

FIELD GUIDE

FOR THE

FUTURE



Food, Farming
& Countryside
Commission

N A M E

FIELD GUIDE

FOR THE

FUTURE

A practical guide from the Commission's inquiries,
case studies of good practice and stories of
change – the future, happening now.

With thanks to everyone who contributed.



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Imagine a future where...

We have halted climate breakdown and reversed biodiversity loss; we have asserted the grace and dignity of human life – everyone matters, everywhere.

Our cities are cleaner and healthier. Our towns flourishing and vibrant. Everyone can find a home they can afford in the places they want to live. Walking, cycling, clean public transport and electric vehicles are commonplace. Greenroutes link neighbourhoods in towns and cities.

It's easy to get out to the countryside, with interconnected public transport hubs from towns and cities. People visit the National Forests, which have brought the UK nearer to the top of the European league table for reforestation, helped largely by the National Nature Service's huge planting effort of the 2020s. Every farm and landholding has wild spaces, and all wild spaces are planned to make up a connected network of species-rich wildlife corridors. Careful planning of forestry and ground cover has minimised flooding and soil erosion downstream.

Arable farms now grow most of their crops for people, planting a much wider range of varieties. Farming is largely chemical free. Precision technologies are readily available, so smaller fields and layered cropping are popular. Investment in quick-win, farmer-led technologies and innovations have brought advances direct to farmers. Older crop varieties are making a comeback, with better genetic resilience and a proven ability to grow in different soils. With a livestock rotation on pasture and no-till practices, soil quality has improved, along with stream and river quality. Livestock is fed on pasture or leftovers. Chickens thrive in agroforestry systems; outdoor pigs consume the little waste that's left in the food system. Since we eat much less, but better quality meat, old British breeds have recovered, well adapted to the UK climate and conditions. Carefully using the whole animal has seen the revival of the wool trade, as a healthy and sustainable fibre for a circular economy.

With fewer grazing animals, tracts of land have started to regenerate. But the native breeds and the hill farmers continue to cherish the landscapes they have inherited and will pass on to future generations, and which are so important to locals and visitors alike. More farmers sell directly to local buyers; coops are thriving, helping small producers enter the market. Public procurement led the transition, providing fair and secure markets for producers and encouraging investment in fruit, vegetables, nuts and pulses. The first big harvests of UK nuts and fruits have started. Mixed farms have become the norm.

Everyone can afford healthy food and can grow it themselves if they want to, in the public gardens that you find in every spare space. The community kitchens and street food that provide healthy, nutritious food at every price point, create convivial and friendly places to eat and connect. Everyone can learn how to grow, prepare and cook nourishing food. With food at its heart, meeting, eating and talking together is reshaping our public discourse – it has become vibrant, convivial, lively and appreciative. What we eat has changed – as well as calories, we think about nutrients and carbon footprint too. We value our food and we don't waste it. We are much healthier – the trends in diet related illnesses have reversed.

A universal basic income means people focus on doing the work that's needed, that sustains the planet, our communities, and the human spirit. A 30-hour week means that good work is shared more equitably; flexible, fair and equal work is everywhere. Ecosystem care, and the skills it needs, is central to every part of the curriculum.

Instead of relentlessly speeding up, we've found ways to slow down too – slow food, slow travel, slow living. Now people can, if they choose, take time to create and enjoy the things that really matter to them – rich relationships, healthy and nourishing lives, the beauty around us, nurturing our communities and our planet. Fast or slow, we decide together the kinds of technologies that enhance the human condition; and we place limits on those that exploit or damage the planet or people's wellbeing.

The rural economy is booming: leisure and tourism has increased, people decide to spend more time in places they can reach easily without flying and driving; the countryside is a place for psychological, cultural and spiritual renewal and celebration; natural ecosystems like forests, peatlands and grasslands are being restored; a working countryside grows more healthy food in agroecological systems, which values people's work at least as much as the high-tech solutions. A place where everyone can live and work, and benefit from the same essential services available to people in cities. Ultrafast broadband opened the countryside to new businesses, made virtual teamworking easy, and wiped out the need for unnecessary commuting. People meet when and where they want to.

Clever and visionary investments kickstarted the 4th agricultural revolution. A National Agroecology Development Bank provides secure finance to help farming businesses invest in the transition and to divest from old assets. Companies around the world focus their work on business that enhances the health of people and planet and pay their share of the investment in this. If they don't, they can no longer expect to thrive. Circular economy and 'net positive' principles are embedded in global supply chains. Taxes on polluters, and other value depleting products and practices, boosted revenues available to restore the health of people and the planet.

Our trading relationships around the world raise the bar for human flourishing, and carefully steward the planet's resources for future generations. Trading that depletes public value for private greed is exposed and regulated through trade rules that focus on sustaining the planet. We produce less stuff, we consume less stuff, we carefully reuse and recycle; we focus our collective ingenuity on the health and wellbeing of the planet and of all the life on it, reducing inequalities around the world.



16th July 2030

About this field guide

One of the great joys of the Commission's work has been meeting and talking with so many people who are already doing extra-ordinary things to bring a more sustainable and regenerative future to life.

From the start, the RSA Food, Farming and Countryside Commission wanted to conduct our inquiry a little differently. We designed an inquiry *for* action, making radical and practical proposals, and an inquiry *about* action, where we could learn from and share the real work people are doing on the real issues that concern them.

Our mandate required us to look across the whole system – food and farming, the countryside, housing, work and the rural economy, as well as making the connections with impacts on the public's health and wellbeing. Mindful that people do not live their lives in neat policy 'silos', we wanted to understand how these inter-relationships affect people in their everyday lives.

To learn more, we travelled the UK on our bike tour, which gave us the Fork in the Road book and festival. We also worked with local partners in all four nations, conducting in-depth inquiries in three counties in England – Cumbria, Devon and Lincolnshire – and in Wales, Scotland and Northern Ireland. And we commissioned further research with farmers, young people and communities on particular issues that emerged as our work progressed.

We learned early on that sometimes our questions were not necessarily the questions that mattered in the communities we visited. When we were designing our inquiries, we got some good feedback on the importance of our inquiries being reciprocal, which went something like this:

"You know, we are getting quite exhausted trying to participate in all the consultations that want to know what we think. We show up, answer other people's questions – and then have no idea what happens with the information we've given".

A good and timely challenge, we stepped back and asked what was important to them and how we could help. We wanted our partners to get some benefit from working with us – making practical progress on things that mattered to them.

All six of our detailed inquiries developed in their own ways, responding to the questions that felt most relevant in those places, whilst also building upon the experiences and expertise brought by our partners in the leadership groups. In Cumbria, the group focussed on resource and activity mapping, making it more visible to the community itself; in Lincolnshire, on soil improvement and farmer learning; in Devon, the leadership group picked a number of topics: farmer mental health, grasslands, biodiversity, young people in farming. In Wales the group focussed on using the Wellbeing of Future Generations Act to improve public procurement in partnership with farmers; in Scotland, a series of workshops around the country looked at national issues in their regional contexts; and in Northern Ireland, the leadership group designed and led an extensive listening exercise across the country.

As a core theme of the Commission's work, we were curious to explore how farmers themselves see their relationship with 'health'. Working with our partners at City, University of London, we interviewed 20 farmers to find out how they think about health and wellbeing. This generated fascinating and detailed case studies, six of which are contained here, with the whole collection published online.

Place matters everywhere – local and community identities shape who we think we are and where we think we belong. This is especially true in the countryside, where the landscape often shapes more directly how we live. In three of our inquiries, it became the principle focus: exploring how communities see themselves and how others see them, and how they can have a hand in shaping their futures more directly in turbulent times.

We found, over and over again, that "the future is here, it's just not evenly distributed". We noticed, too, that there are several versions of possible futures starting to appear around us – and not always in a good way. Through our inquiries we saw evidence of communities working to mitigate and adapt to the effects of climate and ecosystems breakdown – changing their farming practices, putting in carbon sequestering measures, protecting their landscapes. We saw how towns and villages are responding to the social and economic pressures felt by many in the countryside, to protect and regenerate their communities, their livelihoods, and their identities.

This is why we are publishing this stand-alone companion book alongside the Commission report – Our Future in the Land. We wanted to give our partners and contributors space to tell their stories in their own ways, as well as recognising the role they played in shaping our recommendations. Underpinning that report, as a result, is a deeper appreciation of the particularities of place; and how any silver bullet solutions fired from the top (whether that's Westminster, Senedd, Holyrood or Stormont) are likely to land – at best – inadequately.

Our report recommendations are shaped by our observations that creative, courageous and sustainable change is underway everywhere. What people tell us they need are the right conditions that make it easier to do the right thing – and make it good business to do so. Communities want to shape their futures to meet the challenges ahead.

Our Future in the Land sets out our recommendations in three calls to action:

Healthy food is every body's business – good food must become good business.

Farming can become a force for change, leading the 4th agricultural revolution towards agroecology.

The countryside can work for all, as a powerhouse for a new regenerative economy.

We show how farmers, food producers and public organisations are making health central to their work. We show how farmers and land managers are leading the movement for change, adapting their practices to respond to the big challenges ahead. We show how environmentalists, farmers and local communities are exploring together how to shape a landscape that meets many needs. And we show how communities in the countryside are finding ways to flourish through creative and purposeful work together.

When the challenges are huge, and the time is short, top-down policy processes are necessary but not sufficient to the task at hand. New legislation will be important, but we don't have time to wait. Change has to start everywhere, with everyone – and fast. And it is not enough to talk about action, we must get on and do it.

These are the stories of some of the people who are leading in creating positive futures, sharing their learning and taking action all over the UK.

Health

The spiralling costs of diet-related ill-health mean that obesity is expected to cost taxpayers £49bn a year by 2050 if we continue on our current trajectory. It's not just what we eat that affects our health and wellbeing. The relationship between food, farming, the countryside, and the public's health and wellbeing is far reaching, beyond food alone. Being in nature has proven health benefits for children and adults alike.

Sometimes we heard that health is not farmers' business. We wanted to find out whether all farmers felt this way and if not, how they were incorporating health and wellbeing into their work. It turns out that people across the country are bringing the two together – choosing to farm for healthier produce and kickstarting the supply chains to get it to customers. Local authorities are ensuring that schools and hospitals serve healthy, nutritious food through public procurement. Farmers are coming together to support each other through the particular challenges of modern rural life.

Farming

There are many ways farming, health and wellbeing are interconnected. What we grow affects what we eat, how we grow it affects our health and the planet. Farmers do more than grow food – they look after footpaths and countryside access, they maintain the landscape, and they contribute to community life through open farm days, education programmes and even clearing the snow from the roads in the winter. Some are taking this relationship with health and wellbeing further still.

Farming and health

Interviews by Lindy Sharpe, Food Research Collaboration at City, University of London

This collection of six interviews is part of a series of 20 conducted for the Food, Farming and Countryside Commission's health research strand. They explore the linkages between health and farming: from care farming to mental health, land use to wildlife, healthy crops to soil health. To read the rest of the series, visit www.thersa.org/ffcc.

Name:
Richard Betton

Farm:
Waters Meeting
Farm, Pennines



Tenant farmer Richard Betton has 280 pedigree Swaledale sheep and 22 Aberdeen Angus suckler cows on a 290-hectare moorland farm high in the Pennines. Through the National Farmers' Union, Farming Community Network and Upper Teesdale Agriculture Support Services, he also works to protect farmers' physical and mental health.

There are really two strands to farmer health. There's the more obvious one, the physical wear and tear. Certainly in this area a lot of the work is still manual, repairing the drystone walls, handling cattle and sheep, hard physical work. There are not many older farmers who don't have aches and pains that the

health service says we shouldn't have. And then there's the hidden ones, the mental health problems, a lot of it down to isolation. It's very easy when you're working on your own to think the whole world is against you: because Natural England doesn't want you to do this, the estate don't want you to do that, your lambs didn't make enough money and the feed price has gone up. It's stressful. One of the things that I really try to push is that it's all right not to cope. And the first thing is to talk to somebody.

Often just explaining your problems to somebody who is unfamiliar with them helps you to sort them out in your own head.

Farming Community Network has a helpline which operates 365 days a year, from 7am to 11pm. If a farmer phones up and is desperate, or just wants somebody to talk to, our volunteers will either phone them or go and visit them. There are over 400 volunteers, organised into county groups, including a lot of active and retired farmers. They'll talk and listen and signpost. We don't give advice, we befriend them if you like. And quite often they find it helpful to talk to somebody who's not part of the immediate family.

For a lot of farmers, there's a real elephant in the room with the subject of succession. The children don't want to say, "what's going to happen when you

die?”. Quite often it’s a huge relief if you can get that conversation going and the family can start planning. All sorts of things come out. It may turn out that the son or daughter doesn’t want the farm and wants to do something else.

I’m on the council of the National Farmers’ Union, and I’ve made a big play about mental health and wellbeing. I’m getting a lot of support for it in the NFU now, which I wasn’t getting some years ago. I also work for a charity called Upper Teesdale Agriculture Support Services (UTASS), where I help farmers with their paperwork. Back in the early 90s we had eight suicides in six months in Teesdale in the farming community. The health service commissioned some research and found a common thread was the ever-growing complexity of paperwork and fear of the consequences of getting it wrong. So in 2000, UTASS was set up to help farmers with their paperwork.



Part of the reason is that Teesdale is dominated by big landed estates, so there’s a lot of relatively impoverished tenant hill farmers. You don’t have lots of assets as a tenant, just your livestock. Perhaps that had something to do with it. In my time in farming, one of the big changes has been that the support payment has moved from the tenant’s asset, which was their livestock, to the landlord’s asset, which is the land. It’s called decoupling. Ever since then, I think tenant farmers have almost been fighting a losing battle. And the big estates have been pushing to get rid of direct payments and replace them with payments for the ‘public goods’ which they own. It’s another tension.

There are other things bearing down on farmers’ mental wellbeing. We’re more dependent on support payments, because food has got cheaper but the cost of production hasn’t gone down, and we are far more aware of the environmental cost if we don’t do it properly. The isolation has got worse, with lots of people leaving the land, farms getting bigger, very few farmers employing anybody, people working on their own. Nowadays a farmer has to be a shepherd, a stockman, a tractor driver, a drystone waller, an electrician, a plumber, and do all the management and the VAT accounts and the recordkeeping. They’re highly skilled people. And they don’t get any days off. When you’re having to keep so many balls in the air, it’s all right not to cope. It’s absolutely natural.

The most important thing is to remember that farmers and their families are people. I think they’re often seen as a commodity or a problem, and actually farmers are the solution to a lot of the things that we want to do in this country. But you’ve got to handle them right, and farmers have got to be receptive and change their culture as well.

Notes

Name:
Liz Findlay

Farm:
Nantclyd Farm,
Ceredigion



Liz Findlay runs a mixed biodynamic enterprise on about 38 hectares, centred around her flock of 800 to 1,000 laying hens and the all-important aerobic composting system.

We have a number of different enterprises here, all interlinked, and at the very heart of it is our compost system, which is completely integral to the whole farm. It feeds our soil, or rather the microorganisms in the soil, and supports the health of everything that lives on our land and also the people who eat our produce.

The poultry enterprise starts with day-old chicks, which we buy in, and we keep the birds until they’re around two-and-a-half years old. They live in 200-bird laying sheds, which are out in pasture, surrounded by woodland, and they’re free to scratch, roam, and find food for themselves, along with receiving a suitable poultry ration. At the end of their life with us, we sell them on, because they are still laying hens, or we slaughter them for home consumption.

Besides the poultry, we have 30 breeding ewes, Dorsets, that lamb in the autumn. They’re integrated into the poultry system inasmuch as they graze the paddocks to maintain grass growth. We sell the lambs at around six-months-old, after they have been pasture fed over the winter.

