KTIF Final Report East/West Beef Grazing Collaboration Pilot

March 2021

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Report produced by

SAOS
Working together to shape the future of farming and food

CA MacPhail Consulting Ltd

EAST/WEST

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1.1 Title - **East/West Beef Grazing Collaboration Pilot**

1.2 **Overview of SAOS**

Established in 1905, SAOS is Scotland's expert organisation on farmer co-ops and supply chain collaboration. It provides a range of specialist information, development and consultancy services aimed at shaping the future of farming and food in Scotland. Its purpose includes strengthening the profitability, competitiveness and sustainability of Scotland's farming, food and drink and rural economies through the promotion of co-operation and collaboration.

SAOS is a not-for-profit development organisation owned by its membership. As a membership organisation SAOS is committed to driving growth within agri and food co-operatives and stimulating collaboration within their supply chains.

Innovation and co-operation are at the heart of our objectives to achieve added value and production efficiency as is our proven role in smart project management and industry initiatives.

2. EXECUTIVE SUMMARY

The challenging weather conditions in recent years in Scotland have led to disrupted harvests and fluctuating straw prices and dry summers and poor silage yields. The subsequent cost rises have negatively affected many marginal suckler beef enterprises.

This project set out to explore the potential of moving the cattle as opposed to the straw and fodder to assess if there were environmental, animal health and economic benefits to be gained by doing so. A series of cattle out wintering trials were undertaken across Scotland in the winter of 2019/20.

Trials in the Lothians, Morayshire and the Black Isle all demonstrated the potential benefits to the outlaying farmer in reduced cost and labour during the winter period. Similarly, the benefits to the host farmer were demonstrated in terms of a winter income and the boosting of organic matter. Checklists and model agreements were developed to ensure the best possible relationships and expectations.

Attempts to trial summer grazing from low ground/east to upland/west were more problematic. Large in-house farming operations that contain low ground and hill are doing this well, but there was a lack of confidence in farmers to participate in a trial. This was mainly attributed to the risk of taking cattle into areas with high levels of tick-borne diseases.

The focus therefore needs to in the wider adoption of cattle outwintering options to benefit the economics of the beef sector and the soil health of the arable sector. The agreement and methodology tools are now there to give farmers confidence in the approach. The short films and case studies demonstrate quickly the approaches followed and the benefits gained.

Through this project a wider communication plan has been developed to work to ensure the wider benefits of this approach are broadly adopted.

3. PROJECT DESCRIPTION

Background and Rationale

In August 2018 the **NFUS Straw and Fodder Summit** highlighted the financial vulnerability of Scotland's beef suckler herd to severe weather events that affect the availability of straw and fodder. As well as encouraging short term solutions such as arable farmers baling more straw and other fodder options being made available, there was a recognition of a need for longer term thinking to make better use of available resources across Scotland to improve the resilience and financial viability of Scotland's beef suckler herd. There was a recognition of the need to support the industry to create its own long-term solutions.

Follow on discussions with member organisations NFUS and SBA identified the disparity between east and west. When the summer dry spell forced east coast farmers to feed hard earned winter keep to cattle through the summer, there was plentiful under-utilised rough grazing in the west of Scotland.

Similarly, many west coast store producing farmers are finding it increasingly expensive to keep cattle through the winter as poor weather lengthens the housing period and the rising cost of fodder and straw challenge the fragile economics of the sector. At the same time there are geographic areas in the east of Scotland with light dry soils that are in need of organic matter from cattle manure to improve their soils. These areas often have no cattle and are suited to out wintering cattle on fodder crops.

The challenge to conventional thinking is the need to move the cattle rather than move the feed and bedding.

The Project Plan

It was initially thought that a pilot project could have been pulled together for the autumn of 2018 and a short concept note was put to the KTIF board. However, on reflection with various parties there was concern that this approach would be too rushed, not do the project justice and not bring enough people with the project.

The project was setup in 2019 and set out to trial two approaches to maximise the use of natural capital assets to improve the financial and environmental viability of the beef suckler herd in Scotland.

- To trial movements of breeding cattle from east to west for summer/backend grazing
- To trial movements of breeding cattle from west to east for out wintering on forage crops.

Although cattle moving from West to East for wintering is not uncommon, it tends to be to indoor units on a "bed and breakfast" basis.

The project set out to test a low cost, low carbon system with less reliance on cereals-based diets and greater utilization of grazing ground both in the summer and winter. The project also set out to summarise the financial, environmental, carbon and social costs of trialling these movements to ascertain the true value of the collaboration.

The Project

Working through contacts of the project facilitators Fergus Younger and Colin MacPhail, and by linking with the network of Scottish Agricultural College offices the following trials were set up.

1. **Main Trial - Lothians/Ayrshire**

A trial of 40 Luing cows from Ayrshire wintering on strip grazed barley stubbles, straw and silage in East Lothian.

2. **Main Trial - Morayshire**

A trial of 40 Luing dry heifers from Glenlivet wintering on strip grazed stubble turnips and silage in Fochabers. This represents at upland/lowland situation within a region rather than an East West geographic move.

3. **Secondary site -Caithness/Black Isle**

A trial of 100 Luing cows from Caithness out wintering on straw and silage in the Black isle.

Summer grazing of cattle on an upland part of Wellbeck Estates was also reviewed as part of the project.

4. FINANCE

Total Original Grant approved: £43,620.00

A variation was applied for to the conditions of grant awarded to the approved project under the KTIF programme.

The changes were only limited within the project and reflect more time spend on project management and less spent travelling to and holding meetings

Due to the COVID crisis, a contingency plan had to be adopted to ensure full and successful delivery of this project. As a result, and limited by the strict National COVID Guidelines, the team was unable to travel to the extent we anticipated at the outset of the project. This had a knock-on effect to the amount of project management time required with regard to additional support plus management and co-ordination of the project outputs.

The request resulted in that the budget was re – allocated as follows

PROJECT MANAGEMENT COSTS - £5845.70
FEES FOR SPEAKERS - £36582.00
T & S FOR SPEAKERS – £1192.30

5. PROJECT AIMS/OBJECTIVES

Aim: To evidence the financial and environmental value of moving breeding cattle to lower cost natural resources.

Objective: Trialling movements of breeding cattle from east to west for summer/backend grazing and movements of breeding cattle from west to east for out wintering on forage crops.

6. PROJECT OUTCOMES

6.1 How aims/objectives were achieved

The three main trials demonstrated the financial and environmental value of moving cows from the west to the east

6.2 Milestones

In the KTIF Application the project set out a series of Milestones which are listed below:

- March 2019 Industry agreement on approaches (including establishing best practice approaches to follow a common evaluation framework for climate change and biodiversity)
- April 2019 Trial farms selected
- May 2019 Trial farm visits
- June 2019 Joint farm visits of participants, skills audit
- July – December 2019 Health plans and economic plans established
- August 2019 Farm carbon audits
- Jan 2020 – SOPs, protocols, calendar established
- July 2019-Feb 2020 – Films and case studies
- March 2020 future facilitation plan
- May 2020 Project close and promotion meeting – launch films and case studies

1. <u>March 2019 Industry Agreement on approaches (including establishing best practice approaches to follow a common evaluation framework for climate change and biodiversity)</u>

Discussions took place with the key industry bodies and approaches were revisited and decided on post completion of the trials.

