travel costs for those attending in future? Childcare costs?
- As well as running the project, keep thinking about methods - how can we do knowledge transfer better ?

7. COMMUNICATION & ENGAGEMENT

Effective communication and engagement was key to the success of this project. Each partner organisation tapped into their own communications expertise and networks to work to promote, recruit and raise awareness of the project. The partners officially launched the project on the 24th January with a press release, webpage and Twitter campaign

<https://www.nffn.org.uk/ktif-farmer-crofter-agroecology/>

<https://www.nourishscotland.org/projects/agroecology-mindset-change/>



Source of promotion	Reach/Followers//hits
Nourish Scotland Twitter	7,615
NFFN Twitter	13,314
NFFN Instagram	2,861
NFFN Facebook	3,253
Soil Association Scotland	9,653
FFCC	6,936
Landworkers' Alliance	10,861
Pasture For Life	11,349

8. KEY FINDINGS & RECOMMENDATIONS

Findings

The project showed a significant demand for online and in-person opportunities to learn and share knowledge about agroecology. There was no shortage of willing hosts or topics to cover.

This matters because agroecology is increasingly being recognised as the direction of travel for farming in Scotland if we want to tackle the climate and nature emergencies while building resilient farming businesses.

Two significant research reports have been published in Scotland within the life of this project which also align with the aims and objectives of this project:

Lozada, L M & Karley, A 2022, '[The adoption of agroecological principles in Scottish farming and their contribution towards agricultural sustainability and resilience.](#)' SEFARI fellowship project report

Key findings: agroecological farming is more knowledge intensive and less reliant on chemical fixes than conventional modern farming, it demands an understanding of ecological processes in farming systems and integrates the farming operation with the local community and food systems (though social mechanisms). More evidence and greater awareness are needed amongst land managers and other agricultural stakeholders about the financial and social outcomes, as well as the environmental outcomes, of agroecological approaches. Better recognition of current agroecological farming efforts and improved support (i.e. financial, knowledge) could encourage wider adoption of agroecological transitions.

Cole, L J; Holland J P, Eory, V; Karley, A J; Hawes, C; Walker, R; Watson, C A 2021 '[The potential for an agroecological approach in Scotland: policy brief](#)' ClimateXchange

Key findings: Agroecological approaches to farm management have significant potential to help Scotland tackle the twin crises of climate change and biodiversity decline whilst building resilience into our food production systems. Additionally, through improving ecosystem health and economic/crop diversification, agroecology can help to ensure that agricultural production systems are resilient to future challenges. Agroecological farming systems clearly have the potential to deliver a wide range of economic, environmental, and societal benefits. Through restoring and diversifying farming systems they can build resilience into Scottish agricultural production systems. In addition, significant opportunities exist for conventional systems to implement agroecological management practices (e.g. wildflower margins, cover crops, soil carbon amendments) without overhauling the entire system. The impact of widespread implementation of such practices within conventional systems should therefore not be undervalued.

The recent 'vision for Scottish agriculture' <https://www.gov.scot/publications/next-step-delivering-vision-scotland-leader-sustainable-regenerative-farming/> sets out a range of actions below. Agroecology is key to delivering on many if not all of these.

"To achieve this vision, we will work with and alongside farmers, crofters and land managers to ensure that they have the right support to:

- continue delivering high farming standards, including to enhance animal health and welfare*
- contribute to our Good Food Nation ambitions and Local Food strategy, particularly to create more localised supply chains, enhance producer value and cut food miles*
- deliver emission reductions in line with our climate targets*
- contribute to the restoration of nature through biodiversity gain on the land they farm*
- support land use change that contributes to our climate and biodiversity goals in line with the recommendations of the Just Transition Commission*
- encourage more farmers and crofters to farm and produce food organically*
- improve business resilience, efficiency and productivity, including through adoption and deployment of technology and innovation*
- take a whole farm approach to reducing emissions and environmental impact*
- accelerate adoption of approaches and measures which minimise, reduce and remove the use of agrochemical inputs and increase the use of non-chemical related actions*
- enable more local employment on the land, more women to enter farming and more new and young entrants into farming*
- identify and develop the skills needed for regenerative and sustainable farming, changes of land use and adaptation to the changing climate.*
- encourage co-operative approaches to optimise collaboration and knowledge exchange*