We also have cattle that are again 100% pasture fed. They build up fertility, they paddock-graze to feed the soil, and are finished at around 24-30 months and sold locally or wholesale. We also have arable land that produces grain for the poultry, and we grow a range of field scale veg – roots, brassicas and alliums. And then we have polytunnels where we grow a mixture of salad crops, tomatoes, cucumbers and aubergines, along with growing strawberries. We mainly sell our produce locally in the shops in Aberystwyth.

I’m a first-generation farmer. My dad was a grocer in Lancashire, so I’ve always been quite familiar with where food comes from. And I love



We are so connected, we just don’t recognise how connected our gut biome is to the same microorganisms that make our whole planet tick.

my animals, really. That’s a little bit why I went into farming. I did a Higher National Diploma (HND) in agriculture at college in Aberystwyth at the end of the ‘70s, and I learned that you couldn’t grow grass unless you used chemical fertiliser. I then spent 10 years working on livestock farms, realising that it did not work. The people who made the money were the feed sales people and the fertiliser people. So I saved up some money and met my partner and we bought this land. And once I got my own little bit of land, the very last thing I was going to do was put any chemicals on to it.

By then I had realised that the problem is the whole economics of it. Food is expected to be cheap and you cannot grow quality food cheaply. We don’t really get enough money for the food we produce. And we take no government subsidy. It’s more trouble than it’s worth for what we would get. We absolutely do make a living. We just work very hard at making it.



But to come back to human health, it's all to do with the aerobic composting. Any waste product whatsoever from the farm goes into a windrow composting system, where it is heated and turned to kill the pathogenic bacteria and leave behind the beneficial stuff. It ends up as a product that smells and looks like floor-of-the-forest soil. It smells so nice you could almost eat it. We've analysed it, and it's full of beneficial bacteria and fungi. I think it's been shown that we have, and need, very similar bacteria and fungi in our gut. We are so connected, we just don't recognise

how connected our gut biome is to the same microorganisms that make our whole planet tick.

I think intuitively people from many generations past have known that. It's why we've developed fermented foods, so that we can eat them. And it's true of our animals. Our cows have a rumen full of bacteria to digest their food and those bacteria have got to be fit, healthy and diverse. When you start putting antibiotics in there, or adding this, that and the other, you're going to affect the ecosystem that lives inside the rumen, which the animal depends on for its health. Our sheep tidy up our veg field, graze the grass around the poultry paddocks, eat the docks. It all adds to a diverse diet. And it's the same for us, I feel. The bacteria and the fungi are the very roots of life. They're in everything that grows out of the soil.



Making compost is like making food in reverse. It's all one big cycle. We can so simply fix the whole climate change problem we have created on the planet, there's nothing difficult about it, it's about just going back to that cycle. We can lock carbon that we've put in the atmosphere back down into the soil if we manage it in the right way, with grazing livestock, with grass, with growing crops in a holistic way. And our health, most importantly our health. We can do away with the NHS, just about, when it comes to human health.

Name:
George Hosier

Farm:
Wexcombe Manor Farm, Wiltshire



Wexcombe Manor is a mixed, owner-occupied family farm. George Hosier grows wheat, barley, oilseed rape, peas and beans on around 625 hectares, and keeps a suckler herd of around 50 grass-fed cows plus progeny on 80 hectares of grazing land. He has recently transitioned to a no-till system.

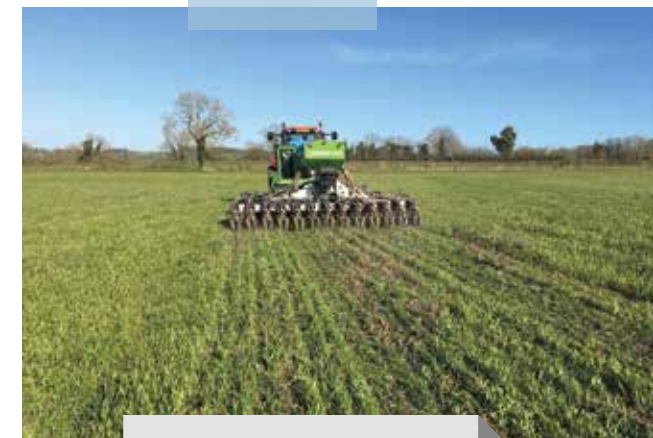
In terms of human health, it all started when I got interested in soil health, and the more I learned about soil health, the more I discovered there is an inexorable link between soil health and human health. It all revolves around the microbiomes of the soil and the microbiome of the gut, which are ultimately pretty similar. Everything we're doing is about trying to improve the health of the soil.

We started the transition to no-till around 2012. We were trying minimum-till, so we had stopped ploughing and were just tickling the surface, but the seed drill we had couldn't cope with the residues. While I was looking for a new drill I came across two people who were doing Nuffield scholarships investigating no-tillage systems. One of them put up a YouTube clip of his farm in Gloucestershire, where he was drilling winter wheat into a cover crop of mustard which was about four foot tall, and they were just going straight in

with the seed drill. I went to visit these two guys. And then I was power-harrowing at 3 o'clock in the morning, because rain was forecast for the next afternoon and I had to get the field drilled before then. When you're sitting on a tractor at 3 am and the thing is steering itself, you have a lot of thinking time, and with GPS you can also trawl through YouTube and Twitter. And I thought, why am I doing this? The more I understood about no-till, the more I read around about soil health and that got me thinking about gut health.



Physically, it all benefits my health, and my family's, because we only eat meat that we've produced on the farm, and we've stopped spraying insecticides, so we're not handling as many chemicals. Everyone who works and travels around here, their health is improved by less chemicals being used. And our customers benefit from eating our beef. Mentally, farming is a lot more interesting when you are doing something different, and people are interested in what you are doing. On that front, it's very good for mental health. What's less good is when it doesn't work brilliantly first time, which happens quite regularly.



The more I understood about no-till, the more I read around about soil health and that got me thinking about gut health.

And then we were expecting yields to drop in the transition period, which they duly did, but that came at a time when we had borrowed to put a new grain store up. So my mental health has probably been affected in both directions.

The main reason why more farmers don't do this is because what they are doing works. Take away the Single Farm Payment and it might not work. Another big thing with the no-till is uncertainty over glyphosate, because our system falls very flat without a broad-spectrum herbicide, and in this country glyphosate is the only one available. Organic farms use cultivation as their weed control – which means disturbing the soil with mechanical

means. We don't cultivate at all, because it upsets the microbiome of the soil, so we spray a chemical instead. After long consultation with various entomologists I've come to the conclusion that one spray of glyphosate is significantly better for the soil than any form of tillage. One dose, once a year, just prior to planting a cash crop. I know the problems with glyphosate, and I would never use it on a cash crop, because that's where the residues can potentially come from.

I wouldn't have been begun to make any of these changes if I hadn't been on Twitter. Twitter was the platform that put me in touch with the people who were doing this around the world. Twitter and YouTube were initially the two biggest learning tools, and since then I've started reading books. I still have a long way to go to improve the nutrient density of the food I produce, but I feel I am on the right path.

I think there is a need to incentivise people to look after their soil, and I wish there was a really good metric for soil health – it is the key to everything. Animal health is linked to soil health, just like human health is linked to soil health. I would really like to see us working towards improving all three, from soil to animal to human. And we need more investigations into how we can improve the carbon capture ability of the soil. That is a massively untapped service that we could provide as farmers.

See p.38 for tips from soil scientist Dr. Iain Gould on easy ways to assess soil quality.

Name:
Bill Grayson

Farm:
Morecambe Bay
Conservation
Grazing Company



Bill Grayson is an organic livestock farmer and conservation grazier, running mainly cattle over an area of about 1,100 hectares, with parcels of land scattered across Cumbria, North Lancashire and North Yorkshire. All of it is designated for its nature conservation value.

We're all familiar with the phrase, 'you are what you eat'. I've subsequently amended it to say, with regard to livestock, 'you are what you eat has been eating'. Human health is the basis of what we do. Given the state of the world at the moment, we haven't as a species done a very good job of managing things. I'm hoping that as we discover more about the relationship between ourselves and our food and the environment, some of those mistakes might begin to rectify themselves. People will become more enlightened and healthier: the two go hand-in-hand.

What we do is called conservation grazing. The grazing regime is geared primarily to delivering nature conservation objectives, so there will inevitably be some constraints on the numbers of animals, the timing of animals going onto the site, and specific times when they are not required. It's about tailoring the grazing regime to maximise the benefits for whatever the specific wildlife objectives are. But what we do conforms to all the principles of farming: we breed our own cows, rear them, and they go off into the human food chain. I am an ecologist and a farmer: arguably all farmers should be both.

We started by managing grazing for the National Trust, and now do this for a range of other conservation organisations. They are responsible for managing nature reserves for their conservation value, but they don't farm in their own right, so they need farmers who can deliver the right kind of grazing regimes to achieve their objectives. All this has made a successful business. The current system of farm support has worked well for us and our staff, and for the people we provide this grazing for.

The current argument against livestock farming is a major concern of mine. The Committee on Climate Change recently recommended that between a quarter and a third of all our upland pastures should be afforested to sequester carbon in timber production and reduce methane emissions from extensively grazed livestock. Personally, I feel it is wrong to reduce meat from agroecological systems whilst promoting more intensive forms of production that require greater inputs and cause soil degradation. The kind of system we have is really geared towards producing livestock in conjunction with trees. Many of the sites comprise areas of woodland, scrub and scattered trees. This mosaic of

habitats allows us to produce meat and timber while enhancing biodiversity, minimising climate impacts and maximising human health benefits. That's the model I think is most relevant.

Higher concentrations of omega-3s are probably the most notable example of the health benefits supplied by pasture-fed red meat, but there may be much more to it. When livestock have access to the variety of plants that you see in a semi-natural environment, they select a diet containing 'nutraceuticals', secondary compounds that wild plants contain which appear to bring numerous health benefits. Another factor is the soil microbial community, which makes important minerals and trace elements available to the food chain.



When we started, the focus for the business was on delivering ecological benefits, and we were less concerned with the holistic perspective. But as a society we are in a state of transition in our thinking about a lot of things, for example the respective roles of dietary fat and sugar for human health. Another example is glyphosate, which recent independent studies show to be pervasive in the food chain. I remember how, when I began my career in conservation some 30 years ago, I was required to use this chemical to control weeds. The advice then was that glyphosate was completely safe because it was quickly degraded on reaching soil or water and would not be able to accumulate along the food chain. It was a shock to learn that its residues were turning up in a wide range of food products and even in samples of human blood and hair. I can't predict how it will play out, but I strongly believe that when we have sufficient knowledge we will recognise that there is an underpinning link between our health, the health of the food we eat, and the environment that food was produced in. To think otherwise to me is nonsense. We need to focus on agroecological approaches, the essence of which is that farming remains within the limits that nature sets. Until we reach that point, we will be causing more harm than good.

This mosaic of habitats allows us to produce meat and timber while enhancing biodiversity, minimising climate impacts and maximising human health benefits.



Notes

Name:
Lydia Otter

Farm:
Pennyhooks Farm,
Oxfordshire



Lydia Otter keeps a herd of beef cattle on her 40-hectare organic farm and uses the farm to provide a unique experience for young people and adults with Autism Spectrum Condition.

I was brought up here. I have a letter from my grandfather in 1943 saying he was thinking of buying a farm for his sons because he considered it to be a balanced and satisfying way of life. So the farm was actually bought, I now find out rather touchingly, as a lifestyle choice. My parents often had visitors and friends staying with us, to share the farm. I think it's been natural for me to understand that farming is good for you.

When my mother died in the early '80s I came home to help dad. It coincided with a decline in dairying, so dad sold the milking herd and bought some Angus yearlings and began to build the herd we've got. They are suckled for nine months and we sell them finished at about two years old. I know them each by each, really. The beef is sold to retailers through the Organic Livestock Cooperative.

The farm is mostly permanent pasture, but a quarter of it is high-value conservation land. We've now made the decision to reduce the herd down to about 20 breeding cows, deliberately to look after that conservation land, which needs the cows to graze it. The decision is linked to our diversification into autism support. Just to give you some idea, our turnover is about £40,000 from the farm and about £400,000 from the diversification.

The cows also have a very central role with our young people, in that they provide that year-long cycle that seems to be so grounding for them. The reason why I started to introduce people with autism to the farm goes back to my experience as a child and the way that I felt so much that I belonged and was so comfortable here. When I went off to boarding school I lost that sense and became very unhappy. The experience influenced my choice of career – I trained as a music teacher specialising in special needs.

When I started to meet people with autism and understand the worlds they live in, where they're so withdrawn and disconnected, I wondered whether coming to the farm would make a difference. I attended a conference in Barcelona where there was a session on farming and autism. I presented my ideas and the others said, go for it, you've got all you need to do it.

We had a young man here today, aged 22, unable to really centre himself or stop. His language wasn't very capable but he was trying to express himself, which was lovely, but he wasn't getting anywhere. When we took him out to feed to the cows, they immediately became his focus. He wanted to get them fed, the satisfaction of hearing them stop shouting and settle into the manger to eat, and he became a completely different person almost immediately. The only way I can put it is that the rhythms of the farm seem to really relate to the need for people with autism for predictability and routines.

It was his first visit. Usually we have people in groups of 10, some coming every day, some once a week, mainly men but increasingly women. They each come with a carer, and I employ 15 people, 10 of whom are experienced support workers, so everything is one-to-one. We have two separate sessions a day, and

The only way I can put it is that the rhythms of the farm seem to really relate to the need for people with autism for predictability and routines.

we also develop special groups at the farm such as the mammal monitoring project, and groups to encourage sociability. We're increasingly approached for the more high-functioning people with autism, who've just finished college and have nowhere to go. This young man today was one.

You see remarkable progress, though it can be slow. At the very beginning, where their autism is in such ascendancy, they walk in and you see high anxiety, the movement disorders, the flapping, the shouting. They might be reluctant

to help you carry a bucket of feed to the hens, then three weeks later you'd have a hand come out to take the bucket or lead the donkey. It's getting the body to be able to physical jobs, pushing wheelbarrows. Eventually they're learning to do woodwork, baking, horticulture, willow weaving. The dexterity is really what I'm talking about, the control. So now in woodwork they're able to use saws with assistance, power drills obviously with support, screwdrivers. They can recognise tools. They can use a hammer.

We've just had an order for 50 of our bee houses, so we're about to encourage an increase in productivity from our students as the next stage of them learning to work. Because that's our basic remit. For them to have that equivalence to their peer group of being able to have a working life, a fulfilled life. They're always going to be too slow to be economical, they'll always need support, but you can see the importance.

They're extraordinary, our young people. They draw you on, you learn from them. The farm taught me to nurture. That's the connection between caring for the land and caring for our young people. It's nurture and observation, listening to the land and listening to the young people.

I feel we've shown this works. I also think it's transferable to other farms. If we remained as a sort of a hub for training and an example of what can work, we could support other farmers. It's a matter of organising the activities, having the facilities, and understanding what's working. The product of our farm is useful, happy, healthy lives.

My biggest challenge is simply the finance of it. At the moment I fundraise for £100,000 a year. The statutory funding reaches nearly £300,000, but we need £400,000. I wake up every day thinking about it. But of course the challenge isn't actually the money, it's people's understanding that it's money worth spending. And that's a policy issue.



Name:
Harry Wilder

Farm:
Sefter Farm,
West Sussex



Harry Wilder is Head of Agronomy at Barfoots, an international, vertically integrated business that grows, imports, processes, packs and markets premium vegetables for the UK market. They farm in Spain, Senegal and Peru as well as Britain. It began, and is still based, at the family farm in Sussex. The UK operations are LEAF certified to meet UK retailer requirements, as, increasingly, are overseas suppliers.