Biodiversity Benefits

All host farmers noted an increase in farmland birds during the wintering period, with birds active around the silage being fed and the cereal stubbles. The most notable

accumulations of birdlife were noticed in the fodder brassicas where the cover of the plants provided valuable habitat for birds.

With these habitats being generated, they are only useful whilst they are there and they obviously diminish over time as the strip grazed area reduces. However, these resources would likely not be there at all without the presence of the cattle during the winter, so a net benefit to biodiversity can be attributed. N.B. It should be noted where wintering is not appropriately managed, negative effects of excessive poaching and or soil erosion are possible.

The most useful resource is the joint, NFUS, SNH, RSPB and SAC paper – link and extract below:

https://www.rspb.org.uk/globalassets/downloads/documents/farming-advice/brassicaandrootfoddercrops_scotland_207643.pdf#

Winter seed sources, such as weedy fodder crops, seed-rich cereal stubbles and grain/hay fed to outwintered stock are scarcer today, especially in pastoral areas. Where weeds are allowed to set seed in fodder brassica and root crops, they provide an important winter food source for seed-eating birds. In addition, areas of bare ground and 'stubble' following these fodder crops can create suitable nesting habitat for some species in spring. Provide important seed food for birds The seeds of broad-leaved weeds growing within fodder brassica and root crops such as fat hen, hemp-nettles and redshank are vital for the winter survival of birds such as tree sparrows, yellowhammers and twite, and also benefit game birds such as grey partridges.

Provide insect food Fodder brassica and root crops are also a good source of insect prey due to the many insects that are associated with weeds. Thrushes, pipits and wagtails favour such crops in the winter as invertebrate prey are more available in the relatively warm wet microclimate of such crops. Provide nesting habitat and other benefits to wildlife Fodder crops also provide cover for birds and brown hares and following spring crops can provide nesting habitat for skylarks and lapwings. They may also provide an opportunity for rare arable plants to establish.

Potential Climate Change impacts and carbon calculation are challenging for this project as there are so many broad variables to consider. Similarly, the farm-based carbon audits assessed for each host farm were not of particular relevance to this project as broader principles were more important.

The most useful approach has been to assess the trials against the status quo, i.e. what would happen if the cattle were not there and kept on the home farm as normal?

- **Less CO2 released** by shorter timespan for exposed ploughed soils. *Assumption* – cereal stubbles would be ploughed during the winter and left exposed as bare earth until ploughing in the spring. Mintill establishment of fodder crop provides ground cover and carbon absorption when none would be present. Return to cereal post use is in s shorter window and potentially with mintill establishment – increasing the saving further.

- **Less power (diesel) used to feed cattle –** with the cattle away during the winter the west coast farmer will not have the same level of usage. Similarly, the host farmer will use less fuel that the west coast farmer as the forage crops and silage bales require simple daily moves and therefore little power.(more detail on this calculation can be seen in the Wellbeck case study in the Annex.
- **Haulage – less journeys** – it is estimated that haulage can be reduced by approximately a half in out wintering cattle in these systems. Traditionally the trial farms would have used at least twice the amount of lorry journeys to bring straw and other fodder to their farms, whereas this methodology there are only two haulage journeys to move the cattle to and fro.

These benefits are hard to define precisely as each situation is unique, but where cattle are outwintered on forage crops on dry land there is certainly a net carbon saving gain.

2. April 2019 Trial farms selected

This project was developed in 2018 during a severe fodder and forage crisis for Scotland livestock farmers. 2019 followed as a year of plenty where record amounts of silage/hay were made across the country, similarly straw dropped in price dramatically as crops yielded large swaths of straw.

This polar opposite year where many livestock farmers had a plentiful year and abundant home-produced winter keep – made trial farm selection much more challenging than envisaged. However, a good geographic split of farms in Ayrshire, Lothians, Morayshire, Glenlivet, Black Isle and Caithness was achieved. The reasoning for these farms joining was often not due to a fodder shortage, but due to a need to free up time at home, a change in management practice, economic benefit and/ or an expansion.

A broader approach to trials has also been necessary to recruit the farmers. For example, where cattle are on stubbles with access to straw and silage – as well as cattle on forage crops and silage.

Trials concluded over the 2019/20 winter for the project, but all projects have carried on themselves in some shape or form for 2020/21 winter. This is an encouraging sign as participating farmers have seen the value in the project and the activity.

3. <u>June 2019 Joint farm visits of participants, skills audit</u>

The importance of these visits cannot be underestimated. Having both parties plus facilitators in the field to assess where the cattle will be managed and to talk through all the issues has been hugely beneficial. It has built trust and has allowed the

facilitators to go through all the issues to build into agreements for each trial. (As per model agreement in Annex)

4. July – December 2019 Health and Economic plans established

Following on from the joint farm visits, agreements have been developed which include all aspects for the management of the cattle on site.

These agreements are thorough have been honed down to a useful but practical document for each farm situation. This has allowed the production of a “Model Agreement” that can easily be adopted by other farmers as a basis for their own stock. This has been a crucial output for this project and is included in the Annex.

5. August 2019 Farm carbon audits

Four farm carbon audits have been undertaken for the farms hosting the cattle.

6. Jan 2020 – SOPs, protocols, calendar established

Visits to the trial sites/farms over the course of the winter have allowed the facilitators to gather best practice to deal with issues that emerge including:

- Weighing cattle on
- Health management – stones in feet, extracting single beasts etc.
- Coping with wet weather
- Electric fence management – distance to move, educating beasts etc.
- Silage feeding management
- Straw feeding – how to avoid trampling

We now have an easy to use 1-page checklist calendar that farmers can use as a guide to ensure they are following best practice and the model agreement – both in the Annex.

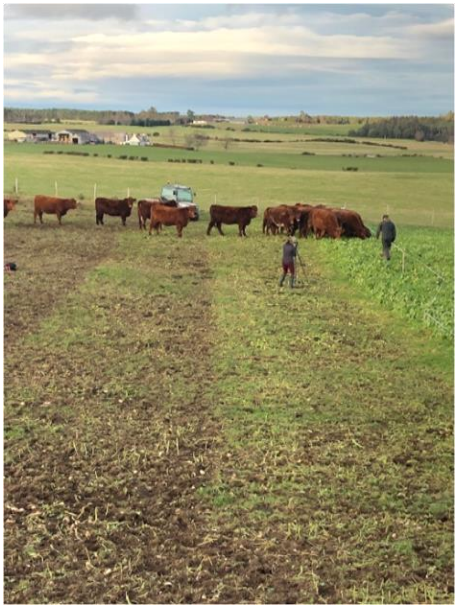
7. July 2019-Feb 2020 – Films and Case Studies

The case studies are now complete and can be found in the Annex.

