

NE Organic Discussion Group

Newsletter



September 2021

Welcome to the September edition of the Newsletter.

Hope harvest went or is going well. There is a definite autumnal feel to the weather over the last few days.

This month the Newsletter not only contains technical articles and news there is some background information on Balcaskie Farms, East Nuke of Fife which is the venue for our virtual farm tour. It looks to be a great event and will build on last year's virtual farm tour. It is on the 4th November at 7.30pm so keep the date free. An invite and more details will follow but in the meantime I hope you will enjoy reading the information kindly provided by Sam Parsons the Farms Manager. He tells a very interesting story.

The articles are: -
Organic Sector Update
Reducing Risk Growing Organic Crops
Deferred Grazing Utilisation Tips
New Tools for Sustainable Worm Control in Sheep

As ever, get in touch if you have any questions or want more information.

Organic Sector Update

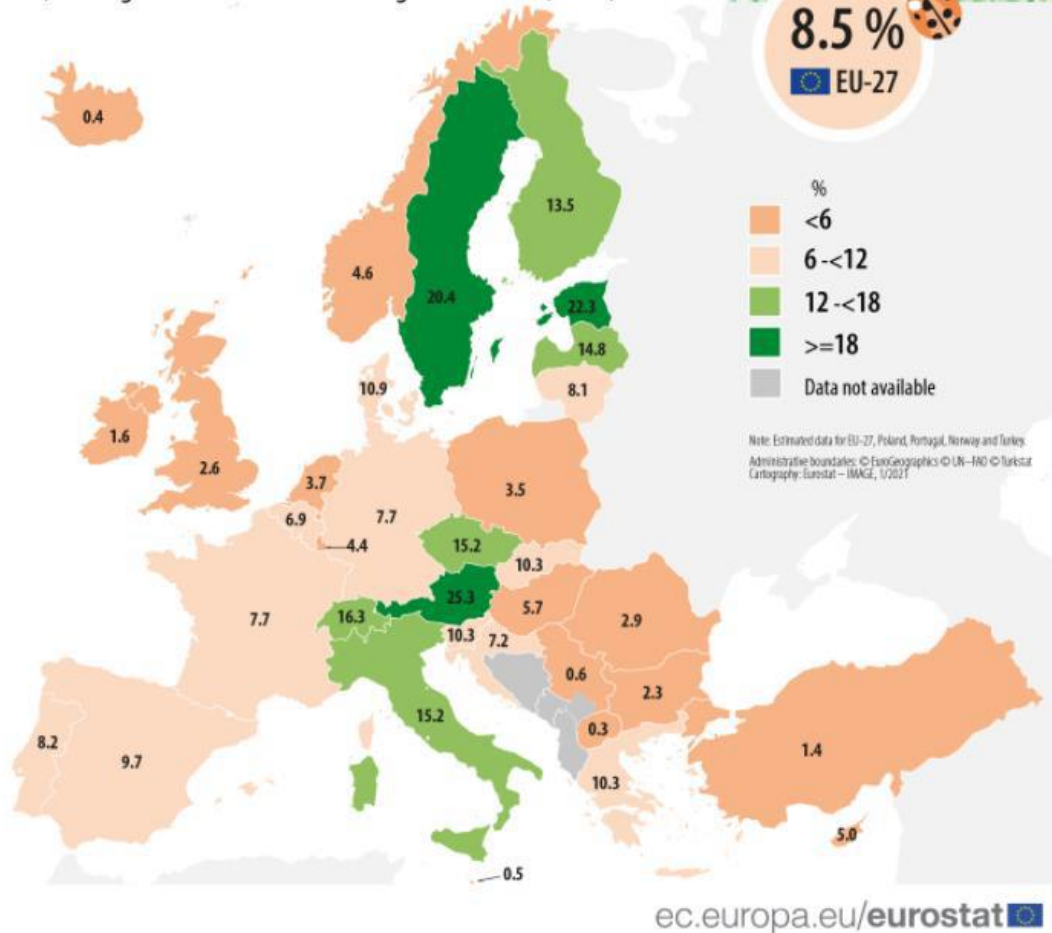
Organic farming increasing in Scotland

The latest figures from Defra's annual report on Organic Farming, suggest that the area of organically farmed land in Scotland is rising for the third year in a row, with a 3.9% increase in 2020 to 95,700ha. Although this only represents approximately 1.7% of Scottish farmland, this rise could be seen as the start of a recovery in organic farming, following the 230,000 ha (4.1%) high in 2008, most of which was rough grazing.