Almost all of all of the produce we grow is very healthy. Products like sweet potatoes, green beans and sweetcorn are right at the top of the list when it comes to health. Our focus is on those products and it's really the health agenda that is driving sales forward. Sweet potatoes have seen huge growth in the past few years, driven by the healthy-eating trend, with a lot of publicity and social media. It does us a huge amount of good and we're lucky to be in the right place for those campaigns. We do our own marketing as well, and we help steer the retailer agenda on these products.

We specialise in premium-quality vegetables, and we grow them in a number of locations – sweetcorn in Spain, the UK and Senegal, asparagus in Peru and the UK. Peter Barfoot set up in the UK in 1976, and started growing courgettes for the first time in the UK, then picked up on sweetcorn and drove the market on that. And then products like butternut and sweet potatoes. He developed the market, based in part on the health benefit of those products. We farm to LEAF standards. The ethos is to protect the environment and the soil, and to grow what people want to buy. There's a lot of people growing commodity vegetables on very thin margins, but if we can produce something that's more niche, we can then focus on expanding the market, and part of that is about marketing the health benefits.

We're different to other sectors within agriculture. When you're in fresh produce, you have to grow what people will buy, and in the right amount. We put a huge amount of resource into planning the right amount of crop for the market. Ideally we get to sell all of our produce and carve out a place in the market. The challenge is second-guessing the consumers and their buying habits. We have a team who spend a lot of time looking at what the next trend is going to be. Sometimes we get it wrong – we grow crops that we can't sell as much of as we like, or we don't have enough meet a consumer trend.

We grow for special health traits, but that's not easy, it's about looking at long-term breeding programmes. We link in with breeders to give them a steer as to what we're after. For example, with sweet potatoes, we're looking for higher beta-carotene. With sweetcorn, there's some varietal work we're looking at to improve the zeaxanthin, a vitamin claimed to help eyesight.



I think it is a challenge for farmers to prioritise human health. Some are more innovative than others, and the ones who are really pushing the boundaries are coming up with the new, healthy crops. But is there a big enough reward for doing that? The market needs to be able to pay a premium for it.

I spend a lot of my time visiting growers overseas and I think the UK is particularly bad at applying research. We spend huge amounts on it, but I don't feel it's for the benefit of the farmer.

Our soil health is variable, but for sure we've made improvements with the practices we've introduced. Cover cropping really protects the soil over winter, reduces erosion, improves organic matter and soil biology. Controlled traffic farming means we're not driving all over the fields. And we have an anaerobic digester, so our produce waste goes into that and the digestate helps fertilise the next crops.

I can understand why more farmers don't farm the way we do, because the economics don't drive it that way for them. And if you're talking about soil management, there maybe isn't the knowledge of the financial benefits. It might seem odd that some farmers don't value the soil, but the challenge is, how do you put numbers on it? And it may mean rethinking what you learned as a student. As a business we've had to relearn and adapt, it's a huge amount of trial and error, and we are still learning. Are all growers prepared to go through that process?

Growers need to be growing what the public wants, not overproducing.

I came into the fresh produce industry because it was unsupported by the Government – at the time it was the one sector that stood on its own two feet. I grew up in the dairy industry, which the Government had interfered with, and it wasn't stacking up. Then there's the 'public good', whether it's biodiversity, soil quality, what the public wants from the countryside. Food security and pricing are essential for the country. It's balancing them that's important. In addition, I spend a lot of my time visiting growers overseas and I think the UK is particularly bad at applying research. We spend huge amounts on it, but I don't feel it's for the benefit of the farmer. There's a big gap between what the industry needs and where the research is actually happening.

Understanding the consumer and the market, that has to be the message. However, other factors are important. For example, growers have limitations on what their land can produce and we need to maintain the amenity value of our landscape. So whilst consumer health is important in decision-making, it's far more complex than this.



Notes

Building a deliberative process around the EAT-Lancet report

Prof. Tom MacMillan, Food, Farming and Countryside Commission

The EAT-Lancet Commission, which backed a global shift towards ‘plant-based diets’, was met with a polarised reaction. It recommended that their global approach be subject to local interpretation, which is what we set out to do, bringing 20 diverse stakeholders, including outspoken critics, together for a deliberative process. They worked together to develop new scenarios to be modelled by Dr Marco Springmann, who did the work behind EAT-Lancet’s recommendations.

The group debated uncertainties in the evidence behind the model, including the impact of methane from cattle and sheep on global warming, and the effect of meat on health. They decided to model a pasture-based scenario – milk and meat fed largely from forage – alongside a diet with more veg and nuts. The modelling found little difference between the new scenario and EAT-Lancet’s when it came to health, but EAT-Lancet’s scenario performed better on climate change.

We found that despite farmers’ concerns that the original study was ‘anti-meat’, the amount of meat in the pasture-based scenario did not differ hugely from EAT-Lancet’s recommendations, though the type of meat did. Eating more veg, nuts and pulses, and eating less calories overall, were the biggest health wins, and much larger factors than reducing unprocessed red meat consumption. It was felt that better data and accounting for methane emissions could close the gap between the scenarios on climate change.

This participatory modelling demonstrates the potential for policies that recognise the need for change while respecting the important concerns of farmers and others. Building and holding a mandate for progress when views are polarised is likely to require large-scale, legitimate engagement, for example through a citizens’ assembly. Find out more in the Commission’s final report.

Prioritising the good: fruits, nuts and legumes

Name:
Tom Cannon

Farm:
Roughway Farm,
Plaxtol, Kent



Roughway Farm is a mixed crop farm well known for its Kentish cobnuts, an historic variety of hazelnut, as well as cherries and greengages.

The wider challenges for cobnuts are market size and mechanisation. More work is required to build market sustainability and educate the public about the value of adding cobnuts to their diet. In particular, the value of eating nuts fresh from shell. Product innovation and developing value-added products is a key area for attracting new customers. This leads to further challenges which centre around a lack of shared and common processing facilities in the UK. Many countries have buoyant hazelnut sectors, with nut products commanding a premium, in part due to the health benefits of nut consumption. Developing multiple contract cracking and processing facilities is essential for the sector so that various producers and businesses can benefit and innovate. Speaking more broadly about farm diversification, a centralisation of facilities for a common purpose is lacking in the UK. Innovation of value-added often comes from a new consumer brand that in turn protects its production facilities for its exclusive use, whereas farm-led approaches overseas tend to enable and facilitate multiple businesses.



Name:
Oli Baker

Farm:
Mora Farm,
Liskeard, Cornwall



What started off as a hobby growing fruit soon turned into an 11-acre market garden supplying soft fruit and vegetables to London restaurants and an organic box scheme.

We are focusing on increasing soil carbon, soil biology, reducing tillage, and growing healthy food in our certified organic system. The goal of the project is to show an example of a sustainable, biodiverse and economically viable small farm that can produce good yield and provide a rewarding livelihood to its employees. We are lucky for our relationship with our wholesaler Natoora, who work with us to plan cropping and provide us with a reliable market at a fair price. I am hopeful for the future of small farms to feed into larger food systems. There is a resilience in modular systems. Social media, particularly Instagram, has become a useful tool for the small farm movement, connecting an otherwise lonely and often isolating profession.

I hope that Mora Farm proves to be a long-term viable success, but we still have a way to go to get it there and it shouldn’t be classed as such quite yet. I feel thankful and proud to be part of a bunch of people taking a fresh look at alternative ecological small-scale food production.



Name:
Nick Saltmarsh

Farm:
Hodmedod,
Brampton, Suffolk



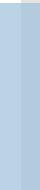
Hodmedod came from a simple realisation that British farmers were producing superb fava beans, but barely any were used for domestic human consumption. Instead, the best beans were exported, mainly to Egypt, with the rest used for livestock feed. Meanwhile, almost all the pulses consumed in the UK were imported.

We work with British farmers to produce and supply a growing range of pulses, grains, seeds, and foods made from these crops. We provide an alternative to commodity markets for arable crops, to encourage more diverse cropping and to offer an ever wider selection of British-grown wholefoods. By working directly with farmers and selling direct to individual customers as well as retailers, caterers, wholesale and manufacturers, we are unusual in the breadth of the food web we span. Our initial range of four types of pulse proved a catalyst to work more widely with farmers and build long-term relationships to both develop a new domestic market for little-known crops, such as camelina, and to develop production of new or rediscovered traditional crops, like naked barley, quinoa and lentils. We underestimated the difficulty of selling an unfamiliar product and the latent demand for a wider range of British wholefoods. When initially approaching food publications to run recipes for fava beans to help raise awareness, we were told they couldn’t run recipes with ingredients that weren’t widely available. Seven years on, the wonders of beans as delicious and nutritious sources of plant protein are widely appreciated, which is fantastic to see.



Procurement

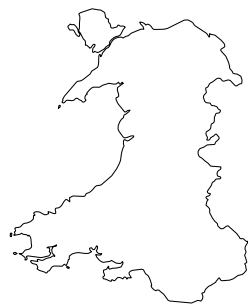
Public procurement is essentially the purchasing of goods or services – food, maintenance work, legal advice – by public bodies like hospitals, prisons and schools. Its power to reshape food and farming systems is underplayed. When it works well it can provide the catalyst for far reaching change – securing contracts for producers, strengthening local food and farming economies, and supplying citizens with fresh, nutritious, local food. What if the majority of food in hospitals, schools and prisons across the UK was sourced from local growers and suppliers, producing healthy food from sustainable agriculture?



The Carmarthenshire Food Procurement Task Force

Jane Davidson, UWTSO

Wales inquiry



For many years there has been a collective ambition in Wales to support greater local food procurement, but somehow that ambition has always seemed to face too many barriers to effecting change to systems at both the national and local level.

The development of The Carmarthenshire Food Procurement Task Force (CFPT) at this point in time owes its genesis primarily to the Wellbeing of Future Generations (Wales) 2015 Act, which set up a new statutory public sector partnership at county level and required working collaboratively to deliver long-term outcomes on wellbeing objectives. Two other catalysts were the RSA Food, Farming and Countryside Commission and the May 2018 report of the National Assembly for Wales Climate Change, Environment and Rural Affairs Committee, 'Rethinking Food in Wales; Public Procurement of Food' which looked at:

- The role of public sector procurement in supporting local produce, both to provide the public with improved access to healthy, local food and to provide markets for producers.
- The role of sustainable public sector food procurement within wider public policies, such as health.
- The potential impact of Brexit on future procurement arrangements.

Conclusion No.3 from the report says:

'Given that the most recent official figures estimated public sector food and drink procurement spend to be £74.4 million per year, it is vital that the wider benefits of that spend are realised. This funding is used to provide food in our schools and hospitals, and should be thought of as an investment in the health and wellbeing of the Welsh people. We believe that public procurement of food should form a central part of a post-Brexit food strategy.'

Carmarthenshire is the fourth biggest county in Wales with a population of 186,500 bridging rural and urban economies. The thriving market town of Carmarthen is home to Carmarthen County Council, the regional headquarters of Hywel Dda University Health Board, Dyfed Powys Police, South West Wales Fire and Rescue Services, University of Wales Trinity Saint David and its further education partner Coleg Sir Gar among others. This concentration of public sector partners in one place, in a county that is also a substantial food producer, creates a specific opportunity to see whether high level conversations among decision-makers in the public sector can align their interests to secure additional social and economic benefits through smart public sector collaborative food procurement.

The Wellbeing of Future Generations (Wales) Act 2015

A key opportunity for our work was the Wellbeing of Future Generations (Wales) Act 2015 passing into law. This aims to improve the social, economic, environmental, and cultural wellbeing of Wales by making the public bodies listed in the Act: think more about the long-term; work better with people, communities and each other; look to prevent problems; and take a more joined-up approach. The bodies 'must now act in a manner which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs'. To do this they must set and publish wellbeing objectives. This is a very different approach to traditional decision-making in government.

To make sure we are all working towards the same vision, the Act puts in place seven wellbeing goals which together provide a shared vision for public bodies linked to low carbon prosperity, resilience through biodiversity enhancement, equality, safe and cohesive communities, mental and physical health, language and culture, and Wales' place in the world. It also mandates five ways of working – collaboration, prevention, involvement, long-termism and integrating

the goals. Essentially the Act is government permission to the public sector in Wales to think differently about the way it delivers services, but in doing so, now provides an opportunity for the sector to be entrepreneurial in delivering its key objectives according to the sustainable development principle.



Notes

In addition to applying the new duties on bodies accountable to Welsh Government individually, the Act also introduced a new structure in Wales: Public Services Boards (PSBs). This allows public services – devolved and non-devolved – and key partners such as universities and colleges to meet at county level to craft and deliver joint responses in line with the wellbeing objectives. Each PSB must improve the economic, social, environmental, and cultural wellbeing of its area by working to achieve the wellbeing goals. It does this by:

- Assessing the state of economic, social, environmental and cultural wellbeing in its area.
- Setting objectives that are designed to maximise the PSBs contribution to the wellbeing goals.

They must do this in accordance with the sustainable development principle. The Carmarthenshire Procurement Task Force was established by the Carmarthenshire Public Services Board with PSB members. Their procurement leads were charged with the identification of collaborative procurement opportunities being a possible future approach through the Wellbeing Plan.

This concentration of public sector partners in one place, in a county that is also a substantial food producer, creates a specific opportunity.

The establishment of a task force

The Wellbeing of Future Generations (Wales) Act 2015 treats health and wellbeing, social cohesion, environmental wellbeing and cultural wellbeing on a par with economic growth. One way to realise the vision of the WFG Act is to harness the power of public procurement and local supply chain development, especially in sectors that loom large in terms of human need, sectors like food, eldercare and health for example. Smart public food procurement and supply chain development should aim to provide a double dividend:

1. It should aim to provide a *health dividend* by promoting good food for all, especially in schools, where the citizens of tomorrow are acquiring their skills, habits and tastes today.
2. It should aim to provide an *economic dividend* by securing more supply contracts for micro, small and medium sized firms that are locally or regionally based – i.e. with a real focus on supplier development.

The main aim of the CFPT is to create a high-level conversation among decision-makers in the public sector about how, by aligning their interests and working in concert, they can secure the social and economic benefits of the double dividend. Through research and workshops, the task force will outline the scope for, and barriers to, working in concert in the sphere of local food procurement and supply chain development, within the context of the wider picture of public procurement in Wales.

In recent years, the Welsh Government has collected procurement data through the Collaborative Spend Analysis Project to provide an overview of public procurement expenditure. This data identified £6 billion of procurement expenditure for 2015-16, of which £680 million related to the Welsh Government.



What does the taskforce want to achieve?

Although the main aim of the CFPT is to secure the social and economic benefits of the double dividend, it has a number of subsidiary aims, including: building rapport and trust among the key stakeholders in the Carmarthenshire PSB area; promoting the PSB area as a leader in food procurement in Wales; distilling the lessons from other areas in and beyond the UK concerning smart public procurement; learning how best to work together; assessing the threats and opportunities associated with Brexit and new developments in Wales (like the Gateway Review of Public Procurement) and in the UK (like the RSA Food, Farming and Countryside Commission). Above all, it aims to ensure that good procurement practice becomes the norm and not the exception.

Clarifying context, aims and objectives

In order to agree the way forward, the task force met to confirm a mutual understanding about its aims and objectives:

- Wales only grows 3% of the fruit and veg that we eat in Wales. As a nation we have become very divorced from our food systems. We need to be able to give producers the confidence that there is a demand for their produce. However, we must also recognise that local producers may not be able to provide the quantities needed to create local supply chain opportunities and supply local buyers.
- The task force aims, through the PSB, to look to create a different food policy for Carmarthenshire. We need to find a way to make procurement pay, for services and for producers.
- Between £5-6 billion is spent in Wales through procurement but power is fragmented as the budget is split across a number of sectors.
- Taking advantage of the changing political context:
 - Wellbeing of Future Generations Act
 - Social Services & Wellbeing Act
 - Ethical Employment Code
- Achieving the double dividend.