Links to the two completed films can be seen here:

Morayshire Trial Video
https://youtu.be/jLzRvdQo3Xg

Lothians Trial Video
https://vimeo.com/430335825/798ba1df1a



8. March 2020 future facilitation plan

The feedback from the final meeting on the 10th of February was supportive of the project and its outcomes. The meeting held in conjunction with Strategy Story helped form the focus of the strategy to encourage more similar activity among farmers and the need for a wider communication plan.

Summary and next steps from the final meeting:

The pilot project has been a success in its own right, and, perhaps more importantly, has played a major role in creating both collateral and engagement for continued innovation and development. Adoption of the approach could make a highly valuable contribution to critical concerns in society such as climate change, carbon storage, rural economy and the sustainable development of our renowned natural environment.

It has also demonstrated vitally needed innovations in sustainable agriculture, land-management, animal welfare and the operation of the circular economy.
Thanks are due to those who have contributed significant amounts of their time, expertise and energy to this project. As the report lays out, the potential gains of widespread adoption are manifold. A key next step is getting this success story "out there" – proactively so that others are persuaded, and the innovation takes root. This will require a concerted effort on strategic communications– starting with the plan – and critically, getting the message to farmers in the voices and imagery of farmers and farming.

9. May 2020 Project close meeting and discussion on how to Promote the approach

The meeting was held with 18 farmers and interested parties on the 10th February 2021, the full meeting note is provided as a PDF by Strategy Story. Key findings from the meeting attendees' feedback was:

Finance key points:
1. There is less outlay on feed, bedding and labour.
2. Outlaying farmers are able to turn attention to things they wouldn't otherwise be able to do
3. Costs are reduced if trust is high (e.g. visiting)
4. It was worthwhile in financial terms. One farmer explained he'd send more away this year
5. Messaging around the project would need some explanation to spell out the finances. Perception is key.

Livestock Health and Wellbeing key points:
1. Outwintered cattle were found to be in great condition -clean, healthy, thriving
2. Perception (on the part of the public) can be an issue –seeing cattle standing outside in wild weather and mud
3. Different breeds of cattle will have different requirements, and some may be more suited to out-wintering than others
4. Need to be careful if partnership more than two-way (eg. someone else's beasts), i.e. biosecurity risks. Biosecurity has been considered within the trial.

Partnerships and Agreements key findings:
1. Trust between farmers is key
2. So is a good solid agreement in black and white – who does what, when, who pays for what and when, etc.
3. It helps if you know the partner – e.g. neighbours, or by reputation
4. Might be cumulative benefits – i.e. longer terms partnerships
5. A well-documented route-map would be helpful for those who've not done it. A standard template has been created
6. Open discussion - keeping in touch, regular reviews etc – are key to making it work

Sustainability Key points:
1. This whole project is all about sustainability.
2. Financial sustainability and environmental sustainability go hand in hand. A holistic approach may be advantageous.
3. There is reduced impact on the ground in winter – and/or alternative uses for land.
4. Less haulage is required.
5. There was noted increased organic matter in soil. A galvanising question is, “If you’re arable, how many years have
you got left in your soil?”
6. Soil biology and soil enrichment were demonstrated
7. The practice provides a contribution to net zero

Communication key points:
1. Perception is everything. The story of this practice needs to be told as soon as possible, and in an accurate way.
2. There is an opportunity to drive the debate, communicate the positives and challenge perceptions.
3. The project meets the needs/desires of the Green agenda, and this should feature prominently
4. The UN’s Climate Change conference is in Glasgow this year, and this could provide an opportunity to tell this story to national/ international audiences, with a view to gaining support/funding
5. Identified 2 key audiences: 1. Farmers 2. Policy makers and public 3. Research/Scientific. Further details in comms plan.

7. LESSONS LEARNED

7.1 Issues/Challenges

- The Covid Pandemic created significant challenges with on farm meetings and learnings no longer possible.
- The initial project set out to examine movements of cattle to wintering's in the East of Scotland and summering's in the West of Scotland. The former proved easier to recruit farmers to participate in, this was due to demand and the process not being too different to over-wintering cattle in sheds – which is a standard practice. The latter proved far more challenging in being able to recruit low ground farms or east coast farms to send their cattle to the west or to upland areas for the summer, the link with summer grazing's in the uplands is still only found in a few areas of Scotland. Also, many continental breeds kept in the lowlands are not suited (too big) to upland areas and can be not acclimatised to tick borne diseases.
- Health management during the trials appeared to go well. However, one farmer experienced issues with dwarfism in calves (stunted) born in the spring following the overwintering period. Little is known about the origins of dwarfism but it is thought it can be diet related.

7.2 Impacts

- Meetings at a distance of small numbers were managed on farm but the larger meeting needed to be held online.
- The difficulty in securing cattle for summer grazing led the project to focus on 3 wintering cattle projects and to observe one existing summer cattle grazing initiative.
- The dwarfism that was experienced at calving in this herd, had been seen in previous years before this trial but not to the same extent. This issue highlighted the need for good checklists, agreements, and levels of stockman ship.

8. COMMUNICATION & ENGAGEMENT

Project information can be found on the SAOS Website

http://www.saossupplychains.scot/innovation-in-scottish-agriculture/

Links to the two completed films can be seen here:

Morayshire Trial Video
https://youtu.be/jLzRvdQo3Xg

Lothians Trial Video
https://vimeo.com/430335825/798ba1df1a

EIP-AGRI Engagement

SAOS are a partner in a Horizon 2020 project on mixed farming, where they are linking the network of farmers involved in this East/west project with twelve other partners in Europe. This engagement was brough about by contact made through the EIP- AGRI
https://projects.au.dk/mixed/about-mixed/

An outcome of the project has been working with the trial farmers on a wider ongoing communication plan that demonstrates how the approaches trialled in this project can be more widely dispersed:

Cattle-Grazing Communication Plan ***February 2020***
The following sets out the communication plan and approach for the Cattle-Grazing project from 2021-2022

Strategy Statement for the cattle grazing project
"We will increase adoption of the cattle-grazing practice to effect participation of 50% of Scotland's arable farmland.

We will do this by developing and leveraging our abilities and partnerships in scientific research and storytelling to convey, in practical terms and farmers' voices, the compelling benefits of cattle-arable collaboration.

This will play into growing public and policy focus on climate-change, sustainability and animal welfare – all of which will reap significant benefits from this innovation."

Communication aims:
1. *To communicate in line with the project strategy statement.*
2. *To promote the project and secure funding to continue and expand the trial*

3. *To increase awareness of the trial, promote the positive impact on farming, and raise the number of farmers taking up the practice*
4. *To promote the project's effectiveness in supporting sustainable and environmentally friendly approaches to farming*

Tone of voice for all communications:
Farmer led informative, knowledgeable, and led by the stories/experiences of farmers.