Recommendations

Our recommendation is for the approach taken by this project to be supported on a larger scale over a longer period of time, and to be integrated into a wider change strategy as part of Scotland's agricultural transition to a more nature-friendly, climate-friendly and people-friendly approach to food production and land management

The Agricultural Knowledge and Information System (AKIS) in Scotland - which includes this sort of knowledge transfer project along with initial farmer education, research, public and private advisory services etc - is key to the success of this transition.

Farmers and crofters, along with researchers, advisors, policymakers and lecturers need both to learn and to unlearn. Unlearning - letting go of what we've always thought, said or done - is a difficult process. Facilitation in small groups and peer support over time are good ways to make it easier.

Again, the evaluation of the Farm Advisory Service underlines the value of small groups working together over time:

Recommendation 8: Engage with Barriers to Following Advice. Consider developing mechanisms to cultivate small, facilitated groups of farmers which can collaboratively develop change over time. A common view among interview respondents was that achieving change is easier in the context of small groups of farmers, rather than individuals, and this should be considered as a mechanism for improving the take-up of advice.

While time constraints restricted our ability in this project to cultivate and facilitate these small groups of farmers and crofters, this will be a core aspect of our proposal for building on this project over the next year

9. CONCLUSION

This project exceeded its targets and was delivered on time and on budget. It demonstrated effective collaboration between six organisations.

Partners also recognise the shortcomings due to time constraints and have a plan to remedy these in any future work.

10. ANNEXES

ANNEX 1: Farmer, Crofter and Grower Participant Feedback

- What did we learn?

Low input Livestock
<p>'Learned lots of new info and it was nice to realise that others go through similar struggles to my farm'</p> <p>'Monitoring faeces for dietary efficiency'</p> <p>'Learning about how to raise and slaughter table birds.'</p> <p>'The practical nature of it all; so much good experience to learn from!'</p> <p>'Detailed descriptions of facilities, setup costs etc.'</p> <p>'Three informative and engaging speakers - fantastic! As someone tentatively thinking about keeping hens this was such a good introduction to different approaches and things to consider. All speakers shared their very practical knowledge; it gave me a much more realistic view of the things involved - rewards and benefits.'</p>
Integrating Livestock into Agroecological Systems in the Borders – PFL
<p>'Seeing examples of deferred grazing and the impact that had on reducing winter feed costs.'</p> <p>'Discussions relating to soil biology'</p> <p>'Mob grazing, particular cattle and profit benefits'</p> <p>'Re-confirming the value of deferred grazing'</p> <p>'Hay vs Silage discussion'</p> <p>'Bale grazing and the unroller'</p> <p>'I will ask about what we are doing for this habitat at CNPA and where wood pasture needs to sit in regards to the Cairngorms Nature Action Plan. Natural wood pasture could/should possibly be receiving a higher profile'</p> <p>'I am going to look into the subject more and feel far more confident to go ahead after such a positive and well informed presentation by two experts'</p>
Arable Systems
<p>'It was useful to share knowledge within the group with specific reference to apple cultivation - I learned a lot about the positive impact on soil biodiversity from having fruit trees in an arable system'</p> <p>'This event has shown me that farmers can reduce their dependence on fossil fuels'</p> <p>'This has made me think more about soil health'</p>

Market Gardening

“Information about green manures and how they had incorporated them into their rotations”

‘Learned more from compost talk than I expected. Market garden very interesting’

‘composting - asking questions about how to use what we each have available’

‘The possibilities for (forest garden-like) diversity in tree / shrub rows between vegetable / crop beds’

‘Physical examples of various methods, talking directly to the farmers and chatting with other people interested in starting a permaculture patch.’

‘Being able to hear from Tap o’Noth growers about how they have planned their growing spaces, and how they have responded and changed their approach over the years as their methods and space have evolved. It’s all process and assessment!’