Key agreed development steps

Following discussion, the following key steps were agreed:

1. Need to define our final outcomes – what do we want to achieve?
2. Undertake mapping exercise of current food procurement arrangements across PSB member organisations.
3. Undertake mapping exercise of current food producers in Carmarthenshire and region. Identify what is available and what the gaps in provision are (LEADER funding application).
4. Identify and share best practice from across the world.

It became clear very quickly that although the task force had agreed broad objectives, we would not be able to define final outcomes about what we wanted to achieve without having a clear understanding of the current situation.

A successful application was made for LEADER funding (the 2014 – 2020 programme is funded through the Rural Development Plan for Wales (RDP) as part of the Welsh Government and European Agricultural Fund for Rural Development). The successful tenderer has just been announced as Menter a Busnes, which is also supporting the RSA procurement initiative in North Wales.

The research will be carried out in five sections and report by October 2019:

Part 1. Undertake a mapping exercise of current food procurement arrangements amongst the Public Services Board.

- Contact PSB Support Team and liaise with PSB members within Carmarthenshire to establish a current list of procurement food arrangements, including detail such as type of contracts/lots, contract duration, contract value, and timescales for renewal as a minimum.

Part 2. Undertake a mapping exercise of food and drink producers and suppliers within Carmarthenshire to establish what is being produced within the area.

- Identify current food and drink producers and suppliers within Carmarthenshire area.
- Produce a detailed analysis of the current food and drink produce and supplies sector in Carmarthenshire to include as a minimum; types of food and drink being produced/supplied, geographical area of business, business type, current associated supply chains, capacity for business growth.

Part 3. Desktop research to be undertaken to include wider mapping of food and drink producers and suppliers across the wider South West Wales region including neighbouring authorities of Ceredigion, Pembrokeshire, Swansea, Neath Port Talbot, and Powys.

Part 4. Identify any gaps in produce/supply provision that could be an opportunity for new or existing business within aforementioned areas.

- Using the collated data of current procurement arrangements and cross referencing with the current food and drink being produced in Carmarthenshire, produce an analysis of the gaps in provision and opportunities for growth for new and/or existing businesses.

Part 5. To build on the work undertaken by the Carmarthenshire Public Services Board (PSB) Prosperous People and Places Delivery Group, to arrange and host a workshop for PSB representatives, PSB member organisations' procurement officers, identified producers/suppliers and distributors.

The main purpose of the workshop would be to explore findings of the research in terms of:

- Current arrangements for procurement and supply.
- Considering gaps in supply and possible development opportunities.
- Future possibilities for procurement and supply.

Collaboration, co-creation and community engagement

Following the completion of the LEADER funded project work, the task force will hold a series of workshops to engage directly with those able to work with us to create new wellbeing focussed food procurement policies for Carmarthenshire, supporting wider community engagement and local employment opportunities.

Workshop 1: Meet the purchasers/buyers

- Opportunities and barriers.
- Pros and cons of dealing with micro and small suppliers.
- Procurement skill sets.

Workshop 2: Meet the producers/suppliers

- Opportunities and barriers.
- What micro and small suppliers need.
- Upskilling opportunities.

Workshop 3: Regulations, policy and support

- Update from Welsh Government on procurement policy in Wales.
- The post-Brexit landscape: the UK Single Market.
- How PSBs can share good practice etc.

Moving forward

The intention is for the task force to complete the first phase of its project by December 2019 in order to feed recommendations to Welsh Government and into the Future Generations Commissioner's report to the National Assembly for Wales on May 7th 2020. The Commissioner is required by law to produce a public report making key recommendations for all political parties to consider a year before an election to the National Assembly for Wales, which is due in May 2021.

A further opportunity which has arisen since the task force commenced its work is an announcement by the Welsh Government that it is making £3m available in a Foundational Economy Challenge Fund. The foundational economy provides those basic goods and services we all use every day – care and health services, food, housing, energy, construction, tourism and retailers on the high street. The fund is aimed at developing Wales' regional economy, to make sure prosperity is shared more evenly across Wales. It will offer support of up to £100,000 for experimental projects to test how Welsh Government can best help to nurture and grow the foundations of our local economies, and it will test what approach works best, with lessons learned then being shared across Wales. Estimates suggest they account for 4 in 10 jobs and £1 in every £3 that we spend. In some parts of Wales this basic 'foundational economy' is the economy. Ultimately

this is about building wealth and wellbeing, particularly in some of our less advantaged communities.

These challenges include:

- The recruitment, retention and skills of the workforce.
- The delivery structures and design of services.
- Ways of boosting the impact of local purchasing.
- Ways of involving citizens in the design of services.

The task force will be bidding into this fund to develop a project to deliver on the outcomes of the LEADER funded data, and thus use the transformation of local public procurement towards a more citizen-centred focus on our local food economy, with the aim of building more employment opportunities on the way.

**For further information contact:
Gwyneth Ayers
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Reflections on the process

Jane Davidson, UWTSO

Wales inquiry



There has always seemed to be too many barriers to effecting change to procurement systems at both the national and local level, but this is starting to change. We are starting high-level conversations among decision-makers in the public sector about how, by aligning their interests and working in concert, they can secure the social and economic benefits of the double dividend.

We've haven't experienced any real sticking points on the way so far, but the ambition of the task force was not able to be taken forward as speedily as initially proposed because of capacity issues in the organisations involved. In fact, this has been beneficial, as it has enabled further consideration of project management, capacity and the necessary underpinning information needed to facilitate an effective outcome. This in turn has led to a successful bid for focussed research to provide an evidence base for the task force's work.

There have been three areas that have contributed to the process of our learning:

- The mandatory structure of Public Services Boards through the Wellbeing of Future Generations (Wales) Act has given us the opportunity to deliver a locally designed, collaborative public service approach to maximise our PSB's contribution to the wellbeing goals in relation to food.
- Partnership between the expertise of the the university sector – Cardiff University (public procurement) and University of Wale Trinity Saint David (sustainability) – has enabled the project to be taken seriously by Welsh Government, and has benefited from access to evidence informed by global best practice.

- The identification of the specific issues our project is designed to address, being highlighted for action in the National Assembly May 2018 report of the National Assembly for Wales Climate Change, Environment and Rural Affairs Committee, 'Rethinking Food in Wales; Public Procurement of Food'

I think the optimal conditions for learning are to have a group of enthusiastic people co-designing and agreeing to co-deliver the project outcomes. There needs to be clarity around defining the parameters and desired outcomes, along with people who continue to advise, support and engage with the project's delivery.

My two main recommendations for someone doing something similar would be:

- Enthusiasm goes a long way, but a clear project focus and plan, including who has responsibilities for what, is essential and clear task delineation is part of that.
- Don't worry if the timescale slips a little. If you are aiming to do something really transformational, it is better to ensure that the project components are put in place in the right order to ensure the most effective outcome, rather than missing a step which means the project fails through lack of credibility. However, to keep people engaged and focussed, the project needs to retain its purpose and direction, which requires a working timescale.

Notes

Mental Health

Farming can be lonely work. Days and weeks can go by with little connection to others. Financial pressures and uncertainty are high: livelihoods can hang in the balance of a good season or fair price at market. In few professions is suicide so common, with one farmer dying every week in the UK. But there are imaginative and effective ways people in the countryside are responding: services that offer a listening ear when times are tough, advice services and workshops that break down the stigma surrounding mental health. A countryside where everyone's mental health needs are cared for is a better countryside.

Farming Connect mentors

Eirwen Williams

The Farming Connect mentoring programme is targeted at all farmers and foresters, including:

- New entrants.
- Businesses considering significant strategic changes (diversification, added value, expansion, new enterprises).
- Individuals looking to exit the industry.
- Businesses or individuals facing difficulties or hardship.

The service is also suitable for individuals looking for a second opinion, sounding board or support with day-to-day business.

Our mentors have 'been there, done that' and can develop relationships based on trust and respect. They are able to share their knowledge, experience, and impartial views to help identify your goals and fulfil your potential. It's an opportunity to develop communication skills, to listen, learn and expand your viewpoints, which in turn may help you find new ways to approach situations and deal with challenges.

Mentees find mentors via the Farming Connect website, and tell us what they would like to discuss. No mentees have ever applied for a mentor because of a mental health issue, but, poor mental health has raised its head when mentors visit the farm. It is often unexpected and hardly ever something the mentor is made aware of in advance. It is something which presents over time as trust and rapport is built. To address this, 14 mentors received mental health first aid training with the DPJ Foundation. This has enabled them to identify the signs and signals of poor mental health and support mentees who are going through a mental health crisis.

When asked about lessons learned through mentoring, mentors said:

- "I need to trust my judgement and try not to over worry".
- "The opinion of others causes you to reflect. It is easier to make changes than you think, you just have to try".

Visit www.businesswales.gov.wales/farmingconnect/mentor-directory to see the Mentor directory.

Farmers' and their families' health: Devon and Cornwall

Beth Dooley, University of Exeter, and Dr. Tim Dudgeon, Devon locally led inquiry

Devon inquiry



People are at the heart of the South West's agricultural system. However, like other regions, the South West suffers from ill health amongst its farming community. Rural disconnectedness and social isolation, financial strain and uncertainty about the future, all impact on the health of farmers and their families. The Commission's locally led inquiry in Devon noted several initiatives in the Devon and Cornwall region that highlight the positive action being taken to address these concerns.

The Derek Mead clinic opened at Sedgemoor Auction Centre in 2018. Anyone working in the farming community can receive essential health checks and can speak about mental health issues confidentially with a nurse. The clinic is held directly next to a livestock market, a venue which farmers would already be visiting, to make it easier for farmers to attend and raise awareness of its work. Livestock markets can be ideal locations for services such as these. However, between 2003 and 2010, the number of livestock markets operating in the South West shrunk from 27 to 16, with only 7 remaining in Devon. To support the section in the

future, the placement of support services in the region needs to be able to react to these changes.

Critical to supporting farmer health is tackling the interconnected issues of business, physical and mental health.

The Farming Community Network (FCN) is a voluntary organisation operating across England

and Wales to support farmers and families. It is a member of the National Suicide Prevention Alliance, and through the commitment of 400 volunteers organised in county groups, FCN offers free, confidential face-to-face and online pastoral and practical support to those who seek help. FCN

serves about 6,000 people a year. Given Cornwall's high number of small, isolated farms, FCN has focused on providing support for business and mental and physical health matters to farmers in the county. In Devon, FCN were invited by the Clinical Commissioning Group to present their services to all lead GPs and Practice Managers, thereby raising their profile.

FarmCornwall is a charity which provides support to farmers on a range of business issues, from debt advice to training and education and support with diversification. As well as working individually with farmers, it delivers The Prince's Farm Resilience Programme in Mid Cornwall, which brings together small, family farms for free workshops and support.

The Cornwall Farming Health Hub is a new initiative seeking to complement the existing work in the region. Initially likely to take place for a six-month trial, acting from a base but with potential for roaming services, it will place an emphasis on providing support across business health, physical and mental health, and the interconnections between the three, as well as sign posting farmers to other specialist support organisations.

Significant changes to farming are anticipated and the ramifications on farmer health are a ticking time bomb, especially amongst the older generation who are already less likely to seek support. Critical to supporting farmer health is tackling the interconnected issues of business, physical and mental health, and doing so in a way which addresses the problems at root cause rather than merely treating symptoms. Support services will become increasingly important. All organisations working with the farming community, across both public, third and private sectors, can help to raise the profile of such services amongst their networks.

Notes

Farming

Farming provides our food and shapes the countryside. Farmers are the stewards of much of the UK's land, with 72% of it under their management. It's tough work; farmers manage many risks every year, from changing weather and prices, to staffing shortages, and now trade uncertainties. It's no wonder that farmers' mental health is also at risk. Despite this, there are many farmers already demonstrating all the ways in which farming can be a force for change. They're helping accelerate a transition to farming that provides many of the things that people really value – nutritious, affordable food; good jobs; clean water; beautiful landscapes; and space for people in nature. As well as the things we urgently need – carbon sequestration, abundant wildlife, restored soils, and climate adaption.

Soils

Once overlooked and misunderstood, soil health is now at the top of many farmers' minds. But our soils are in crisis. Soil is critical to human, plant and animal health, through the nutrients it provides; for the microorganisms that provide the foundation of all life on earth; for water quality; for protecting against flood and drought. And our soils, treated right, could mitigate climate breakdown through carbon sequestration. Whilst we now understand the importance of soil to healthy ecosystems, changing practices at farm level takes time. This part of our inquiry worked with farmers for change on the ground.

Generating a healthy future for Lincolnshire's soils

Dr Iain Gould, Isobel Wright and Jenny Rowbottom, Lincoln Institute for Agri-Food Technology, University of Lincoln

Lincolnshire inquiry



Greater Lincolnshire is home to ten percent of English agricultural production. Its combination of climate, soil type and topography make the county ideal for a variety of crops; around 25% of the UK's vegetable production and 21% of ornamental crop production takes place in the region¹.

The county's diverse soils, including clays, sands, shallow limestone, chalk Wolds, peats and silt soils underpin this production, providing a valuable resource not only for crop growth but for the ecosystem services that our society relies on. Healthy soils can store water, alleviating flood pressures downstream. In doing this, they can also act as a filtration system, contributing to cleaner drinking water. Well-functioning soils can also store carbon, fixing CO₂ from plant photosynthesis into more stable carbon forms belowground, and are home to a vast and diverse biological community, which help cycle nutrients, enhance soil structure and regulate pests.

Interest in sustainable soil practices

Over a third of the world's soils are degraded, with factors such as erosion, sealing, contamination and salinisation causing this deterioration. In the UK,

agricultural soils suffer from erosion by wind or water, loss of organic matter from land use change and soil disturbance, and compaction from heavy machinery². Recent years, however, have seen a growing interest in soil conservation in the UK, with organisations including the Sustainable Soils Alliance, Catchment Sensitive Farming, the Soil Association and AHDB championing the issue to policymakers and practitioners.

A degree of soil management practice does feature in current UK farming payment schemes. To adhere to Cross Compliance, farmers must comply with several Good Agricultural and Environmental Conditions (GAEC), three of which directly link to soil protection. However, unlike water, soil conservation does not benefit from a Soil Framework Directive

The specific details of any future Agricultural Bill are yet to be announced at the time of writing, however, the recently issued 25 Year Environment Plan³ highlights the need for appropriate soil management, with a view to managing all UK's soils sustainably by 2030. As such, it is likely that soil health indicators may play a role in future payment schemes.

Sustainable soil practices in Lincolnshire

Recent research by the Lincoln Institute for Agri-food Technology⁴ has sought to understand from Lincolnshire farmers what they are doing to improve soil health; to understand from their experiences how further action could be incentivised; and to test

interventions with other farmers which encourage the take up of sustainable soil practices.

Farmers involved in the study expressed a range of motivations for adopting practices to promote soil

health, from those seeking financial savings to those with a keen interest in soil biology. Those acting for reasons of financial savings found that reduced costs on fuel and labour went hand in hand with reduced soil disturbance and improved quality. Those using cover crops, however, needed to weigh up the initial seed costs against long-term benefit on soil, and therefore the financial savings are not so easily ascertained.

Farmers described being on a journey to improve soil health, for example by gradually switching from ploughing (high soil disturbance) to min-till, to strip-till and eventually to no-till (very low soil disturbance) with other components such as controlled traffic and cover cropping also implemented at various stages. Several discussed a further stage of reducing fertiliser inputs after their gradual build-up of soil biology in recent years, which could provide a further cost, as well as environmental, saving. Farmers use a range of indicators and measures to track the progress of their soil health interventions.