Target audiences, and key messages

Primary Audiences	*Key Messages:*
Farmers:	
1a. Arable farmers	*- This trial has been successful. Farmers are behind it.* *- Livestock on your soil can improve it, and improve the organic matter content of your soil.* *-The method can reduce cost in your system and improve productivity.* *- A profit can be made.*
1b. Livestock farmers	*- This trial has been successful, farmers are behind it.* *- Animals have thrived as a result.* *- Outwintering cattle frees up time and can increase productivity* *-Resources are available to help you plan*
2a. Policy Makers	- *Livestock and Arable collaboration can have significant benefits and can help sustain and improve soils and help the sustainability of the beef suckler herd*
2b. Public	- *Livestock and arable farmers are working in collaboration to improve efficiency and help the environment*
3a. Research and Science	*Work with us to develop more evidence/research and pioneer this approach*

Call to Action

Primary Audiences	*Call to Action*
Farmers:	
1a. Arable farmers	*Contact us to find out more about how to winter cattle on your land*
1b. Livestock farmers	*Contact us to find out more about how to work in partnership with an arable farmer*
2a. Policy Makers	*Ensure a favourable policy approach to livestock on arable ground is pursued*
2b. Public	*Mixed farming is a positive practice for the environment*
3a. Research and Science	*Engage more projects in researching the benefits of mixed farming*

Communication Risks

The following sets out some communication risks that we will need to be aware of:

- *Elements of trial are confidential to the farmers involved, so need generic template approaches*
- *We need to ensure we have contributor consent*
- *People may disagree with our approach*

Success measures include

- *20% of arable farmers take up the practise by 2030*
- *Funding achieved for phase 2 to help more farmers take up this approach*

9. KEY FINDINGS & RECOMMENDATIONS

Animal Health

The animal health benefits of this trial have shown the value of outwintering, but also the challenges of underlying health conditions and the importance of a thorough agreement.

- Choosing the right **type of cattle** for outwintering is important – native bred (hairy cattle) cattle are more suited to this approach. Thinner skinned continental cattle do not fare well in poor weather and are often to heavy for the ground.
- Following the **checklist** is important to be sure that all possible precautions are taken to ensure a successful project.
- **Early action** and intervention are necessary if health problems are suspected, blood tests (to check for mineral levels) should be undertaken if any issues are suspected or likely.
- **Underlying** health issues with herds should be explored
- **The Agreement** should be gone through together with both parties before signing.

"When we got these heifers back, they were just the way we wanted them. They were just in the condition that we wanted them to be, and hopefully, will be in the same condition this year again." ***Outlaying farmer***

Economic

There is an economic benefit to the west coast/upland farmer in away wintering their cattle, but it is not significant. i.e. it is cheaper to winter them away.

- The outlaying farmer **knowing their home farm costs** is critical to being able to put a value on away wintering.
- The host farmer **knowing the organic matter content** of their soils is a likely influencer to taking part in such an initiative.
- The **opportunity cost gain** to the outlaying farmer is significant, but only if they can make use of it – i.e. find ways to generate additional revenue with the freed-up time.
- The host farm can generate an **additional winter income** but needs to ensure they have the skills to deliver.

"I think you've got to look at it in a whole, you know, because if you just said: "Oh well, what's it going to cost me to put my cows away?" You might be a bit scared

by the number, but you have to actually sit down and work out what the real number of keeping them at home would be." ***Outlaying farmer***

"Sustainable to me means I want to have these cows on a hill all summer for the next 25 years of my working life. And for that to be sustainable, I can't just keep going the way, I am: the cows at home and the gutters, and the mess and the cross-compliance issues and the labour and all the rest. So I need to have a sustainable arrangement with someone who can outwinter them. And you can winter them in a way that's sustainable for them so they can also make a living." ***Outlaying Farmer***

Environmental and Carbon

Best practice guidance indicates that there are environmental and carbon sequestration benefits, especially where fodder corps are grown and grazed gradually over the winter period.

"The thing that we're trying to do – for arable - is to try and return some fertility to the soil via the out wintering of these cattle." ***Wintering Farmer***

Social/Partnership agreements

The project highlighted the importance of individuals forming relationships of trust and mutual benefit proving the principle of farm scale and semi-formal co-operation. This was seen to be equally important by the farmer participants to the drawing up of a formal agreement.

"Honest Broker" -The role of facilitation was noted as being critical in the early stages of bringing two parties together. Also noted was the need for the facilitators to be well known and having contacts across agriculture. On farm events to demonstrate this approach would be very helpful but were not possible with the pandemic. Further work is needed to help facilitate and demonstrate the benefits of the approaches.

"We want this situation, agreement to carry on indefinitely. So therefore, there's got to be a bit of coming and going and discussion. I don't think there's any real need for us to involve solicitors to draw up the agreements. I think that there has to be an element of trust between both parties. And that's how I see it." ***Outlaying farmer***

"The first key to it all is good relationships between the parties involved. What you want is an absolutely solid agreement that sets out precisely who does what, and who pays for what, etc." ***Wintering farmer***

Future Uptake

The project demonstrated a route for greater numbers of livestock farmers to co-operate to create an efficient and profitable sector and ensure that livestock production remains feasible in geographically remote areas.

The final meeting emphasised the need to deliver a communication plan to engage a broader partnership in telling the collaboration story and the value of this approach.

10. CONCLUSION

The project has demonstrated the opportunity for wintering hill cattle on drier arable land in the East of Scotland. The agreement and methodology tools are now there to give farmers confidence in the approach. The short films and case studies demonstrate quickly the approaches followed and the benefits gained. There are potential savings for the outlaying farmers to make to their bottom line and also in freeing up their time for other work. For the host farmers there is an opportunity to make a winter income from hosting the cattle and to generate carbon and biodiversity benefits on their farms.

The task of encouraging farmers to move low ground cattle to upland areas is far more challenging. There are some farmers who are doing this well within their own systems, but the challenge of moving cattle into areas where tick borne diseases are prevalent should not be underestimated. The lack of willingness to participate in a trial was evidence of the concerns of farmers to this health risk.

The feedback generated from the workshop has shown the next steps for the initiative in communicating the benefits far more widely. Also, the need to focus on the more achievable wintering approach in the first instance and encourage greater numbers to take part. To do this we will continue to promote the approach through SAOS and will seek new funding for a Phase 2 of the project to assist more farmers to participate.