By contrast, to the relatively small organic acreages in Scotland, the EU's organic farmland area has increased by 46% since 2012, covering approximately 8.5% of the EU's farmland, with countries such as Sweden, Estonia, Austria having over 20% of their farmland designated as organic (see diagram below).

Organic farming area

(% of organic area in total utilised agricultural area, 2019)



Demand vs production anomaly

There has long been an anomaly in the organic sector in the UK, with the farmland area decreasing against the market demand for organic produce increasing, as this is now the 10th consecutive year of growth for the organic market, following the associated financial crisis shrinkage in 2008.

During lockdown, organic Food & Drink sales have risen dramatically with growth reaching 12.6% (the highest year on year growth for 15 years) lifting the market worth to £2.79 billion. Online sales and home delivery have accounted for nearly 25% of these sales, according to the latest Soil Association Organic Market Report, highlighting the importance of direct marketing and box schemes for producers in this sector.

The wider benefits of organic farming

Organic farming is a form of agroecological farming based on sustainable management of natural resources and seeks to work with natural biological systems on farm, whether that be soils, crops, climate, animals, or people on the farm. It therefore excludes the use of agrochemical pesticides, synthetic fertilisers, and genetically modified organisms.

With multiple benefits listed for conversion to organic farming, (e.g.. lower greenhouse gas emissions, higher animal welfare standards, increased biodiversity, and certain foods with higher levels of omega-3 fatty acids and certain vitamins & minerals) the EU have also recently announced a target to achieve 25% of all EU farmland to be organic by 2030, as part of the Farm to Fork strategy within the EU's Green Deal.

Other forms of agro-ecological farming, such as conservation agriculture, regenerative agriculture and agroforestry can all help to focus farmers attention on sustainability, and soil management, but organic farming's certification process provides an assurance to the consumer that organic standards are met, enabling a price premium to be achieved.

Looking forward

The Scottish Organic Stakeholders Group which involves a wide range of organisations (SRUC, NFUS, Nourish Scotland, OMSCO etc) recently had a positive meeting with Mairi Gougeon (Cabinet Minister for Rural Affairs) to discuss their Nine-Point plan to boost the organic sector in Scotland and implement a Scottish Organic Action Plan, (building on the 2015 -2020 plan).

With both the SNP & the Scottish Green Party having proposals in their manifestos to at least double the organic farmland area in Scotland within this parliament, organic farming may become increasingly important to Scotland's farmers and crofters.

Denmark was highlighted as an example where organic sector growth increased above 10% within 15 years, with some food staples (such as carrots, oats & milk) having at least 30% of the market.

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Reducing Risk Growing Organic Crops

There is a hierarchy in the decision-making process for growing a financially successful organic crop. Nature can be unpredictable in what it can throw up during the growing season and two seasons are never the same. However, without the massive armoury of fungicides, fertilisers and growth regulators which the conventional farmer has to help deal with numerous pest, disease and fertility issues the organic grower has a lot more preparation and planning before growing the crop. If a crop is disappointing it is not uncommon to look back and see that the result was maybe not so unpredictable after all if one of the following "rules" were ignored -

1) Field selection

Rotation – make sure the field is at the correct stage in the rotation to supply sufficient N for the crop.

Rotation, Disease - Never grow the same crop twice in a row to reduce the risk of trash borne disease and volunteer borne disease, such as netblotch or rhyncho in spring barley.

Rotation – make sure the N loving crop is first in the rotation after grass. Wheat first and oats which scavenge N last.

Rotation – don't push for the extra combinable crop if your land won't stand it.

Fertility - make sure the pH, phosphate and potash status are sufficient to support the crop you wish to grow. If lime and ground mineral phosphate is required, then apply some. If potash is required apply dung or ask for a derogation to apply potassium sulphate.

Fertility – look after any dung you have. Stack it neatly, apply at 20t/ha and plough down as soon as possible.

2) Variety selection

Market – make sure the variety has a market such as for malting or breadmaking.

Disease – look up AHDB recommended lists and check disease resistance.