‘The chance to see trees at different stages of development- 3 or 5 years on from planting. That helped me to visualise what our agroforestry strips will look like in that time scale.’

‘Best Windbreak trees & uses plus ways to manage existing trees with fruit tree planting.’

‘Networking and being able to discuss the topic while being on site with a practical example.’

Crofting

‘The potential of the use of the moor’

‘seeing that collars are practical to use’

Corncrakes - various things learned including:

- Numbers
- Historical numbers
- They are rare
- Distribution over the UK
- How endangered they are

‘It gave me a view into local food production that I had only heard about before but never seen it myself’

‘Yes working together is essential ‘

‘Lovely to see and hear about local food production happening all over the Highlands’

‘Yes-it has highlighted the importance of providing habitats within the croft for all levels of wildlife and their connection to each other. Leaving some areas wild and managing other areas’

- **How have I changed my views as a result? How have I changed my practices? How do I plan to change my practices?**

Low input Livestock
<p>'Better use of grass to reduce hard feeding.'</p> <p>'more rotational grazing, hopefully more diverse pasture with trees'</p> <p>'Keep feeding for condition on ewes later towards end of weaning'</p> <p>'Yes - ACV and garlic in water. All the electric fencing info too!'</p> <p>'Using ducks to help control fluke'</p> <p>'Will be looking at doing some pastured meat chickens now'</p> <p>'Some of the regulation info has made me reconsider scaling up'</p> <p>'Mobile coops'</p> <p>'More split grazing paddocks. Moveable water systems.'</p> <p>'Lots: including using electric fencing to divide the croft and move livestock around. You don't necessarily need to lime. It is possible to croft/farm without input from machinery.'</p> <p>'Yes, smaller paddock sizes'</p>
Integrating Livestock into Agroecological Systems in the Borders – PFL
<p>'Review my tree planting ideas'</p> <p>'I would definitely like to establish some hedgerows and shelterbelts of trees on our wee bit of land. I kind of ran out of steam this year, but I'm re-inspired. So lovely seeing cows enjoying woods'</p> <p>'Looking into ways of increasing trees on our land. Will look at the species mentioned and use the Dutch site to explore micro nutrient cycling'</p> <p>'Open up the woodland for better grazing'</p> <p>'Look to get more detailed soil analysis undertaken'</p> <p>'Getting more and bigger diameter water pipe to support moving livestock'</p> <p>'Getting water troughs to more areas of the farm to enable rotational grazing'</p> <p>'Investigate herb quality and quantity in pastures'</p> <p>'Establish more species rich sward'</p> <p>'Deferred grazing'</p> <p>'Tighter calving period'</p> <p>'Reviewing traditional thought processes'</p> <p>'Outwintering and bale grazing'</p> <p>'Deer strip grazing'</p> <p>'Pasture cropping / oats into grass leys for winter forage'</p>

'Leaving hay outside'

'Organic conversion'

'Look at research on livestock unit carrying capacity in agroforestry systems which Andrew Barbour mentioned from 70's'

Seed merchant to promote more diverse mixes to farmers, not just ryegrass.

Arable Systems

'We are learning all the time about growing fruit on our own patch of land'

'I'm looking to add to what I already do and to improve biodiversity. It was useful to hear from all of the attendees on their experiments. Keen to explore use of companion cropping and windrowing/composting'

'Direct drilling would not work on our farm, but I am considering looking at cover cropping.'

'I'm looking at the potential for input reduction from alternative cropping. I will think about reducing tillage and got some ideas for composting.'

'The workshop reassured me about focusing on soil health and multi-species leys. I'm very keen on regenerative agriculture and mob/paddock grazing. I want to continue to improve.'

Market Gardening

'Yes, lots of things. I'm definitely going to try some of the green manures, I've already ordered the seed!'

'Definitely going to be burying some pants, counting worms, and doing drainage tests around our mixed soil plot'

'starting new compost system'

'Bokashi composting'

'Deadhedging! And root-stock grafting orchard trees.'

'Yes, the incorporation of willow/shrub planting in amongst food growing areas. And goats!'