Those involved sourced information about sustainable soil practices from a variety of places, including Twitter, YouTube, training courses and books. A large proportion of this information is coming from North America, who appear to be leading the field in this type of practice. In the UK, groups such as BASE UK, and events like Groundswell, provide opportunities for knowledge exchange, but these are still marginal. Peer support and reassurance from other farmers who have already taken steps to improve soil health is valued.

Much like soil itself, increasing the take up of sustainable soil practice requires a variety of approaches, and may have no 'one size fits all' approach.

Recommendations for increasing the uptake of sustainable soil practices

Much like soil itself, increasing the take up of sustainable soil practice requires a variety of approaches, and may have no 'one size fits all' approach. What can work on one farm and one soil type may not always provide the same results or may have a slower response on others. As such, incentives to take up more soil-friendly practice also can be manifold. A 'top down' approach, providing payment for soil improvement is one way forward, and it may feature in a new Agricultural Bill. However, the challenge here is to find a way to assess practice and soil condition across a range of soil types that have seen a contrast in management history. For example, simply assessing soil organic matter levels will favour some soils more than others, and perhaps not favour management systems which have been building up organic matter already.

A grassroots, local approach provides a key mechanism for increasing uptake: in-person events and activities which provide farmers with independent advice, practical knowledge and an opportunity to meet and learn from one another appear to be important in promoting the take up of sustainable soil practices in the county, particularly when placed in an informal setting to allow discussion afterwards. This approach can utilise existing farmer networks, but also build up new ones.

Encouraging take up of sustainable soil practices via grassroots, local approach

The Lincolnshire research highlighted several recommendations for those seeking to run activities and engage farmers at a local level:

Invest in networks and let them evolve

Obtaining farmers' trust and commitment takes time. It is important to respond to the energy, interests and needs of the farmers involved. Identifying these can take time. Achieving long-term change in practice is likely to require sustained engagement. In achieving this it is the peer relationships, as well as any relationship formed with a training or organising group, that are most important to nurture.

Networks and relationships, either formal or informal, which already exist amongst farmers can act as good platforms through which to introduce information about sustainable soil initiatives. Local knowledge of how, where and who holds these relationships is valuable when seeking to engage farmers.

Respond to needs and interests

It is important to understand what the drivers are for change and the areas of interest amongst the group and network. Focussing on the needs of the farming community helps build trust, showing that their issues are cared about and making it easier to engage.

Cultivate peer relationships

The greatest benefits from activities which bring farmers and other practitioners together to discuss soil health come from the potential for peer learning and connections. The farmers involved in the research found the reassurance from their peers to be important in encouraging them to continue developing their sustainable soil practices. Online communities can also provide this support, but in person and local relationships remain important.



Providing a hot lunch in a welcoming environment is a simple step which creates a friendly and convivial ambience for informal discussion and networking which helps to build trust and connections. Farmers often work in isolation and creating a social space provides additional benefit and appeal to a skills-based workshop.

Keep it practical

Farmers responded particularly well to practical learning activities. These included 'in-field' demonstration sites and talks where they heard from experts about the latest research and were also able to try activities themselves as well as lab-style demonstrations of soil testing techniques. Ensuring that Continuous Professional Development points can be collected during training provides another incentive for farmers to attend. In the vein of large events such as Groundswell, these more-local engagement events could build momentum by occurring annually or bi-annually, with a smaller community of neighbouring farmers attending, sharing knowledge and benefitting from hearing the latest from farmers, industry, and research.

Involve a range of voices and expertise but keep it independent

Bringing together a range of practitioners, academics and other stakeholders, such as water companies, provides an excellent opportunity for knowledge sharing. To get the most out of this opportunity it is important that activities and agendas instil trust and encourage openness amongst participants. Independent events with a range of activities and inputs can provide this. Support for such activities is likely to continue to require support from the third and public sectors to remain viable.

Clear and simple indicators and measures give farmers confidence to start

Providing farmers with a range of useful, quick and inexpensive methods to assess soil health reduce barriers to action and ensures that they can easily undertake assessments on their farm.

Agronomists can act as ambassadors

Agronomists provide soil health advice to farmers throughout the county. Through their wide client bases, they can promote the take up of sustainable soil practices. Encouraging agronomists to attend events and form part of soil health networks is also important.

A detailed report of the Lincolnshire locally led inquiry is available at www.bit.ly/ffclLincolnshire.

How to assess soil quality

Dr Iain Gould, Lincoln Institute of Agri-Food Technology

It is important to be able to assess the overall quality of the soils we work with by looking at their chemical, physical and biological condition. Many soil properties that are essential to plant growth are best assessed with laboratory testing (e.g. nutrient levels, organic matter content, pH). However, there are a number of other methods we can use to diagnose soil health in the field.

Anyone can carry out these tests, they are relatively inexpensive and can be applied year-on-year. This makes them great for measuring the impact of changes or introductions made on a farm to soil structure.

Soil physical properties

Good soil structure creates the ideal conditions – sufficient aeration, drainage and water retention – for plant growth. Soil structure is dependent on the arrangement and stability of the materials that make it up. Unlike some of the chemical properties of soil, the physical condition is best assessed in-situ. As such, some of the following simple techniques can be used to great effect.

Two of the more commonly used techniques to assess soil structure are the Visual Soil Assessment (VSA)⁵ and the Visual Evaluation of Soil Structure (VESS)⁶. These both involve breaking down as-dug soil into their smaller constituents and assigning a scoring system. Where the aggregates, or clods, are still large after breakdown, this could indicate low porosity, poorer structure and as such a lower score. Conversely, a mix including finer aggregates after breakdown could indicate the opposite (Fig 1a).

It is important to note not only the size but also the shape of the soil units. Angular aggregates indicate a poorer soil structure – likely a result of damage by machinery or undesirable conditions. Some structures are known as ‘platy’ – flat structures that break horizontally under pressure (Fig 1b) – these indicate a degree of compaction. This information is all incorporated into the scoring system.

Another simple way to assess soil structure in the field is with an infiltration test. This can be done by pushing a small pipe offcut into the soil (making use of a mallet and a plank of wood), filling the pipe with water and timing how long it takes to drain (Fig 1c). The water will find a route through the soil by exploiting channels and pore space. Greater infiltration means better drainage and rooting potential, likely a result of good soil structure.



Fig 1a: Soil aggregate size distribution following Visual Soil Assessment breakdown



Fig 1b: ‘Platy’ soil structure – horizontal cracking



Fig 1c: Soil pipe infiltration test

Soil biology

Soil is a living system, and the life within a soil is essential to its healthy functioning. Some of the more detailed tests for measuring soil biology can be expensive, however, there are cheaper and simpler methods. For the keen biologist, investing in a microscope and becoming familiar with the important species living in soil is a possibility. Here, we discuss some of the other methods adopted on farms around the country.

Worms are a vital ecosystem engineer in soil – recycling nutrients and influencing soil structure with their burrowing. Worm Counts are a great way to start, and can even be incorporated into other soil structural assessment (like the VSA). A cube of soil the width of a spade is dug from the ground and sifted through for 5 minutes, counting the number of worms. These can be compared year-on-year or carried out in different areas to build up an overall picture of the soil system of a farm/field. Recently, the ‘60 Min Worm’ and ‘30 Min Worm’ initiative, led by Dr Jackie Stroud, proved very popular – see www.wormscience.org.

Another important thing to consider is the microbiology of a soil. This can be tricky, given that microorganisms, such as fungi and bacteria, are invisible to the naked eye. Instead, we can measure decomposition – how much of a food source is broken down by microorganisms over time. Two of the more popular ways to look at this are the Tea Bag Index and the Underpants Test.



Fig 2a: Tea Bag Index – two teabags buried in adjacent holes

The tea bag index (www.reatime4science.org/) is a test in which two unused tea bags containing teas of different types are weighed, and then buried for 90 days. The tea bags are then dug out, dried and re-weighed (Fig 2a). The loss in mass indicates the rate of the decomposition of tea carried out by the microorganisms.

The underpants test (www.farmersguild.org/soil-my-undies-challenge.html) is a more visual test based on a similar principle. Burying cotton underpants in different locations can provide a comparison of the rate of decomposition (Fig 2b), indicating the health of the biological community below ground.

Soil chemical properties

Soil chemistry is more challenging to measure in the field, which is why it is beneficial to combine the techniques discussed above with laboratory testing. Under current practice, plant-available nutrients are measured by the processing of samples in a laboratory, however, handheld kits are available to measure soil pH and electrical conductivity in the field.



Fig 2b: University of Lincoln staff demonstrating the underpants test – high decomposition (left) and low decomposition (right) after burying in different soil environments

Advice

Farming can be a lonely job, but it doesn't have to be. Farmers want reliable, independent and evidence-based advice. Learning with your peers – who are facing the same challenges – can be a powerful catalyst for change. Sharing questions and building knowledge with trusted colleagues helps push up standards and improves farming incomes, as well as building the connections that help farmers have a greater voice. Beyond the farm business, we heard how these groups help farmers deal with difficult personal issues too – isolation and loneliness, retirement and succession, anxieties about the uncertain future.

Discussion groups: a catalyst for positive change

Catherine Smith

Farm business discussion groups are a hugely powerful catalyst and driving force for change which enable members to share learning and best practice, benchmark their performance data and explore new innovations with other like-minded businesses.

Over the last four and a half years I have had the pleasure of facilitating a range of farmer-led discussion groups in Wales through Farming Connect. The project has received funding through the Welsh Government Rural Communities – Rural Development Programme 2014-2020, which is funded by the European Agricultural Fund for Rural Development and the Welsh Government. Farming Connect provides support which is transforming the business prospects of thousands of farmers and foresters. Our support is wide-ranging and includes helping to increase efficiency, keeping up to date to with the latest

technology, as well as benchmarking performance and sharing best practice with other farmers, industry experts and academics.

The Monmouthshire dairy discussion group was formed in October 2014. Members were initially recruited for having the common aim and objective of trying to improve herd fertility performance. Poor dairy fertility is the most common inefficiency on dairy units and has a direct impact on product costs, milk production, culling rate and young stock numbers. The group membership herd sizes range from 100 milking cows to over 700 milking cows with annual yields of between 8500 – 12300 l/cow. All businesses had a milk record. Milk recording data was the foundation for the initial fertility benchmarking work completed within the group.

The first group meetings identified and quantified the fertility parameters of member farms and measured the financial impact of that performance. Key drivers to facilitate change for each farm were then

Over the lifetime of the project, the indicative saving as quantified by reduced calving interval achieved across the group is around £203,600, which equates to £94/cow.

Location:
Wales



Ross Edwards, New Dairy Farm: member of the Monmouthshire dairy discussion group.

discussed and agreed with the overall objective being to work towards targeted improvements. A regular programme of knowledge transfer meetings were scheduled to support the group farms in their objectives and to monitor progress.

The five fertility KPIs that were constantly monitored within the group, along with many other statistics were:

- Calving interval (days).
- Inter-service interval (ratio).
- Cows served before 65 days (as % of herd).
- Calving intervals greater than 480 days (as % of herd).
- Culling rates (as % of herd).

To date, over the lifetime of the project, the indicative saving as quantified by reduced calving interval achieved across the group is around £203,600, which equates to £94/cow.

Fertility benchmarking was an excellent foundation for the group to build upon and as the trust and dynamics within the group membership naturally developed, so did the ambition to widen its remit. Crucially this transformation was driven by the membership and my role as the group's facilitator was to manage that change and support its successful development to meet the members evolving business needs and associated industry challenges. The group's wider focus has included all important benchmarking principles and data sharing amongst members.

Additional focus areas have included:

- Cost of production benchmarking.
- Antibiotic usage and AMR.
- Youngstock health and heifer replacements.
- Johnes management.
- Soil health and nutrient management planning.
- Genomics testing.
- Lameness.

Fertility still remains a key focus for the group and fertility updates are now conducted annually.

Group activities, where possible, have been supported and augmented by the wider suite of Farming Connect services, including clinics, the advisory service and skills funding.

An added benefit of the discussion group is that it has become a trusted forum where members can share day-to-day problems, challenges and concerns with their peers which plays a significant role in enhancing the wellbeing of members. This is hugely powerful and cannot be underestimated in its importance as the farming industry faces the challenges of a changing world.

Notes

Mind the gap: analysis of support available to farmers in Cumbria

Prof. Lois Manfield, University of Cumbria

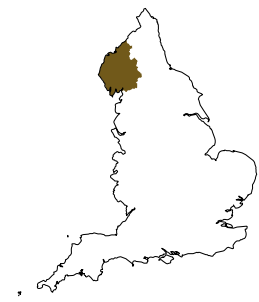
The curious thing is that when we talk about advice and support for farmers, in some places, they're not short of people and organisations who want to help. So how do we explain the gap between what's available, what works, and what people need? Our inquiry in Cumbria investigated current provision and this is what they found. See the full report online at www.bit.ly/ffccCumbria.

Altogether 33 distinct projects and programmes currently operate in Cumbria to support a range of aspects of hill farming (not including BPS). Of those, 24 specifically support hill farming.

Theme 1. Maintaining and enhancing biodiversity

This theme has provided the main support for hill farming communities since the designation of the Lake District Environmentally Sensitive Area in 1993. Since then, these forms of agri-environment scheme have been the mainstay of government support for hill farmers through national and EU funding. Currently, farmers are either seeing out the previous Environmental Stewardship Scheme agreements or joining the new Countryside stewardship scheme. There is also forward planning in this area post-Brexit, through what is known as 'test & trial' schemes, two of which are hill farm focussed ones running in Cumbria.

Cumbria inquiry



Theme 2. Managing water

Large-scale flooding in 2015 has focussed many minds in Cumbria. As a result, there are funds available through the National Flood Management pot to set up facilitation groups to support farmers to understand flooding on their land and how they can adapt their management and characteristics of a river to reduce it. An example of this is the Lunesdale farmers group who, through membership, can obtain small grants to make appropriate structural changes on their farms. It is jointly funded by Defra and the Environment Agency.

Theme 3. Supporting cultural landscapes, structures and processes

By far the most numerous initiatives are those which aim to support the continuation of cultural landscapes, structures and processes. This support can be money for farming business or as in-kind. It can be government funded, NGO, charity or private. Having said this, it has the least amount of money allocated to it, the main funding coming from two Heritage Lottery.

Theme 4. Developing relationships

This theme is very much about building trust between the farming community and the various organisations involved in land management who realise this is key to achieving their objectives. Low level, bottom-up interactions create goodwill and trust. Small amounts of money, a few hundred pounds, can demonstrate interest of organisations in supporting the cultural heritage and traditions of hill farming. Examples include: lambing signs to go out on roads at lambing time, to slow visitor traffic and agricultural show and prizes sponsorship.



Theme 5. Providing advocacy

The provision of advocacy is a common theme for a number of organisations supporting hill farming. Key players in this area are: Farmers Network, Uplands Alliance, Federation of Cumbria Commoners, and Foundation for Common Lands. For businesses that are very small or sole operators, it is often difficult to have a voice. These organisations have lobbying power with government, NGOs and can act as brokers and negotiate in times of crisis or conflict. A second group of advocacy is also emerging in relation to setting up facilitation and farmers' groups, such as the tenancy group operated by the National Trust, whereby tenant farmers can have greater dialogue and empowerment over issues affecting farm management.

Theme 6. Providing financial support

Money for hill farmers with regards to business resilience and development comes from really only two main sources in Cumbria. The most important cluster is the agri-environment money and the Basic Payment Scheme. For example, there are 1101 existing Entry and Higher Stewardship Agreements in the Lake District covering 145,000 ha, a total investment of £135 million. They are also gradually disappearing as the agreements expire. For farmers these constitute the difference between a viable and a non-viable business.

Theme 7. Providing advice

The final area of support provided to hill farming businesses is general advice. Most organisations interviewed offered free advice when funds allowed. But Natural England and the Catchment Sensitive Farming project relies on a lot of different staff on fractional contracts who often did other roles as well. The National Park and the National Trust part-fund a Farming Officer between them. Farmers Network and the Federation of Cumbria Commoners provide advice to their members.