Find out about the disease resistance of the variety you are wanting to grow. Don't take a chance with low scores for example Yellow Rust or Mildew in Wheat. Don't take a chance on varieties with no information.

3) Seed selection

Disease – if homesaving walk through your seed crops looking for seed borne disease such as net blotch, loose smut and leaf stripe in barley.

Disease – test seed for seed borne disease such as net blotch, leaf stripe, loose smut and fusarium. If they are detected at a high level then reject the seed and look for another batch.

There is an endless number of varieties on the market you may have found ones that suit you. If you are growing any of the following for the first time then you could do worse than choose the following –

Winter Wheat – Revelation

Spring Barley – there is a wider choice of spring barely varieties suitable for organic production – Laureate, Sassy, Diablo

Spring Oats – Canyon

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Deferred Grazing Utilisation Tips

Deferred grass is lower in energy than short leafy grass, usually around 9-9.5 MJ ME/kg DM. For this reason, you wouldn't expect stock to gain much on it. However, it is a good way to reduce winter feed costs for cows and ewes. Some ideas for utilisation below:

- If the grazed area will be important for the summer, then back fence to prevent grazing the regrowth and favour soil structure recovery;
- Leave hedges uncut for shelter;
- If moving stock, during frosty weather, move after frost thaw;
- Keep a plan B of forage stock for snow conditions;
- Estimate how long it will last:

		Note	Calculation	Example
A	No. of animals			50
B	kg DM intake/day	See intake assumption below		8
C	Total kg DM/day		A x B	400
D	Grass Cover (kg DM/ha)	Estimate: 3500, if below 15cm use a sward stick.		3500
E	Residual (kg DM/ha)	Estimate: 1500		1500
F	Grass Available/ha (kg DM/ha)		D-E	2000
G	Total area (ha)			30
H	Utilisation (%)	Estimate: 50%		50
I	Total available (kg DM)		F x G x (H/100)	30000
J	Days feed		I/C	75 days

Intake assumptions	% of body weight*
Dry cows	1.5
Ewes	2
Growing cattle	2
* use a mid-winter weight estimate	

- Plan a strategy for feeding after this period: housing, forage crop, conserved forage and factor in the need for gradual transitioning.

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New tools for sustainable worm control in sheep

A shift from routine worming to strategic worming utilising tools to assess the need for treatment, as well as genetic selection are essential so to reduce anthelmintic use and slow down the rate of anthelmintic resistance. Otherwise, we are heading to a situation where many flocks aren't sustainable as they cannot successfully control gut worms leading to poor performance and welfare.

In my last article, we looked at using Faecal Egg Counting (FEC) as a treatment decision tool, a tool to assess wormer efficacy and anthelmintic resistance and also in genetic selection for worm resistance through FEC Estimated Breeding values (EBVs). In this article we'll look at new novel solutions and alternatives to FEC.

Targeted Selective Treatment (TST)

80% of worms are found in only 20-30% of hosts. TST is the treatment of only some individuals within a group based on defined parameters such as daily live weight gain (DLWG). This targets those with high worm burdens to reduce pasture contamination whilst reducing flock anthelmintic use and maintaining susceptible worms in refugia.

SRUC has conducted research on TST at Kirkton and Auchtertyre Research farm using EID and technology to monitor individual DLWG, combined with treatment decision software currently in development. Flock level study using the TST approach found a 40% reduction in the number of lambs needing treated and a 46% reduction in anthelmintic use compared to conventionally treated control groups with no impact on production including lamb weights.¹

In the following FAS webinar, Jim Logan of Pirntaton Farm discusses how they are implementing a simpler approach to TST through weighing a small batch of lambs first to gauge a benchmark minimum lamb growth rate to dose the mob to: [FAS Sustainable Sheep Systems: Strategic Worming webinar](#)

¹Claire, Morgan-Davies et al., 2018. Impacts of using precision livestock system targeted approach in mountain sheep flocks. *Livestock Science Volume 208* p67-76.

IgA Estimated Breeding Value (EBV)

A test is now available for IgA levels in saliva. This antibody plays a key role in the sheep immune response to *Teladorsagia circumcincta* (Strongyle) through regulating worm growth and fecundity leading to decreased egg output. This offers an alternative to FEC to breed for worm resistance which is potentially more heritable ($h^2 = 0.11-0.16$) whilst being easier and cheaper to sample than FEC. A genetic correlation of -0.34 has been found between Saliva IgA and FEC (Strongyles) showing that selection based on Saliva IgA will lead to reduced egg counts.