'Thinking about putting comfrey in our tree lines, and possibly blackcurrants'

'Yes, Forest garden windbreaks'

Crofting

Four attendees in the NoFence event said they would be looking at changing their grazing practice.

'I will be rethinking some aspects of my garden and making more of an effort to source local meat'

'Yes already chatted to other course attendees about setting up a food hub of our own'

'Thinking to increase veg and fruit production and may speak to other food producers'

'I hope I will be able to take part in the Green Bowl as a supplier in the future'

'I feel confident to go away and start a local food hub'
 'Planting fruit trees and harvesting bracken for mulch, creating narrow drainage channels'

- **How useful/well-run/enjoyable were the sessions? / Would I like to see more opportunities for peer to peer learning?**

Low input Livestock

'The diversity of the speakers offered a wide range of considerations'
 "I'm just grateful to everyone in the LWA who puts together these great educational resources."
 This was one of the most inspiring webinars I have attended in the past 2 years"
 "Thank you for this event. Very useful to have access to this information and to hear from people actually doing it."
 "Learning from people's experience and getting some details/numbers"
 "Farm visit - being able to see the grassland, the animals. Meeting other members."
 "Practical proven techniques, clear convincing explanations"
 "The evidence based lived experience"

Integrating Livestock into Agroecological Systems in the Borders – PFL

'Opportunity for discussion where there were no right or wrong answers, but space for everyone to share their ideas.'
 'Farm walk, giving the opportunity to see a range of land management approaches'
 'Engaging with like-minded people'
 'Really enjoying this - so good to see so many happy cows. Thank you.'
 'Seeing another system similar to own and making comparisons'

Arable Systems

'A fascinating workshop on mixed farming, diversifying and use of land to its best advantage'
 'It is so important to have farmers who are willing to go against the grain.'

Market Gardening

'The accessibility of the info - really good speakers'
 'connecting with other growers'
 "Thank you, this was one of my favourite online workshops of all time."

"Excellently organised, great speakers, fab food and tea!"

"Thanks - awesome to have many local events instead of just Glasgow/Edinburgh"

"Physical examples of various methods, talking directly to the farmers and chatting with other people interested in starting a permaculture patch."

"Excellent event and the presence of good food is important as a connection to what is trying to be achieved by growers and farmers."

"Really useful to see the way others approach the design of their farms / land. The value of farm visits! Many thanks"

Crofting

'Very welcoming and informative event with lots of practical advice and knowledge'

'A perfect day –good length of time, great refreshments, excellent dialogue with participants'

'Brilliant day - hugely informative. Very exciting and encouraging'

'There are so many individuals trying to succeed and events like this help them meet and learn and make them more likely to succeed.'

'Yes especially on the North West coast.'

'These events are very valuable. It would be good to see more long-standing crofters in attendance. Perhaps reach out to common grazings committee clerks, and frame the event content as helping them to build future resilience?'

'As new entrants to the crofting world it gives us confidence to learn/hear about other crofters' experiences and techniques. To be able to see/visit first hand is vital to cement new knowledge.'

ANNEX 2: Videos and Links

To be completed when videos launched in April 22

Video	Views Total	Link
Agroecology in Scotland overview		
Farmer story - Pasture-Fed in the Borders with Matt Griffin, Edston Farm, Peebles		
Farmer story - An introduction to silvoarable systems - integrating fruit trees and crops with Roger Howison, Parkhill Farm, Newburgh		
Farmer story - Introduction to Holistic Grazing with Nikki Yoxall, Dingwall		
Grower story - Composting and Fruit Tree Care at East Neuk Market Garden, Fife		
Crofter story - The Green Bowl: running a crofting township food hub hosted by Helen O'Keefe and Tessa Dorrian, Elphin		
Crofter story - Crofting and Grazing - Using NoFence Collar Technology hosted by Domhnall MacSween (Air An Lot, Lewis)		

Finance *(for internal use)*

- 10.1 Sum awarded.
- 10.2 Detail of spend.
- 10.3 Noting any underspend and explain why.