In summary, the range of support is impressive but highly complex, making navigation for farmers difficult.



You can read more on the findings of this research on p.86.

Notes

Five horizontal lines for taking notes.

Transition

Farming is braced for change, being at the front line of climate breakdown and the need to restore biodiversity and natural resources. Shifting public attitudes towards healthy food are already being felt in the sector. Some farmers are leading the transition towards healthy and sustainable farming using innovative techniques, new technologies and greater collaboration.

Agroforestry

Name:
Stephen and
Lynn Briggs

Farm:
Whitehall Farm,
Cambridgeshire



Stephen and Lynn Briggs are tenant farmers who have integrated trees into their wheat, barley, clover and vegetable-producing business, establishing the largest agroforestry system in the UK. The trees enhance biodiversity, diversify the cropping and create a mix of perennial and annual crops better able to meet the challenges of climate change.

Wind erosion affects the fine, grade one soils on the farm, so we planted apple trees in rows as windbreaks, but also to produce fruit. Alleys of 24m were left in between the tree rows for cereal production. It's efficient, multifunctional use of land – nature doesn't do monoculture. If you do nothing with your land for 40 years it will revert to trees and bushes – this should guide you that it's what nature wants to do. It's getting more for the same area – through three-dimensional farming – while helping manage the risk of climate change by having a mix of perennials and annuals.

We chose to plant apples as we recognised there was an undersupply of UK grown organic apples, so planted 13 different varieties. Tree rows are orientated north to south to minimise shading and tree canopies are managed by annual pruning. We established a diverse range of pollen and nectar species in the 3m wide understorey strip beneath the trees to benefit pollinating insects and farmland birds.

It has delivered everything we wanted. It's making us more income and delivering soil protection and biodiversity benefits. There is a lot of talk about cover crops at the moment. Trees are the ultimate cover crop because you do not have to plant them each year.

Our 52 hectare silvoarable agroforestry scheme cost an initial £65,000 to establish in 2009. In total, 8% of the land is planted with trees and the remaining 92% is cropped under the existing cereal rotation. It took five years for the trees to mature into full production. The fruit yield per ha is now similar to the surrounding arable crop, with gross margins typically



It's getting more for the same area – through three-dimensional farming – while helping manage the risk of climate change by having a mix of perennials and annuals.

c.£1000/ha. The young fruit trees will continue to grow and increase to peak yield in year 15.

Central to profitability is the ability to add value to farm outputs. Adding value to commodities like cereals is difficult, whereas there is greater potential to increase the value of the fruit through processing into juice or direct sales. We have built and opened a farm shop to benefit from the direct retail.

Because of the agroforestry, we've been able to employ someone full-time on the farm as there is an even amount of labour throughout the year – plenty of pruning and management of the trees to do over winter. For the apple harvest I employ six staff on a casual basis.

As we were the first to implement an agroforestry stand like this in the UK, we made mistakes along the way. I hadn't anticipated that by planting 4,500 trees I'd created 4,500 extra spaces for pigeons to roost. They damaged 25% of the crop in the first years, but I've now put up 10ft bamboo frames around each tree, so they roost on that instead and don't cause any damage to the trees anymore. I also planted three different pollen and nectar understory mixes – two did well but the other didn't, so I probably should have experimented with that before applying to all the rows. The 1m square mipex matting I put down underneath the trees to manage weeds also gets stuck in the mower – wood chip would have been better.

My advice to anyone wanting to get started with agroforestry is to go and look at other sites – there are a few now in the UK. Get involved with the European Agroforestry Federation (EURAF), The Farm Woodland Forum in the UK and look at the Woodland Trust resources – all are really helpful. A new book written by multiple partner organisations – The Agroforestry Handbook – comes out soon too, and there's plenty of advice in there.

Name:
Harriet Bell

Location:
Dartington Hall,
Totnes, Devon



The Dartington experiment started in the 1920's and was at the forefront of many of the agricultural innovations that shaped the landscape and the nature of farming by the end of the century. This tradition of innovation continues today as it considers how to tackle contemporary challenges in agriculture, such as climate change and lack of opportunities for new entrants.

Old Parsonage Farm, the estate's largest holding, was re-let under a tenancy that stipulated it must be farmed to organic equivalent standards, look at low carbon approaches to dairy farming and deliver the transformation of a 50-acre arable field into agroforestry.

Some might have gone straight for an obvious crop, such as apples, because of the growing heritage of the area, but I had experience of planting apples under a Higher Level Stewardship Scheme and was keen to approach things differently. In that example, even with the stewardship funding, apples added limited value to that farm and agroforestry should make sense not just environmentally but economically, designed to complement a farm business.

So we began brainstorming end markets, which was deeply unhelpful in that there appeared to be no end of possibilities, I think the only crop which got



ruled out was hops. The two paths we started down were timber and nutriberryes, looking for that added value. In discussion with the Schumacher College horticulture team and The Agroforestry Research Trust, we honed in on a few crop ideas and commenced our market research.

We called a local company called Luscombe Drinks and through discussions with them we established that they needed more elderflowers, in fact we could have filled all 50 acres just with elderflower for them.

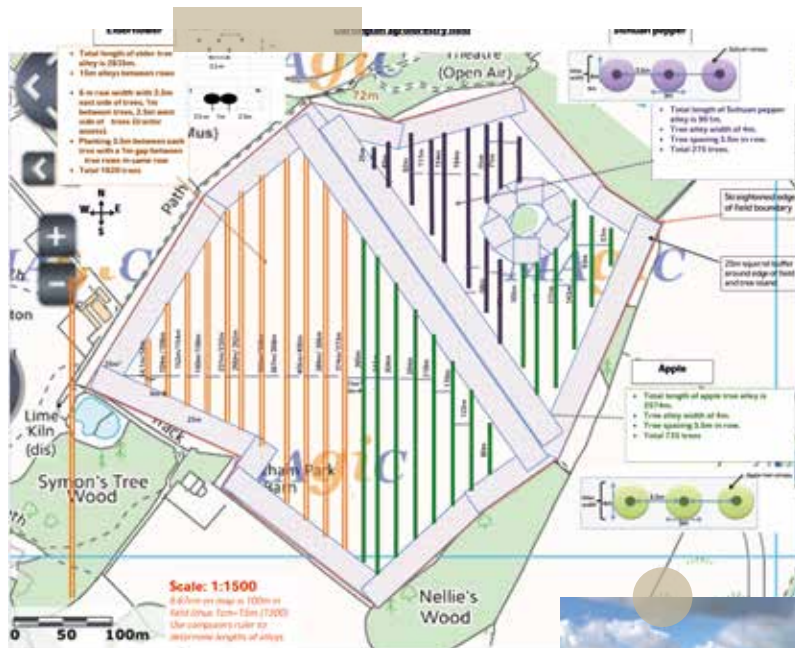
We also had a conversation with an adjacent community enterprise, who are experienced fruit growers, Huxhams Cross Farm. They were looking at some land rich in orchards to plant fruit trees, so we suggested they plant trees in our field to leave some space for orchards in their own field.

At the time, I happened to be reading The Observer Food Monthly and noticed that one of the top trends was Sichuan pepper from Salthouse & Peppermongers. Prior to that I had been blown away by the incredible flavour of the Sichuan pepper trees growing on the Dartington estate at The Agroforestry Research Trust. I called the founder of Peppermongers and asked if he thought there was a market for UK grown pepper, he thought there was. From there a 50/50 partnership evolved to give it a try.

Because we'd found all these interested parties, we threw away our original model of how agroforestry is 'usually' done. Instead, we developed a model whereby The Dartington Hall Trust owns the field, Old Parsonage Farm is the tenant of the field and the three other businesses have licences to rent rows within the field, between the arable crop, where they can plant, manage and harvest their tree crops.

I suppose sometimes being a novice pays off, if you don't know what you should be doing you're not stuck in an entrenched mindset and that enables you to embrace new approaches more readily. Also, a strong desire to save money and make it (not that that's always worked!)

Going around talking to people is a massively underrated activity. People often worry that it's not a productive enough use of their time but in my experience, it often results in unexpected but very beneficial outcomes.



Carbon neutral upland farming

Dafydd Morris-Jones

Tymawr is a traditional Welsh upland farm extending to 157ha of hill land in the Cambrian Mountains, split between two-thirds moorland and one-third permanent pasture grassland, including traditional haymeadows and two small larch plantations.

The farm has a flock of 550 Welsh Hill Speckled Face Sheep and we've been in consecutive agri-environment schemes since the 1980s. We also operate a small-scale low impact campsite, catering for outdoor activities and events. Our farm is a rich mosaic of habitats, which has been safeguarded and maintained due to our continued, unbroken use of traditional livestock and land management practices – keeping the best elements of past practice and adapting them for the present.

We maintain the floral diversity of our haymeadows by making hay or haylage so that the seeds fall back to the ground.

Maintaining the fertility of the haymeadows is also essential for diversity, and the winter forage more than pays for the additional nutrients. The peatland and moorland on the farm are maintained by carefully managing the stocking density at different levels during the year, and molinia and spruce encroachment is addressed mechanically. We have never drained our peat bogs, but stopping rushes, trees and molinia from encroaching on the habitat allows us to maximise their biodiversity and carbon sequestration potential. We have also undertaken work to plant and re-invigorate our hedges and woodlands.

In 2018, 21 farms from the Cambrian Mountains area undertook a carbon footprinting exercise, with many finding that their practices are carbon neutral or better – carbon negative. We've compared our farming methods and our land type with these farms and are confident that our farm operates at least as carbon neutral, though more likely carbon negative when the annual sequestration levels of our land are taken into consideration.

We're proud to produce carbon neutral food and wool as well as the environmental benefits from an extensive upland farm, yet there are a few factors that frustrate our ability to do more:

- The unviability of hill (beef) cattle on our holding (due substantially to the 30 month slaughter regulations) causes a number of issues which increase our CO2 output, including: lack of farmyard manure creating a dependence on fertilisers; the lack of differential grazing on the hill which necessitates the mechanical removal of molinia and spruce saplings; the lack of heavier footed livestock to benefit the wetlands in the lower fields.
- The inflexibility of the prescriptions within our agri-environment schemes has led to significant under-grazing of some areas on the hill, and consequent over-grazing of some of the pasture at different times of year. It has also made it impossible to react to changeable or extreme weather events in a manner which prioritises both habitats and livestock.
- The cumulative effect of consecutive agri-environment schemes has affected the business' financial resilience and has made investing in alternative income streams (e.g. renewable energy) difficult.

Considering these limitations, the best advice I could have given my younger self would have been to be more assured of my own assessments of our future needs, both in terms of secure (non-subsidy) income streams and energy, and be bolder in creating infrastructure to produce power on-farm.

Location: Cambrian Mountains



Cooperatives

As the farming industry is challenged to produce more food, more efficiently, for more people, the industry needs to seek out innovative ways to increase sustainable production, competitiveness and profitability. Coops are uniquely positioned to drive forward the innovation and supply chain collaboration that is required, enabling shared risk taking and scalability amongst farmers and supply chain customers.

East of Scotland Growers (ESG) is a farmer-owned cooperative established in 1987 that specialises in large scale vegetable production. We plan, market, administrate, haul, advise, and control the production of around 6000 acres across 16 farms. Innovation along with R&D is a critical part of what we do.

Some of the recent work we've done includes: planting and harvest automations, securing UK exclusivities on new varieties/products, adjusting fertiliser application and timings, reducing the input by 25%, developing organic production, investigating the use of hydroponics for plant propagation, developing new crop production to achieve a 52 week production for members, and we're in the planning process of a vegetable drying and powder mill.

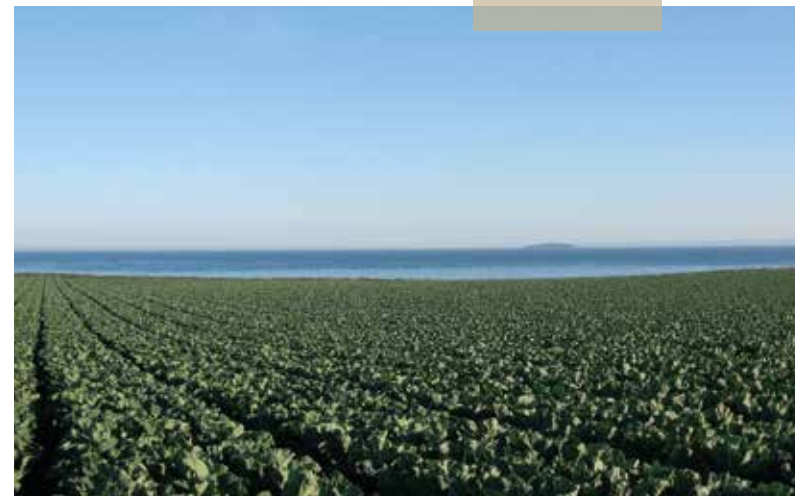
As part of a board strategy, we developed ways of utilising waste from our production to add a revenue income. After a year of concept creation work we had eliminated several projects and product ideas and focussed on creating a broccoli-based crisp that would be healthier than alternative crisp snacks. The group's intentions were to create a branded snack using the waste from our own broccoli – stems, leaves and trimmings – as the primary ingredient, whilst outsourcing the crisp manufacturing.

We had unintentionally created a world first – using fresh vegetables in an extruded crisp – so could not find a manufacturing facility anywhere, let alone the UK. This led to a slight rethink and back into the market to carry out more consumer testing. The product was still receiving very strong feedback which led to the board's decision to price up the project of building our own factory.

This required a significant cash input: large enough that should the new business be unsuccessful, the capital outlay would destabilise the group and its core function. At this point the decision was to create a standalone company under the umbrella of ESG: this is when Growers Garden was created. The cash

Name:
Andrew Faichney

East of Scotland Growers



was essentially 'crowd funded' within the confinement of the ESG members under an EIS scheme and ESG's IP was converted into a shareholding – so essentially the new company has the same shareholders as ESG, just under a different format. All of this has only been possible because of the collaborative structure of ESG.

As part of a board strategy we developed ways of utilising waste from our production to add a revenue income.

As an organisation, the key lessons we learned from the process were about the brand process and the real costs associated with this. In hindsight, we should have put a greater emphasis on the strength that becoming a manufacturer has given the organisation – it is almost an unforeseen business in its own right. However, when I reflect on the overall business development and business structure, I genuinely don't think we would do anything differently.

Name:
Andy McGowan

Scottish Pig Producers



Scottish Pig Producers (SPP) is a pig marketing coop owned by 75 pig farmers in Scotland and Northern Ireland. SPP plays a leading role in industry and market developments to maximise value for its farmer members. They operate Wholesome Pigs (Scotland) which drives improvements in pig health and welfare through information analysis and reporting, along with the emergency response facility for any potential disease outbreak. In a major innovation for Scotland's pig farmers, SPP worked closely with coops Scotlean and Tulip to re-develop the abattoir at Brechin, creating a modern processing facility for Scottish pork.

The arrangement was that the farmers would own the site and facilities, but employ the staff through a company limited by guarantee called Quality Pork Ltd (QPL), which was set up in November 2014. The two farming cooperatives sell the pigs to Tulip, and Tulip pay a fee to QPL to cover the operating costs. This is an unusual model, since processors usually buy the pigs and operate the factories themselves. However, this arrangement enabled significant funding support from the Scottish Government's Food Processing, Marketing and Collaboration Scheme.