IgA EBVs are now available in certain breeds. A positive Saliva IgA EBV score is desirable. Positive score = more antibodies = more resistance to worms. Research into IgA has found variable results with low levels of repeatability, so it is perhaps best used in conjunction with FEC EBVs when selecting tups. Research is now focused on IgA levels in blood serum as an alternative which is showing higher levels of repeatability.

For more information on breeding for resistance: [SCOPS Breeding for Resistance to Parasites](#)

Daniel Stout, SAC Consulting Solutions Agricultural Consultant

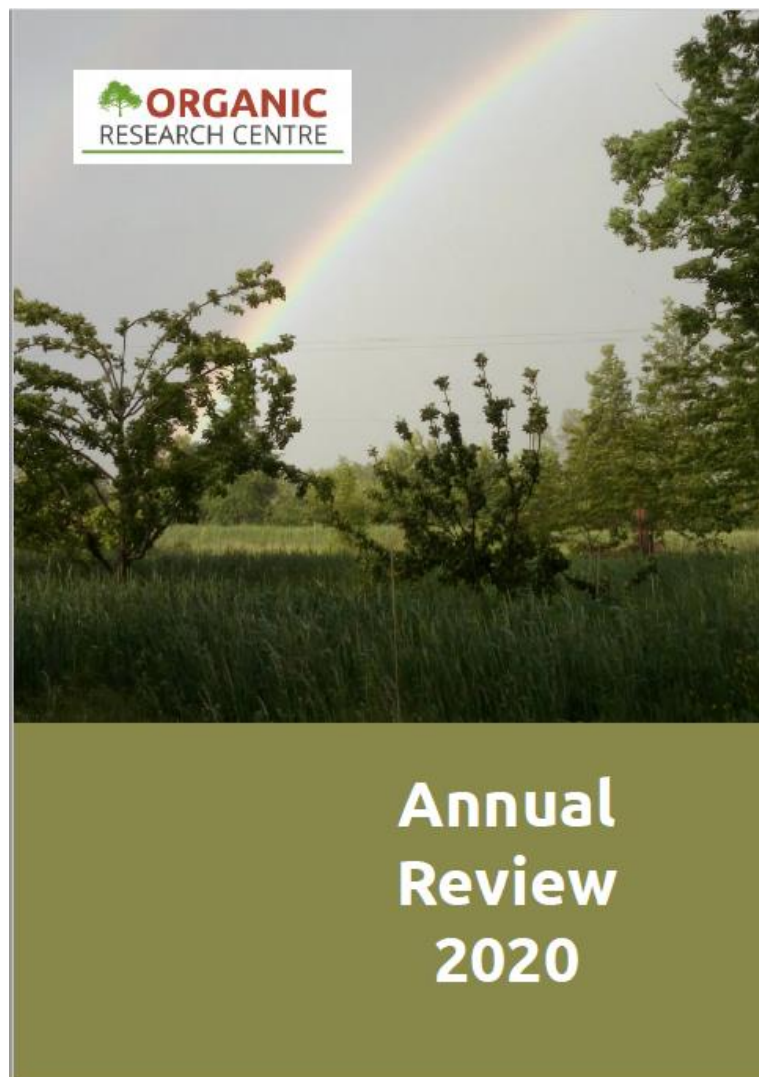
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Meeting



Organic Research Centre

Our Annual Review 2020 is published



Our latest **Annual Review** demonstrates the breadth of progress the Organic Research Centre has made, in a year of significant change, in spite of the enforced restrictions we've all been living with.