10. ANNEXES

Cattle Out Wintering Checklist
(Document to be used in Conjunction with Agreement Template)

Order	Activity	YES/NO (tick)
1	Arable and Livestock farmer face to face introduction	
2	Arable and Livestock farmer meeting in field to agree management of cattle, check fencing and water at least 1 month prior to cattle arriving.	
3	Ration and mineral management agreed between parties	
4	Livestock farmer to share health status of animals?	
4.1	If concerns on animal health are raised then blood samples should be taken to asses for any deficiencies	
5	Arable farmer to share any known mineral deficiencies or parasite issues on land?	
6	Agreement on health management between parties, whose responsibility for ill animal, how to manage and remove animal	
7	Agree Cattle Numbers (head)	
8	Agree Cattle Breed/Type	
9	Agree Average Age	
10	Agree Wintering Period	
11	Agree Arrival Date	
12	Agree Body Condition Score (on arrival)	
13	Agree Departure Date	
14	Agree Body Condition Score (on Departure)	
15	Agree Bull in date (if applicable)	
16	Agree Expected Calving Date (if applicable)	
17	Agree Transport Responsibilities	
18	Model agreement signed by both parties	

Cattle Wintering Agreement

For:

Farm1

&

Farm 2

Prepared by: Consultant

Contact: **Consultant email**

Date: **202**

Introduction –

This cattle wintering project/arrangement has come about through discussions between Farmer 1, Farmer 2, Consultant 1 and Consultant 2 as they discussed the 2019/20 cattle wintering Knowledge Transfer and Innovation Fund (KTIF) Project. This KTIF project was instigated following the straw and fodder summit in August 2018 on how beef farmers could make better use of available grazing across Scotland.

The principles of the KTIF project broadly covered the background and common approach which these partners wish to achieve.

The project set out to trial two approaches to maximise the use of natural capital assets to improve the financial and environmental viability of the beef suckler herd in Scotland.

- To trial two movements of breeding cattle from east to west for summer/backend grazing
- To trial two movements of breeding cattle from west to east for out wintering on forage crops

Famer 1 and Farmer 2 entered into a pilot project with away wintered youngstock to test the arrangement and familiarise each other with how this may work.

The 2020/2021 project approach provides innovation as although cattle moving from West to East for wintering is not uncommon, it tends to be to indoor units on a “bed and breakfast” basis. This project seeks to test a low cost, low carbon system with less reliance on cereals-based diets and greater utilization of grazing ground both in the summer and winter. The project will also seek to put a financial, environmental and social cost against these movements to ascertain the true value of the collaboration.

The 2020/2021 arrangement also involves individuals forming relationships of trust and mutual benefit proving the principle of farm scale and semi-formal co-operation.

The final aim is to provide a wider industry roadmap for greater numbers of livestock farmers to co-operate to create an efficient and profitable sector and ensure that livestock production remains feasible in disadvantaged areas.

Background

Farmer 1 from Farm 1 has been investigating alternative wintering options for their Suckler Cow herd due to the environmental impact and economics of wintering the cattle at home. Following some benchmarking and financial analysis on the cattle enterprise and a review the farm staff with a view to put some succession planning in place, Farmer 1 decided to engage with the KTIF project and away winter a proportion of the stock for winter 20??.

The cattle provide valuable environmental benefits and increase the biodiversity by grazing the hills in the summer months. The bio-diversity benefits of sporadic hill grazing and the role the cattle deliver makes them a valuable asset to the croft/farm/estate. However, the costs of making silage and then feeding silage during the winter months and importing concentrate feeding and straw make the economics for the cattle challenging as a stand-alone enterprise.

Farmer 1 at Farm 2 has significant scope to winter cattle and has the land, feed and labour resources to take cattle for the winter months. The cattle will provide an additional income stream and also add valuable organic matter to help maintain and improve soil structure.

The project fits well with the objectives of both parties and with a constructive and transparent arrangement in place, the project should provide a basis for long-term agreement.

Farmer Objectives

Farm1 – find a suitable like-minded farmer to collaborate with on a wintering project and assess the benefits of away wintering a proportion of the suckler herd. Improve the economic viability and the deliver the environmental gains provided by cattle in a sustainable model through collaboration.

Farm 2 – generate a working relationship which provides livestock to out-winter at Farm 2 which can develop into a mutually beneficial working relationship for both businesses.

Agreement Principles

Cattle Numbers (head)	
Cattle Breed/Type	???? Suckler Cows
Average Age	3rd Calvers
Wintering Period	22 weeks
Arrival Date	15th November

Body Condition Score (on arrival)	3
Departure Date	1st April – 31st May
Body Condition Score on Departure	2.5
Bull in date	15th June
Expected Calving Date	24th March
Transport Responsibilities	Farm1

Areas of Responsibilities & Stockmanship Skills

The economic responsibility for the cattle will remain with Farm1 and Farm 2 will be paid for the wintering service including all aspects of animal welfare and calving the cows. Farm 1 is effectively renting wintering land and sheds and remaining in full control of the cattle.

Vet & Med Protocols

All cattle will be given the routine treatments prior to departure and all emergency treatments and Vet cost will be the responsibility of Farm1.

Management Practices (Rations)

The wintered ration will be discussed annually but it would be expected the cows will be wintered the on stubbles and straw bedding courts and fed a Straw and/or Silage based diet which accounts for all nutritional needs and manages cow condition up to and after calving.

Financials

The arrangement will run from November 2020 to April/May 2021 and the cows would except to be at Farm 2 for 22 weeks on average. The agreement is based on basic £??/head/week for each in-calf cow. If a calving bonus is part of the arrangement, the calving bonus of £??? will apply to each live calf delivered back to Farm 1. The cows will be scanned and any baren cows sold or remain to Farm1.

Beef Calf Scheme Claims and Payments

If the cows are calved a Farm 2 there will be implications for the Beef Calf Scheme claims and this must be considered to ensure that all aspects of the eligibility criteria listed below would be delivered.

The business must be linked through Scotmoves and the calves tagged and claimed under the Farm 1 herd number. As the arrangement is effectively a wintering service which includes the rental of seasonal land and shed space, the cows and new born calves will remain under the ownership of Farm 1 who will retain the economic responsibility for these cattle.

Guidance

Economic Responsibility

Under the scheme, you must have economic responsibility for the animals which you include in your claim and be able to provide evidence of your ability to meet this requirement if required by RPID. Economic responsibility means that you must be responsible for:

- management of the herd
- feeding
- housing and paying the bills
- veterinary care
- ownership, including receipts from sales, of any progeny
- the selecting of animals brought into or disposed of from the herd

In essence, this means that you must own or have a formal leasing agreement on the animals included in your claim. Economic responsibility does not include arrangements to buy animals and sell them back to the original owner, whether for a single or multiple scheme years and/or where the original owner undertakes day-to-day management of the herd. If you have some other arrangement which you think may entitle you to claim SSBSS, contact your SGRPID Area Office before you complete your claim form.

Health Status & Bio-sercuity

The Farm 1 cattle will not mix with any other resident cattle at Farm 2 and Farmer 2 will endevour to keep strict bio-secuity protocols in place.

Current health Status

	Farm1	Farm 2
Healths Scheme (SAC,Biobest, etc)		
BVD (vaccinated or not)		
Johnes (level)		
IBR (vaccinated)		
Lepto (vaccinated)		

Cross Compliance and GAEC

It is the responsibility of both parties to ensure all cross compliance assocaite with ear tagging requirements and livetsock movements are met. The holding will be linked through SCOTMOVES and the passports remain at Farm 1 . All calves must be tagged within 7 days and registered within 27 days of birth.