The investments in the factory happened in 2015 through a mixture of private and Scottish Government financing. The upgraded line started operating in January 2016 and finished pig volumes grew significantly through 2016, with cull sows being trialled early in 2017. Later that year, an arson attack



caused major damage to the plant and operations were suspended for 15 weeks. Through that period, Tulip continued to take full volumes of pigs from the farmers, avoiding what could have been major animal welfare problems due to the lack of alternative facilities in Scotland. With Tulip's support, the pigs were moved to other plants in England and Northern Ireland whilst the repairs were made. Since the plant re-opened, volumes, customer base and operating efficiency have all continued to increase.

The fire was an exceptional event that could not have been foreseen. However, the relationships that had been built up between the cooperative, QPL and Tulip since 2014 greatly improved the ability of all parties to work closely and rapidly together to solve the numerous problems that the fire caused. By contrast, previous plant closures in Scotland and Northern Ireland have always seen farmers left to fend for themselves because the relationships were purely transactional, not collaborative.

If were to do it again, we would do so with the knowledge that getting governance procedures established early on is essential, as these protect the interests of all parties when challenges occur later on. It is too easy to get distracted with day-to-day issues and then when there is a serious problem, it is more difficult to sort out if the structures are not in place. The other piece of advice would be to stick at it – this is a successful model. Pork production in Scotland is growing and there is increasing customer interest, so it is worth the effort!



By contrast, previous plant closures in Scotland and Northern Ireland have always seen farmers left to fend for themselves because the relationships were purely transactional, not collaborative.

Notes

Nethergill Farm – stocking to the ‘sweet spot’

Chris Clark

Location:
Yorkshire Dales



Nethergill is a hill farm in the Yorkshire Dales. The land rises from 350m (1150ft) to 550m (1800ft) and is 160 ha of often sodden ‘soil’ consisting largely of peat, and on the wetter land, blanket bog. Chris & Fi Clark manage livestock according to their own stocking principles and carry out a range of activities – eco-holiday letting, producing sustainable ready meals – that make use of their best asset: the landscape.

My wife, Fi, & I bought Nethergill in 2005. We met at Seale-Hayne Agricultural College in 1976, decided to marry in 1979 and in the same year set ourselves the target of buying our own farm before we were 50. It took us 26 years to raise enough capital and find the finance, but we took over in 2005.

We continually wrestle with the disadvantages of elevation, precipitation, latitude and geology, and for the first few years we tried to counteract these disadvantages by adding cost: purchasing concentrates, fertiliser and veterinary medicines. We struggled with both profitably managing

the livestock and successfully controlling the cash flow.

Eventually we started reducing stocking rates and found that, not only did margins improve, but there was a corresponding improvement in biodiversity. Not immediately, but gradually. Flora, fauna and mosses all increased in number and species.

Eventually we started reducing stocking rates and found that, not only did margins improve, but there was a corresponding improvement in biodiversity. Not immediately, but gradually. Flora, fauna and mosses all increased in number and species.

Moreover, we started to sweat our assets, realising that our biggest business asset is the landscape in which we live and farm: developing eco-holiday lets, a nature barn, bird hides, bird feeding stations, and a partnership with a local chef creating ready meals from mutton and

Whitebred Shorthorn beef. This approach has revolutionised our cash flow and our accounts.

In 2016 I was asked by Nidderdale AONB (funded by The Prince's Countryside Fund) to analyse 14 hill farm accounts. The results were extraordinary, and the findings and characteristics found have been replicated on all subsequent farms. By the end of 2019 over 40 hill farms will have been evaluated. Some of the findings include:

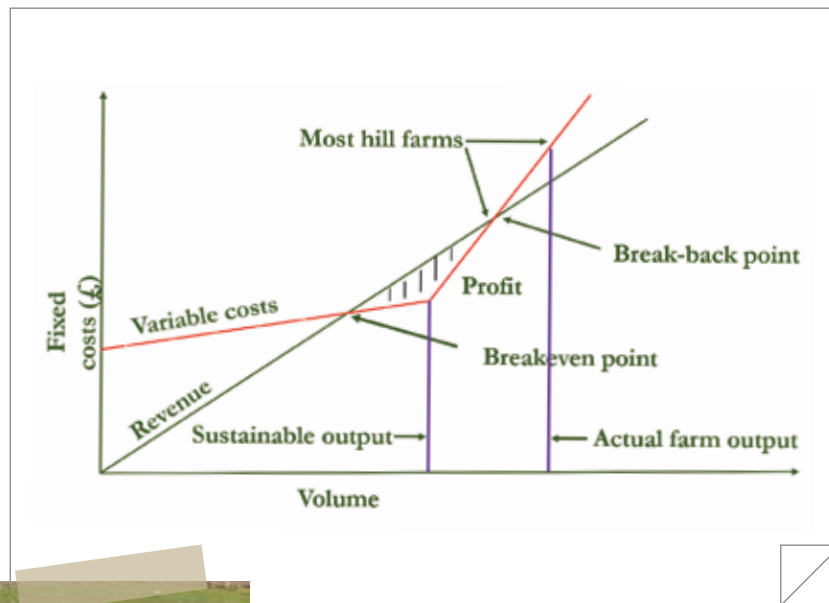
1. Whilst much has been done to make farmland more productive over the centuries (through capital investment to ‘improve’ the land – through, for example, de-forestation or drainage), it has had little impact on the fundamental viability of hill farming.
2. Since 1945, one-off capital investment has largely been replaced by annual programmes of investment to try to correct the fundamental natural deficiencies of the uplands, such as poor soils, latitude and elevation. This includes the use of artificial fertilisers or purchase of concentrates. This has enabled hill farmers to increase the number of livestock to levels well above the natural carrying capacity of the land, generating significant additional income, but not additional profit.
3. Our direct experience of farming at Nethergill Farm, and the experience of other hill farms, has prompted this thesis for hill farming: *If there isn't enough natural grass, no amount of corrective economic action can make the farming any more profitable.*
4. This has significant implications for current stocking rates, and is characterised by ‘non-linear’ variable costs rather than the economies of scale normally assumed to exist. That means that: the more stock that a farm attempts to produce, the more the actual profit decreases – this is true to a point that many hill farmers have now reached without realising it.

Contrary to the received wisdom, and counter-intuitively, the economic reality is that reducing stocking rates (to the ‘sweet-spot’ – the naturally sustainable level) produces the maximum profit. It also naturally starts to generate significant

environmental improvements; improvements that, with the current Defra thinking, would appear to be eligible for the highest level of any future 'payment for public benefits' policy currently being promoted by government.

What, if anything, would I do now if I was starting again? Three things:

1. Test the business theory and models advocated by those that are supposed to know.
2. Actively and regularly manage and monitor my business profit and loss in conjunction with a cash flow budget.
3. Not necessarily listen to the advice of my accountant, whose role, first and foremost, is to mitigate my tax liabilities.



Notes

Pipers Farm: raising high-quality meat and delivering environmental outcomes

Devon Committee and University of Exeter

Devon inquiry



Pipers Farm produces high-quality, pasture-fed meat across a network of 26 smaller-scale family farms in Devon and Cornwall: providing a route to market for these farming businesses and delivering online retail nationwide. The market is increasingly moving towards demand for less quantity of meat that is of a better quality. Quality is driven by consumers' growing awareness of systems of livestock production; sustainability in terms of impact on landscape and the environment; and nutritional value.

The framework of the organisation is tailored to respond to the physical, environmental and human resources specific to each of those individual businesses. However, working as a group creates economies of scale and provides each business with digitised access to the market. Aggregating the resources of these smaller scale businesses has the additional benefit of harnessing traditional knowledge of landscape, native breeds, and farming practices which have often been passed down through several generations, and which focus on environmentally sustainable outcomes.

The organisation seeks to produce meat that is value for money in terms of nutrition, taste and convenience, and believes that enterprises producing food must be built on a fundamental

objective to deliver a financially sustainable margin for the farming business and provide ecological and public goods through their work. Pipers Farm undertakes a range of activities to achieve their objective. For example, the partner farming businesses are encouraged to be multi-enterprise and draw on the wisdom of traditional mixed rotational systems,

in order to diversify income streams and provide a more resilient business. Pipers Farm offers the opportunity for each individual farmer to optimise sustainable management of the landscape and natural assets, delivering both public goods and also high-quality food to meet growing market demand.

Examples of different farm enterprises within the Pipers Farm family are:



Trevigue, North Cornwall

A partnership farm within the National Trust estate, Trevigue rears a herd of pasture fed Red Ruby cattle, which are outdoors year-round. This beef is sold through Pipers Farm delivering a sustainable enterprise margin, ensuring the profitability of the farm. This model safeguards and enables the promotion of biodiversity on the land. As well as the intrinsic benefits of this, it provides additional value in experience and education for the public who access the farm, including potential relationships with local health centres through social prescribing.

Orway, a mixed family farm in the Culm Valley

Farming for over a hundred years, this farm has focussed on Red Ruby cattle (dual purpose milk and beef), and subsequently commercial Holstein cattle. The farm used to produce increasingly high volumes of commodity milk, until it was driven out of production in 2015 by the downward pressure on margins, and an outbreak of bovine TB. During this time both young sons left the farm to work elsewhere. The farm is now part of the Pipers Farm model, rearing 700 pigs, 750 turkeys and 250 lambs for sale direct through the Pipers Farm online shop. These viable livestock enterprises are helping to re-establish a multi-enterprise family farm and demonstrate the traditional benefits that livestock can bring to arable rotations, for example; reduced use of inorganic nitrogen fertiliser; reduced use of carbon fuels through mechanical cultivations; and improvements to soil structure, biota and fertility.

Pipers Farm

The Home Farm is increasingly becoming a hub for interaction with consumers interested in provenance, animal welfare, nutrition, human health, cooking, and children's education. Farm visits are complemented and enhanced by sharing knowledge digitally through the Pipers Farm website about the positive impacts their food and lifestyle choices have on the health, biodiversity and the sustainability of landscapes and rural communities.

The Ethical Dairy

We started the conversion of the farm to organic in 1999. Within about 10 years we started to question much of what we were doing. Organic farming was working for us and the land, but could we do better?

Name:

Wilma and David Finlay

Location:

Cream O' Galloway Farm, Gatehouse of Fleet



We produce ice cream and run a visitor centre at the farm. Our ice cream is delicious and popular, but it's an energy hungry product – is it ethical to be using fossil fuel energy for a luxury product? The visitors to our farm also questioned some of our farming practices, especially the separation of dairy calves from their mothers.

Initially, our main decision was whether we were going to stay in dairy farming or not. If we were, we would have to make a major investment in infrastructure as our buildings were no longer fit for purpose. If we were to make such a big investment, it should be a system that would give us a future in a volatile world, which

meant developing a micro food system that took us out of the control of the corporates. We wanted to have a positive impact on biodiversity, climate change and animal and human welfare.

If we were to be successful in breaking away from the corporates, we had to introduce a product that allowed us to bypass conventional routes to market and maximise on-farm value, using all of the farm's primary products. The solution was cheese.

We introduced a simple model that didn't rely on external inputs and didn't rely on products that included ingredients bought in from around the world. We set ourselves targets to reduce antibiotic and pesticide usage; reduce mastitis and lameness; reduce greenhouse gas emissions; increase biodiversity; increase the longevity of our herd; and at the same time increase the net food available to humans.

Many parts of the system produced exactly the benefits that we had set out to achieve, but the biggest issue by far was the challenge of leaving the dairy cows and calves together. We first tried it in 2012 and it almost bankrupted us – the calves drank virtually all the milk! We then tried separating them overnight (they could still see each other and even rub noses, they just couldn't drink) and then in the morning we milked the cows and re-united them with their calves. This worked – finally a reasonable quantity of milk! But we were still broke. It was a massive learning exercise, but also financially, physically and emotionally exhausting. We stopped this aspect of the system and re-assessed what we really wanted to achieve.

We licked our wounds, but then began to talk about what was feasible and what needed to change to give us everything we had initially set out to do. Fortunately, we had some profitable years to help us recoup some of the losses. So why change a system that is working? Well, we are stubborn and still wanted to try to achieve something transformational, so we re-introduced it.

We learned a lot during our 2012 trial, and so changed the layout in the farm shed to make overnight separation easier and started again in 2016. We've continued to make tweaks to the system and are now confident that we have a system that is better for animal welfare, better for the people working here and better for the environment.

Scotland

Some parts of the UK have been in their own transition for a while. The political sensitivities of a UK Commission on largely devolved matters shaped this inquiry. For some, the Brexit vote reignited the independence question, and Scotland's future relationship with both London and Europe. We wanted to find out how the Scottish government was shaping its own policy choices, growing a confident relationship on the world stage on the strength of its food, farming, fishing, forestry and countryside sectors. We were intrigued to hear of the promising relationships with the Nordics, with businesses and government looking north, both for trade and a shared political and cultural connection. We heard about radical Scottish Government policies on food strategy and land use. We also noticed the patterns that showed up in all nations – rural communities feeling distanced from their governments and anxious to shape the policies that most affect them, from the Borders to the Highlands.

Scotland inquiry: gathering information and ideas

Prof. Lorna Dawson, James Hutton Institute

Scotland inquiry



People from a broad diversity of backgrounds and responsibilities contributed their knowledge, opinions and ideas to the RSA Food, Farming and Countryside Commission Scotland inquiry.

We held a series of roundtable discussions in the capital city Edinburgh, from Shetland in the north, Grampian in the north-east, to the Scottish Borders and Galloway in the south-west. All events were characterised by the participant's positive attitudes, a willingness to contribute, and a belief in the benefits of aligning efforts to meet the significant challenges being faced by communities. The discussion of these events shaped the final reporting.

We will be publishing the full Scotland report in September 2019. Issues we encountered during this process included: encouraging community resilience, tackling changing rural demographics, the importance of skills delivery, changes in land

use, human and environmental health, water quality and availability, and more.

There was broad agreement around key messages: the need to develop and respect local solutions for local priorities and problems; ensuring that research and evidence are co-constructed with end users; cooperation, collaboration and innovation will be key in driving a successful future; the co-benefits that can be created by the use of natural solutions that work with the natural environment; and the importance of education and training, effective knowledge exchange, and meaningful engagement of all actors in food, farming and the countryside.

Stephen Balfour of Community Food Initiatives North East, who features on the next page, was one of the many who contributed to our work.

Urban growing

Stephen Balfour

Location:
Aberdeen



There has been a renewed interest in urban food growing in recent years, which has resulted in an increased demand for allotments and in the number of community garden projects springing up in Scottish towns and cities. Reasons for the increase are varied and the benefits wide-ranging: community cohesion, improved mental and physical health, access to fresh produce, increased biodiversity, clean air, and improved local greenspaces.

In Scotland there are currently two strategic developments that could help enhance the potential of urban food growing. In 2015, the Scottish Government made it obligatory for every local authority to develop a Local Food Growing Strategy to identify potential food growing sites and encourage food growing activities, making the provision of food growing spaces a consideration in local authority planning.

Secondly, there has been a move towards the creation of cross-sector food policy partnerships in Scotland's three largest cities. I coordinate The Sustainable Food City Partnership Aberdeen (SFCPA), which has developed cross-sector partnerships with; Aberdeen City Council, Community Food Initiatives North East (CFINE), NHS Grampian, Aberdeen Health & Social Care Partnership, as well as other community and voluntary organisations, local businesses, and educational institutions. We bring together key stakeholders to explore practical solutions and develop best practice on a range of issues:

- Promoting healthy and sustainable food to the public.
- Tackling food poverty, diet-related ill health and access to affordable, healthy food.

- Building community food knowledge, skills, resources, and projects.
- Promoting a vibrant and diverse sustainable food economy.
- Transforming catering and food procurement
- Reducing waste and the ecological footprint of the food system.

By taking a 'whole systems approach' to food we engage a variety of sectors to learn from best practice. Aberdeen Sustainable Food City is hosted by CFINE, a social enterprise that works to cooperative principles which underpin the organisation's and activities: equality; cooperation, collaboration and partnership; mutuality and reciprocity; recognising that everyone has something to offer; and enterprise.