[Download our Annual Review 2020](#)

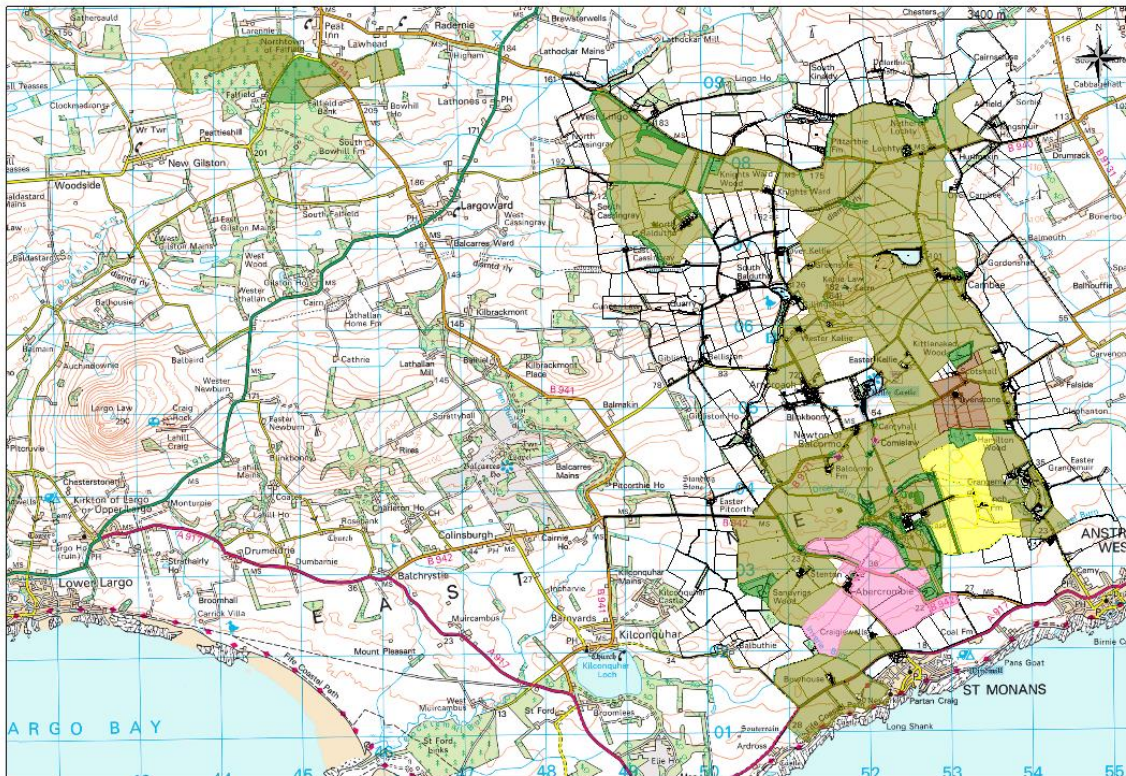
September's 40th anniversary theme is 'Animal Husbandry'.

Please also remember you can follow all our 40th anniversary updates on our [Facebook](#), [Twitter](#) and [LinkedIn](#) pages.

#40organic #sustainableresearch #exploreorganic #ORC40

[40th anniversary communication hub](#)

Balcaskie Farms



Balcaskie Estate is owned by the Anstruther family and covers approximately 1800Ha in the East Neuk of Fife.

The in hand farming operation covers 1300 Ha from coastal deep fertile soils to 185m above sea level with shallow peaty soils over clay. Enterprises include 300 Suckler beef cows, 1200 breeding ewes, 7 sows and arable land producing milling wheat, rye, oats, barley and beans.

The farm business began organic conversion in 2016 following a 50 year review, where metrics were measured from the past 50 years and predicted forwards 50 years. In all but one case, the direction of these metrics was negative and so in a bid to halt the decline – the Future of Farming at Balcaskie policy was drawn up which focused on production of food in the most natural way possible with minimal synthetic input.

The vision was based on the principle that within 20 years, our customers will expect natural foods or those produced in laboratories and therefore we should make the decision on which side we sit.

With the organic conversion phased over 6 years to provide time to change what was essentially an arable farm with livestock into a livestock farm with some arable, the first 600 Ha converted in 2016 and final phase in 2022.

Initially fences and water were less of an issue as land was in a grass rotation and had good fences many of which were replaced in 2010/11 with SRDP funding for agri-environment works. However, we were essentially a conventional organic farm – in so far as we continued with many of the same practices as we did before – just missing out fertiliser and chemicals.

Our winter cattle housing was replaced in 2011/12 with SRDP funding to make better use of FYM around the estate and was based on a winter housing of all livestock –

reaching 7 months on average. To provide sufficient straw – 8000 round bales per year were required, or 500 Ha organic cereals. In addition, we fed 250t barley and beans to fat cattle.