It is the responsibility of Farmer 2 to ensure the GAEC rules are observed on the land used for outwinter cattle. Farmer 2 will claim the Basic Payment Scheme across all land and it is critial that any field operations or livestock movements comply with the Cross Compliance and GAEC requirements.

AGRICULTURAL HOLDINGS (SCOTLAND) ACT 2003

Farm 1 accepts that this agreement does not form, nor will be construed to form, an agricultural lease nor a pretended agricultural lease under the Agricultural Holdings (Scotland) Act 1991, the Agricultural Holdings (Scotland) Act 2003 or otherwise and that Farm 2 has the land at their disposal for the purposes of the regulations and is entitled to include the land in their claim for Single Farm Payment under the Basic Payment Scheme.

Administration

The farming agreement has been documented by Consultant 1 as an independent Agricultural consultant. It is also advised that quarterly meetings will be arranged to discuss performance, financials and any general farming issues. It must be noted that any negotiations must be conducted and agreed between both parties to maintain project facilitators impartiality.

Disclaimer

For the avoidance of doubt, The Consultancy Firm have documented the terms of this agreement and facilitated the meeting between Farmer 1 and Farmer 2. The agreement is written, based on a common instruction provided by both parties and each individual is encouraged to seek independent legal advice should they have concerns over the legal implications of this agreement. This does not constitute a formal lease and has been drawn up to formalise the agreement whereby Farm 1 is wintering cattle with Farm 2.

Case study – Welbeck Scottish Farms

Farms involved: Welbeck Scottish Farms & John Scott & Partners
Farmers involved: Anson MacAuslan & John Scott
Farm Location: Berridale, Caithness & Fearn Farm, Tain
Farming systems involved:
Extensive Hill Unit and Lowground mixed beef, sheep and Arable unit

Introduction

This cattle wintering project/arrangement has come about through discussions between Anson MacAuslan, John Scott, Colin MacPhail and Fergus Younger as they discussed the 2019/20 cattle wintering Knowledge Transfer and Innovation Fund (KTIF) Project. This KTIF project was instigated following the straw and fodder summit in August 2018 on how beef farmers could make better use of available grazing across Scotland.

The principles of the KTIF project broadly covered the background and common approach which these partners wish to achieve.

The project set out to trial two approaches to maximise the use of natural capital assets to improve the financial and environmental viability of the beef suckler herd in Scotland.

- To trial two movements of breeding cattle from east to west for summer/backend grazing
- To trial two movements of breeding cattle from west to east for out wintering on forage crops

In 2019 Welbeck Scottish Farms and John Scott and Partners entered into a pilot project with away wintered youngstock to test the arrangement and familiarise each other with how this may work.

The 2020/2021 project approach provides innovation as although cattle moving from West to East for wintering is not uncommon, it tends to be to indoor units on a “bed and breakfast” basis. This project seeks to test a low cost, low carbon system with less reliance on cereals-based diets and greater utilization of grazing ground both in the summer and winter. The project will also seek to put a financial, environmental and social cost against these movements to ascertain the true value of the collaboration.

The 2020/2021 arrangement also involves individuals forming relationships of trust and mutual benefit proving the principle of farm scale and semi-formal co-operation.

The final aim is to provide a wider industry roadmap for greater numbers of livestock farmers to co-operate to create an efficient and profitable sector and ensure that livestock production remains feasible in disadvantaged areas.

Trial Summary

Anson MacAuslan from Welbeck Scottish farms has been investigating alternative wintering options for the Luing Suckler Cow herd due to the environmental impact and economics of wintering the cattle at home. Following some benchmarking and financial analysis on the cattle enterprise and a review the farm staff with a view to put some succession planning in place, Anson decided to engage with the KTIF project and away winter a proportion of the youngstock for winter 2019/20.

The cattle at Welbeck Scottish Farms provide valuable environmental benefits and increase the biodiversity by grazing the hill straths at Berridale and Langwell in the summer months. The bio-diversity benefits of sporadic hill grazing and the role the cattle deliver as tick mops for the grouse reintroduction programme make them a valuable asset to the estate. However, the costs of making silage and then feeding silage during the winter months and importing concentrate feeding and straw make the cattle unviable as a stand-alone enterprise.

John Scott of J Scott and Partners at Fearn Farm have significant scope to outwinter cattle and has the land, feed and labour resources to take cattle for the winter months. The cattle will provide an additional income stream and also add valuable organic matter to help maintain and improve soil structure.

The project fits well with the objectives of both parties and with a constructive and transparent arrangement in place, the project should provide a basis for long-term agreement.

Farmer Objectives

Welbeck Scottish Farms – find a suitable like-minded farmer to collaborate with on an outwintering project and assess the benefits of away wintering a proportion of the suckler herd. Improve the economic viability and the deliver the environmental gains provided by cattle in a sustainable model through collaboration.

John Scott & Partners – generate a working relationship which provides livestock to out-winter at Farm 2 which can develop into a mutually beneficial working relationship for both businesses.

Key information

Cattle Numbers (head)	100
Cattle Breed/Type	Luing Suckler Cows
Average Age	3rd Calvers
Wintering Period	22 weeks
Arrival Date	15th November
Body Condition Score (on arrival)	3
Departure Date	1st April – 31st May
Body Condition Score on Departure	2.5
Bull in date	15th June
Expected Calving Date	24th March
Transport Responsibilities	Welbeck

Areas of Responsibilities & Stockmanship Skills

The economic responsibility for the cattle will remain with Welbeck Scottish Farms and John Scott & Partners will be paid for the wintering service including all aspects of animal welfare and calving the cows. Welbeck Scottish Farms are effectively renting wintering land and sheds and remaining in full control of the cattle.

Management Practices (Rations)

The wintered ration will be discussed annually but it would be expected the cows will be wintered the on stubbles and straw bedding courts and fed a Straw and/or Silage based diet which accounts for all nutritional needs and manages cow condition up to and after calving.

Animal Health

Vet & Med Protocols

All cattle will be given the routine treatments prior to departure and all emergency treatments and Vet costs are the responsibility of Welbeck Scottish Farms. A review of the both herd health status is established prior to any cattle movements being made.

Current health Status

	Welbeck	John Scott & Partners
Healths Scheme (SAC,Biobest, etc)		
BVD (vaccinated or not)		
Johnes (level)		
IBR (vaccinated)		
Lepto (vaccinated)		

Environmental overview

The cattle at Welbeck Scottish Farms provide valuable environmental benefits and increase the biodiversity by grazing the hill straths at Berridale and Langwell in the summer months. The bio-diversity benefits of sporadic hill grazing and the role the cattle deliver as tick mops for the grouse reintroduction programme make them a valuable asset to the estate. However, the costs of making silage and then feeding silage during the winter months and importing concentrate feeding and straw make the cattle unviable as a stand-alone enterprise.

John Scott of J Scott and Partners at Fearn Farm has significant scope to outwinter cattle and has the land, feed and labour resources to take cattle for the winter months. The cattle will provide an additional income stream and also add valuable organic matter to help maintain and improve soil structure.

Carbon estimation

Welbeck Scottish Farms have been making 1,000 bales of silage annually on the inbye fields at Berridale and the then hauling them several miles to be stored for the winter. The bales are then hauled out to the cattle during the winter months and straw and

concentrate feeding is also taken from feedmill and arable farms in the South to bed and feed the cattle.

This historic operation incurred significant road miles and significant fuel usage. The new trial project aims to reduce the number of lorry journeys required to keep the cattle and significantly reduce the tractor hours and fuel usage on the farm. The cows will require one return journey to Tain (90 Miles) X 3 loads of cattle or 270 miles.

The traditional system incurred multiple feed and straw deliveries throughout the winter months and this will be more difficult to calculate as the deliveries are part load form different destinations. As an example, the historic straw usage would require 2 delivers of straw from the Inverness area annually (288 miles). The home wintered cattle would use in excess of 70t of concentrated per winter which is the equivalent to 3 full artic loads of feed from Inverness. (432miles).

The silage making process at Welbeck will have incurred at least 2,000l of diesel and the winter feeding will add another 1,000 litres over the winter months. This does not include any additional fuel usage for checking cattle at calving in Spring. The cattle at Fearn Farm will be indoors for calving and grazed on fodder crops and 500litres of fuel has been included in the calculations to cover this.

The fuel usage has been estimated below based on Haulage at 9 miles per gallon plus farm fuel

Cattle Away Wintering	**Miles**	**Litres**
Cattle Haulage	288	144
Winter Feeding @ Fearn		500
Total		**644**
Traditional Wintering System		
Silage making		2,000
Winter Cattle Feeding		1,000
Purchased Concentrates	432	216
Purchased Straw	288	144
Total		**3,360**
Saving		**2,716**

Conclusion – what are main learnings? Social, practical environmental

Practically, the pilot in year one worked well and has developed into a larger project in year two with the suckler cows being wintered and calved at Fearn

The environmental impacts will take several years to come through but reduced winter poaching has been witnessed in the first winter.

With all collaborative arrangements the key principles of the agreement are built on trust, transparency and clearly defined areas of responsibility.

The collaborative approach requires skilled facilitators to bring like-minded farmer together and manage the process to help build confidence in the first year.

Case study – Kennies Hillock Farm, Fochabers

Farms involved: Kennies Hillock & Clashnoir Farm, in the Braes of Glenlivet
Farmers involved: Mathew Milne & Alastair Nairn
Farm Location: Kennies Hillock, Morayshire
Farming systems involved:
Extensive Hill beef and sheep unit and Lowground mixed beef, sheep and Arable unit

Introduction

This cattle wintering project/arrangement has come about through discussions between Mathew Milne (and his brother and father) Alastair Nairn (and father), Colin MacPhail and Fergus Younger as they discussed the 2019/20 cattle wintering Knowledge Transfer and Innovation Fund (KTIF) Project. This KTIF project was instigated following the straw and fodder summit in August 2018 on how beef farmers could make better use of available grazing across Scotland.

The principles of the KTIF project broadly covered the background and common approach which these partners wish to achieve.

The project set out to trial two approaches to maximise the use of natural capital assets to improve the financial and environmental viability of the beef suckler herd in Scotland.

- To trial two movements of breeding cattle from east to west for summer/backend grazing
- To trial two movements of breeding cattle from west to east for out wintering on forage crops

In 2019 the two farms entered into a pilot project with away wintered heifers on stubble turnips and silage to test the arrangement and familiarise each other with how this may work.

The success of the first year has led them to repeat the process for the winter of 2020/2021. The project approach provides innovation as although cattle moving from West to East for wintering is not uncommon, it tends to be to indoor units on a “bed and breakfast” basis. This project seeks to test a low cost, low carbon system with less reliance on cereals-based diets and greater utilization of grazing ground both in the summer and winter. The project will also seek to put a financial, environmental and social cost against these movements to ascertain the true value of the collaboration.

The 2020/2021 arrangement also involves individuals forming relationships of trust and mutual benefit proving the principle of farm scale and semi-formal co-operation.

The final aim is to provide a wider industry roadmap for greater numbers of livestock farmers to co-operate to create an efficient and profitable sector and ensure that livestock production remains feasible in disadvantaged areas.

Trial Summary

Mathew Milne along with his father and brother had been looking for routes to generate more income for their low ground unit which is a traditional mixed operation alongside a pedigree livestock business. The farm is rented from the crown estate. The adjoining farms that the brothers operate have significant scope to outwinter cattle and has the land, feed and labour resources to take cattle for the winter months. The cattle will provide an additional income stream and make use of the available skills and also add valuable organic matter to help maintain and improve soil structure.

Alastair Nairn and his father run a herd of luings on an upland unit in Glenlivet, similarly to the Milnes the Nairns are also tenants of the crown estate. The Nairns had been looking to free up resources at home by off wintering 40 in-calf heifers and for someone to host them through until they were all calved.

The KTIF project fits well with the objectives of both parties and they already knew each other through the crown estate tenant farmers forum. They held mutual respect in the others livestock husbandry and stocksmanship abilities. With a constructive and transparent arrangement in place, they were both looking for a basis for a long-term agreement.

Farmer Objectives

Kennies Hillock – find a suitable like-minded farmer to collaborate with on an outwintering project to secure a long-term relationship that can generate additional income for the farm business. Help improve the organic matter content of their light sandy soils.

Clashnoir – wetter winters and shortages of winter keep have encouraged the Nairns to look at keeping less stock at their home farm over the winter. Working with the Milnes has given them confidence that their cattle can be well looked after away from the home farm.

Key information

Cattle Numbers (head)	40
Cattle Breed/Type	Luing in calf heifers
Average Age	Heifers
Wintering Period	22 weeks
Arrival Date	15th November
Body Condition Score (on arrival)	3
Departure Date	1st April – 31st May
Body Condition Score on Departure	2.5
Bull in date	15th June
Expected Calving Date	24th March

Transport Responsibilities	Nairns

Areas of Responsibilities & Stockmanship Skills

The economic responsibility for the cattle will remain with the Nairns and the Milnes will be paid for the wintering service including all aspects of animal welfare and calving the cows.

Management Practices (Rations)

The wintered ration has been of strip grazed stubble turnips and pit silage in a trailer. The cattle are moved daily and have access to adlib minerals.

When close to calving the cattle are moved to housing for the calving period.

Animal Health

Vet & Med Protocols

All cattle will be given the routine treatments prior to departure and all emergency treatments and Vet costs are the responsibility of the Nairns. A review of the both herd health status is established prior to any cattle movements being made.

Current high health status is know for each herd. However it is possible for the herds not to mix and remain separate.

	Kennies Hillock	**Clashnoir**
Healths Scheme (SAC,Biobest, etc)		
BVD (vaccinated or not)		
Johnes (level)		
IBR (vaccinated)		
Lepto (vaccinated)		

Environmental overview

The Nairns are keen not to move all their cattle off their home farm during the winter as they wish to retain the benefit to their own soils of the organic matter build up from FYM. However, away wintering a portion is beneficial to the business from a practical management point of view.