In 2018 (very dry year) we spent £100k on purchased straw (and spent £7000 on PGR's on our conventional cereals). Organic barley was worth £300/t and our organic rotation was driven by production of barley for the beef unit.

Coupled with the prospect of BPS capping, lower demand for red meat through environmental pressure and veganism rising, I assumed that we could see 50% reduction in BPS and 20% reduction in red meat.

On the back of an envelope – we needed to save £200k from our annual costs to stand still and saving a few pounds here and there on inputs was not going to be sufficient.

Regenerative Farming.

In 2017 we experimented with mob grazing cattle to see what improvements to soil health we could effect with this management technique. Driven by a desire to improve soil health, it was clear it would take time for the results to be measurable.

Moving cattle daily into small paddocks with high density stocking rates and long rest periods between grazing, the principle enables grass to establish strong, deep roots. However, it became obvious immediately, that the ability to store grass through the growing season and continue grazing in the autumn and winter had potential to change the economic returns.

With a trial of 87 cows mob grazing in 2018, we extended the grazing season to 324 days by using winter bale grazing and only brought cows in to calve.



Since 2020, we have mob grazed all cattle and aim to extend the grazing season to youngstock and fat cattle to reach a 60 day winter housed period only.

Becoming PFLA certified in 2019, we removed all cereals from the cattle diet and now finish entirely on grass and grass silage. Cattle are finished between 20 and 26 months – we retain 15% of the fat cattle for our own butchery.

Breed.

Initially we ran a pedigree Luing Herd and crossed it to a Sim bull for Sim X Luing replacement cows in the main herd. But with cow weights creeping up and fat cattle carcasses regularly reaching 400kg, we looked at the future breed choice.

Requiring a breed which would finish on grass alone, outwinter, have big feet and a smaller cow, the Luing was well suited. However, carcase confirmation from pure Luing was insufficient to maximise fat cattle values and markets. Lincoln Reds were introduced in 2019 due to the un-improved nature of the breed and similar east coast climate selection process.

Sheep.

With a significant area of grass, we needed to increase the mouths and sphincters on the land. A breeding flock was established in 2015 with 200 gimmers. Lambing in March and April, we aim to finish lambs from end of May to end of July and then October through to May in order to avoid the peak lamb production months and maximise organic premium. Now running 400 Texel X ewes to Suffolk tups for indoor lambing in March and 800 Greyface Mules to Texel tups for outdoor lambing in April. Yet to master mob grazing sheep, we move the flock on a weekly basis to maximise pasture rest and reduce worm burden.

Lambs are all left entire and tails are un-docked – less intervention is a better story and seems to work.

Pigs.

A micro herd of Tamworth pigs was established to supply our own butchery and help to clean land of problematic weed build-up. All pigs are outdoor 12 months of the year and again, moved regularly. Fed on a diet which is based on all of the spent grains from the onsite brewery, flour mill and any grains cleaned out during the seed dressing process, the herd will remain small to match with food availability



Cereals.

Growing cereals following a grass fertility building break, Balcaskie supplies Scotland the Bread with milling wheat and rye for flour production. Utilising ancient varieties which are rich in minerals – the objective is to nourish people per Ha and not yield per Ha.

The tall strawed crops shadow weeds out in spring and provide early spring grazing for sheep, helping to tiller the cereals and prevent lodging. Producing high volumes of straw, the varieties are well suited to our system.



The farm employs three full time on livestock, three tractor drivers who now spend much of their time building infrastructure such as water and two full time estate workers who are fully engaged fencing some 30km/year.

Employing a full time Wildlife and Biodiversity officer who manages the environmental improvements and pest/vermin control, the aim is to plant more trees, hedges and create wild space. Since 2010, the estate has planted over 500,000 trees and hedge plants with 46km of new hedging.

Creating Habitat is an objective which spans not only biodiversity, but also social habitat. The estate hosts 40 commercial business in units on redundant farm steadings, 60 houses and welcomes over 50,000 people per year through Bowhouse Food Markets. The estate pub – The Kinneuchar Inn opened in 2019 as the final point of production from soil to table.

Links;

www.balcaskie.com

www.bowhousefife.com

www.butcherybowhouse.com

www.kinneucharinn.com

www.scotlandthebread.org