The Milnes observed a significant increase in farmland birds during the wintering period, with birds active around the silage being fed and the stubbe turnips. The most notable accumulations of birdlife were noticed in the fodder brassicas where the cover of the plants provided valuable habitat for birds.

Carbon estimation

During the trial the Nairns made savings in making less silage and in hauling in less straw but this was not significant.

The distance between farms is relatively short saving in haulage time for the animals to be moved. However, this distance was still significant enough for the Nairns not to travel regularly to check their animals, the trust levels built up between the farms was also high.

Conclusion – what are main learnings? Social, practical env etc

Practically, the pilot in year one worked well and has developed into a continued project in year two. The host farmer and the outlaying farmer were very satisfied with the relationship.

The environmental benefits to farm-land birds of forage brassicas are well proven and the longer term organic matter build up is likely to take more time to establish the real benefit.

Case study – Prestonhall Farm

Farms involved: Prestonhall, Saughland
Farmers involved: Bill Gary, Peter Eccles and Norman Sturrock
Farm Location: Pathhead, East Lothian
Farming systems involved:
Ayrshire Hill Unit and Low ground Arable unit with Livestock management support

- **Introduction**

This cattle wintering project/arrangement has come about through discussions between Bill Gray, Norman Sturrock, Peter Eccles Colin MacPhail and Fergus Younger as they discussed the 2019/20 cattle wintering Knowledge Transfer and Innovation Fund (KTIF) Project. This KTIF project was instigated following the straw and fodder summit in August 2018 on how beef farmers could make better use of available grazing across Scotland.

The principles of the KTIF project broadly covered the background and common approach which these partners wish to achieve.

The project set out to trial two approaches to maximize the use of natural capital assets to improve the financial and environmental viability of the beef suckler herd in Scotland.

- To trial two movements of breeding cattle from east to west for summer/backend grazing
- To trial two movements of breeding cattle from west to east for out wintering on forage crops

The 2019/20 project approach provides innovation as although cattle moving from West to East for wintering is not uncommon, it tends to be to indoor units on a “bed and breakfast” basis. This project tested a low cost, low carbon system with less reliance on cereals-based diets and greater utilization of grazing ground both in the

summer and winter. The project will also seek to put a financial, environmental and social cost against these movements to ascertain the true value of the collaboration.

The arrangement also involves individuals forming relationships of trust and mutual benefit proving the principle of farm scale and semi-formal co-operation.

The final aim is to provide a wider industry roadmap for greater numbers of livestock farmers to co-operate to create an efficient and profitable sector and ensure that livestock production remains feasible in disadvantaged areas.

Trial Summary

Norman Sturrock has been investigating alternative wintering options for the Luing Suckler Cow herd due to the environmental impact and economics of wintering the cattle at home. The additional purpose is also to free up some of Normans time during the winter months as his children were at university and he also has additional businesses to manage.

Bill Gray has not had cattle on Prestonhall for a number of years and was keen to explore routes to improve soil fertility and organic matter. As one part of the recent monitor farm programme Bill had worked in partnership with Peter Eccles of Saughland Farm. They decided to work together for this project with Bill providing the land and Peter the livestock skills to manage the animals.

Key Farmer Objectives

Norman Sturrock – find a suitable like-minded farmer to collaborate with on an outwintering project and assess the benefits of away wintering a proportion of the suckler herd. Free up time at home.

Peter Eccles – generate an additional winter income to maximise the use of his existing labour.

Bill Gray – utilise cattle wintering to attempt to improve a soil light in organic matter.

Key information

Cattle Numbers (head)	40
Cattle Breed/Type	Luing Suckler Cows
Average Age	3rd Calvers and older
Wintering Period	22 weeks

Arrival Date	1st November
Body Condition Score (on arrival)	3
Departure Date	1st February
Body Condition Score on Departure	2.5
Bull in date	15th June
Expected Calving Date	24th March
Transport Responsibilities	Norman

Areas of Responsibilities & Stockmanship Skills

The economic responsibility for the cattle will remain with Norman Sturrock and Peter Eccles will be paid for the wintering service including all aspects of animal welfare and calving the cows. Bill Gray will be paid the value of the straw bales left in field.

Management Practices (Rations)

The wintered ration agreed involved strip grazing cattle across a barley stubble field with straw left where it was baled. The cattle were also fed silage bales in two ring feeders at the side of the field. Moves were every 2-3 days dependent on need.

It soon became apparent that the straw needed to be rolled out rather than left in the bale, otherwise large clumps of straw would be left making follow up cultivations more challenging. The straw often provided a dry bed during the wet winter conditions.

Mineral buckets were also provided by Norman to be used on an adlib basis.

Animal Health

Vet & Med Protocols

All cattle will be given the routine treatments prior to departure and all emergency treatments and Vet costs were the responsibility of Norman.

A review of herd health status prior to any cattle movements being made failed to pick up that the herd had previously been susceptible to dwarfism. This did not cause any problems whist the cattle were on the trial – all looking well and returning at the appropriate condition score.

However, significant calving issues were experienced with dwarfism once the cattle returned home. It is unknown whether a change in diet at the time of movements or the stress of moving was a factor or if it was a factor from the home farms which was

causal. The cattle did not return for the winter of 2020/21 and the herd will be revisited post caving to assess if there has been a difference in the two seasons.

Environmental overview

The cattle being wintered stubbles ensured that the stubbles were available for longer to farmland birds as opposed to being baled. However, as the winter progressed and as the cattle traversed the field the area of stubble available diminished

No other significant over gain was observed from a biodiversity perspective.

Carbon estimation

Norman been making 1,000 bales of silage annually on the inbye fields and subsequently does not have access to these fields over the summer. The bales are then fed to cattle on a slatted system during the winter months and straw and concentrate feeding is also used and some straw bought in for some pens.

The savings in fuel were not as significant as farms in Caithness where distances travelled are greater, but significant savings were possible.

The fuel usage has been estimated below based on Haulage at 9 miles per gallon plus farm fuel.

Cattle Away Wintering	**Miles**	**Litres**
Cattle Haulage	174	87
Winter Feeding @ Prestonhall		300
Total		**387**
Traditional Wintering System		
Silage making		1,000
Winter Cattle Feeding		500
Purchased Concentrates	40	20
Purchased Straw	100	50
Total		**1570**
Saving		**1183**

Conclusion – what are main learnings? Social, practical Environmental

Practically, the pilot in year one worked well and the cattle appeared healthy on the trial. It is still to be assessed whether the movement of cattle had potential impacts on the dwarfism issue at calving or whether this was just coincidental.

Peter and Bill were encouraged by the trial and have gone on to do a similar system in the winter of 20/21 with Peters cattle on Bills fields.

The impact on soils is still to be fully evaluated with the crop yield results in 2021. The picture below shows the wintering field the following summer with clover cover crops and cattle grazing. It has subsequently been planted with oil seed rape and its looking very healthy, soil organic matter and crop yields will be evaluated in the summer of 2021.