Together, the food partnerships and Local Food Growing Strategy could start to understand the complexity of urban food systems – tackling the inequalities and waste that the system produces through a reorientation towards more local food and shorter supply chains, as well as addressing health and environmental issues within local communities.



Notes

Technology

From finding new places to farm in vertical and underground farming in our cities to data, drones and tiny robots in the fields, technology has an important role to play in speeding up the transition to sustainable farming. There is a plethora of technologies in development that get a lot of attention; here, we have chosen to foreground those which enable farmers to transition towards an agroecological future.



Vertical farming

Dr. Rob Hancock, James Hutton Institute

The Advanced Plant Growth Centre (APGC) at the James Hutton Institute is a new £27M project, funded through the Tay Cities Deal, that aims to exploit advances in controlled growing environments, environmental and plant monitoring technologies to bring about a step change in the way our research supports agriculture.

Following a detailed design and planning phase the APGC build is anticipated to start in 2020. We will measure the impact of the project primarily through anticipated increases in interaction and co-funding of research with the agricultural industry and other academic partners, and the resultant economic value added to the associated supply and value chains.

The capacity to grow large numbers of plants in highly controlled environments provides us with previously unavailable opportunities to accelerate the breeding of climate resilient crops required for the future of agriculture. For example, by optimising the environment to promote plant growth and development, we are able to produce multiple generations each year. Combining

this with high throughput imaging technologies that allow us to rapidly assess the performance of individual plants will provide us with opportunities to massively accelerate our breeding programmes, bringing the varieties that growers need to the market place much sooner. These same imaging technologies have enormous value in the field: not only to monitor crop performance at high spatial resolution providing vital information for precision agriculture, but also for early disease diagnosis allowing farmers and growers to deal with pathogens before they impact yield and quality.

Although still in the design phase, a key element of the APGC has been extensive industry consultation right from conception, through to funding and now design. A big part of the successful bid was our capacity to demonstrate industry relevance. This was in no small part exemplified by the decision of Intelligent Growth Solutions Ltd. (IGS), a pioneering automated vertical farming company, to co-locate onto the Invergowrie campus of the Institute. The cross fertilisation of knowledge and ideas has challenged both organisations to think in the broadest possible terms about the application of their respective skills and knowledge to the broadest possible industrial base, including not only agriculture but also other applications in automation, big data, sensing and lighting technologies.

Although the project is still in its infancy, we've found the dialogue between industry and academia has been important to allow us to ensure the facility will meet the research challenges of the future.

Location:
The Advanced Plant Growth Centre, Invergowrie



Small robots

Callum Weir

Meet Tom, Dick and Harry – a trio of robots. Along with Wilma, the digital brains behind the robots, they could revolutionise the way we farm over the coming decades.

Location:
Wimpole Estate,
Cambridgeshire



Resembling luridly painted miniature Mars exploration rovers, they are being developed by an agri-tech start up from Salisbury called the Small Robot Company to monitor crop health, seek out and destroy weeds, and plant seeds – and we're testing them on our National Trust farm on the Wimpole Estate.

We have 370 hectares (914 acres) of arable land that we use for growing cereal crops. Our farm is one of 20 in the Small Robot Company's Farming Advisory Group, but is the only organic farm, which makes it a challenging test site as we have more weeds – it gives the robot more to learn!

The robot being tested with us at Wimpole is called Tom, and it's essentially a robotic agronomist. It sets an area to map and travels autonomously up and down the fields, taking photos of the crops and weeds in high resolution. The photos are then stitched together and an algorithm distinguishes what's wheat and what's weed, creating a digital map of all the weeds in the field.

The basic premise is that 95% of chemicals used in farming are unnecessary. Imagine that a robot could be sent out into a field to find where the weeds are, and come back with their precise coordinates. Instead of spraying the entire field with expensive herbicide, you only spray or mechanically remove individual weed plants. The same principle applies to the precision application of fertiliser, whereby fertiliser bills could be reduced, as well as the risk of leaching.

The robotic revolution could bring particular benefits to small farms. Instead of investing hundreds of thousands of pounds in an 8-tonne tractor, farmers would only have to pay out a fraction of that for Tom, Dick and Harry. Tractors compact the soil, and unnecessary cultivation damages soil structure and contributes to soil erosion, so soil health would benefit too.



Other, more radical, possibilities also exist. In the future robots might be able to plant different seeds in the same field, allowing strip farming on a much bigger scale. This could move away from pure monoculture – just one variety of crop in a field – which would have many benefits. Take peas and wheat for example – if you can grow both in one field, the peas fix nitrogen into the soil, which helps the wheat grow. The pea flowers attract bees, increasing biodiversity. With weather becoming more extreme and unpredictable, it's harder to know what will grow well, so having more than one crop improves farm resilience.

Robotics also has the potential to reduce the reliance of farming on fossil fuels. They're smaller than standard farm machinery, so the robots can be electrically powered, potentially charged by solar panels.

The technology is still in its early days – and it may be 10 or 15 years before this technology becomes mainstream – but trialling new technologies here at Wimpole is very fitting. The 3rd Earl of Hardwick created Wimpole Home Farm in 1794 as a demonstration farm, using the latest machinery to improve efficiencies and increase yields. Today, our goal is to improve biodiversity and soil health, but the spirit of innovation lives on. Watch this space.

Adapted from an article by James Fair in the summer 2019 edition of National Trust Magazine.

Discussion Kit

As part of the Food, Farming & Countryside Commission's 'Transition to 2030' research strand, we invited farmers and other agricultural professionals to hold discussions about the future of farming over the kitchen table or down the pub.

This is something you can do too.

Use this discussion kit to facilitate a conversation with friends or colleagues to explore some of the challenges facing farming and the practical things you can do to respond.

Transition to 2030 discussion kit

Beyond the immediate uncertainty around Brexit day, farmers are bracing for at least a decade of transition, adjusting not only to changes in payments, but also in markets, diets, labour availability, standards, regulation, weather patterns, and technology.

Much attention has focused on the short term. But even 10 years pass fast in an industry planning multi-year rotations, making 25-year investments and planning succession over generations. Decisions made years ago lock down your options today.

As well as making contingencies for trade disruption and testing future payment schemes, policy makers therefore need to plan now to ensure farms have the support and flexibility to develop their core business through a decade of change.

The Commission identified this as a crucial gap. We wanted to hear from farmers and advisors about the changes they see coming, the challenges they face in adjusting to them and ensuring their business can thrive, and what the industry and government can do to help.

We're still keen to hear from farmers about the challenges they're facing and the practical solutions that could help. If you want to contribute to the research, please take a photo of your groups answers and send them in to ffcc@rsa.org.uk

Suggestions for how to guide the discussion

It's your group so feel free to explore the questions how you'd like, but here's some suggestions for running a good discussion.

- 1. If your farm had a check-up today, what three words would the doctor write down?**
Start with an easy one. Go around the group or split people into pairs to discuss before coming back together as a group.

- 2. Looking ahead to 2030, what would excite you most about farming if things go the way you'd like?** Get people to write down some thoughts before sharing with the group. Ask for clarity if needed and notice whether it is easy or difficult for the group to discuss the future.

- 3. Is there anything that worries you about how the future may pan out for your farm?**
Get the group to write down their thoughts and go around the group so everyone has a chance to discuss their worries. Write down the top 5 concerns.

1

2

3

4

5

- 4. When you hear other people talking about how farming needs to change, what sounds least realistic?** What are the barriers and challenges currently facing people in your group? Write down the challenges the group discussed.

- 5. What practical things will you need to help you get where you really want to be in 10 years' time?** Can you get the group to agree on their top 3 practical things that would help?

1

2

3

Reflections

- Did anything surprise you about the conversation you had?
- Were there any parts of the conversation that were difficult or that people disagreed with?
- Was it useful?



Send in your answers to ffcc@rsa.org.uk

Countryside

The countryside is central to local and national identities across the UK. As well as providing a home for millions, our image of the countryside often brings reassurance and comfort for those living in cities. But our landscape of green fields and rolling hills can mask a very different reality: depleted soils, greenhouse gas emissions and the disappearance of wildlife. The beauty of our countryside and the iconic picturesque village also obscure some of the realities of rural life, with many places struggling with chronic underinvestment, low wages, unaffordable housing and an ageing population. With this backdrop, people in their communities are already thinking more carefully about how we use the land, how we re-energise rural communities, invest in infrastructure and create the jobs we need for the regenerative economy. In creative and inspiring ways they're working on restoring the countryside to bring image and reality together.

Land Use

Worth £5tn, land is the UK's biggest asset. It provides us with food and water, shelter and open space. But it is not inexhaustible, and it needs care to be able to meet so many needs sustainably. From the earth beneath our feet, to the environment around us, it has also become the ground on which people's different hopes and fears are being played out, raising some difficult questions about what our land is for, and who decides. Across the UK, people are thinking strategically and practically about how we use our land and ensure that it is passed on to the next generation in good shape.

Scotland's Land Use Strategy

Prof. Lorna Dawson, James Hutton Institute

Scotland



A strategy for how land is used is essential for understanding change in multifunctional sustainable landscapes. As the commitments to climate change in the UK are increasing, a land use strategy provides a potentially dynamic tool to catalyse landscape-scale management, especially if the CAP incentives are harmonised with a landscape-level policy.

Scotland's Land Use Strategy (LUS) is a key commitment of Section 57 of the Climate Change (Scotland) Act 2009. The Land Use Strategy builds on the experience of the two Regional Land Use Pilots in Aberdeenshire and the Scottish Borders, which tested an innovative approach to local land use decision-making.

The key aim of the Aberdeenshire pilot is to create a framework which summarises policy and environmental information for users and indicates where certain types of land use change might be either beneficial or detrimental in line with policy goals and climate change mitigation. This work was set in the context of the five main policy areas of the Land Use Strategy – see overleaf.

The pilot then built an 'approach' around an interactive web tool that was designed to stimulate discussion by exploring different options of land use change and their consequences. For example, this

showed where expanding woodlands would improve water quality the most. The tool aids decisions about land use change to better deliver policy objectives and highlight trade-offs. It aimed to rank and map areas according to suitability for the proposed change (e.g. woodland expansion) but where other benefits (e.g. recreation opportunities) or problems (e.g. poor water quality) can be identified.

As there were limited resources for the pilots, the Aberdeenshire project concentrated on one major example of land use change: afforestation along with three ecosystem services – nutrient retention, soil/sediment retention and carbon storage. Using the web tool, the user could explore the effect of altering the weighting of related groups of criteria on suitability for the land use change in question, and so produce a map to visualise the effect of the change. Results were then discussed with a range of land managers in three interactive workshops which were held across the region.

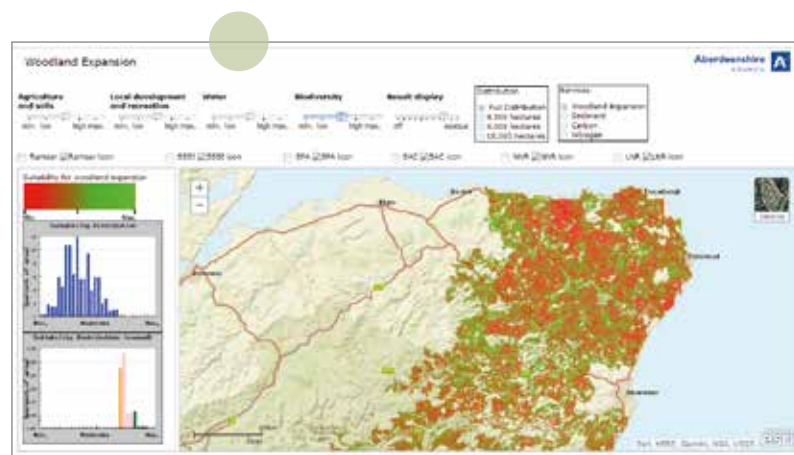
The other pilot project based on the Tweed catchment put more emphasis on engagement, i.e. discussing potential land use change for environmental benefits. However, the evidence base for assessing the change in the Tweed pilot was not as strong as that used in Aberdeenshire,

The Land Use Strategy 2016-2021 goals				
Example indicative policy issues under the broad policy goals in the LUS				
Low carbon economy	Safeguarding food production	Halting biodiversity loss	Enhancing recreation opportunities	Sustainable water management
Increase woodland cover Avoid trees on deep peat soil Avoid woodland removal 80% renewable energy Reducing GHG emissions Mitigate the impact of timber transport Peat restoration	Safeguard against inappropriate use Reducing GHG emissions (NO & CH4) Dealing with changing pests and diseases Appropriate crops Good Agricultural and Environmental Conditions	Farm woodland Protected areas Scottish Biodiversity Strategy, Local Biodiversity Action Plans Soil functions Invasive, non-natives Deer Ecological networks Pollution ESA Aichi Biodiversity targets (Convention on Biological Diversity)	Avoid woodland removal Farm woodland Green space Livelihoods Cultural tradition Health and wellbeing Urban green space Access Tourism Sense of identity Food Community Transition network	Extreme weather events Flood prevention Water quality Pollution control Abstraction

which had better data and used modelling, rather than running the scenario on basic rules. Without sound scientific evidence for action, the Tweed pilot was mapping opinions about ecosystem services, not mapping ecosystem services.

The Tweed pilot project demonstrated really good engagement, while the Aberdeenshire one demonstrated how to synthesise a large amount of data into tractable, evidence-based, decision making. Both were successful but also very different.

What both pilots showed was the clear need of a strategy for how we use land, which is essential to catalyse landscape-scale management to meet climate change targets. Currently the Land Use Strategy in Scotland is a series of voluntary guidelines. To fulfil its true potential the Scottish Government will need to renew its commitment to such an integrated strategy. It appears that momentum is now picking up again, and the strategy is attracting more interest; there has never been a greater need for such an integrated strategy for our land.



Peatland restoration

Emily Taylor

The Crichton Carbon Centre, established in 2007, is an environmental charity that was set up as a direct response to the need to help people and government learn and adapt to climate change.

We blend academic and applied work with the mission of enabling change and turning research into action. We strive to realise ‘action on the ground’ and work hard to develop partnerships and build relationships with communities, land managers, businesses, schools and other environmental organisations. We have developed and delivered a range of projects since our inception, including the first UK Carbon Management Master’s Degree Programme in collaboration with the University of Glasgow and a 10-year programme of environmental and climate change education for local schools.

Location:
Dumfries



As a small charity that receives no core funding, we are always striving to develop new projects, identify and apply for funding while delivering our suite of current projects. This ongoing cycle of time limited projects makes it difficult to build our capacity and invest in staff over the long-term as funding for staff can seldom be permanent. Following the vote to leave the EU this was particularly apparent as uncertainty around EU funding mechanisms meant it was very difficult to develop the large-scale projects that would have supported our staff.

In response, we went through a period of revaluation and sadly had to make the decision to make some redundancies, reduce our core costs, even move our office premises to reduce our overheads. This period, however, allowed us to revisit our ambitions and develop smaller projects that would really showcase our unique position and expertise, particularly on peatland restoration and management for carbon benefits. This led to us working on UK government funded projects and becoming a key organisation delivering the national Peatland ACTION programme of peatland restoration in Scotland. We’ve now developed a unique programme for Peatland ACTION to deliver training for contractors, land managers and consultants to improve their understanding of restoration so we can build capacity for long-term, national-scale, best practice.

Our new approach to how we fund our work; developing and delivering projects, not always large-scale in terms of budget, but those that absolutely provide real world advice, information and support, has allowed us to be seen as ‘doers’ and be more reactive and opportunistic. This is of particular importance for us now, during this time of great change both politically and environmentally. We are striving to be at the forefront of taking concepts, for example payments for ecosystem services, and understanding and establishing how these concepts can go on to underpin how we manage our countryside.



I think, personally, what I have realised is that the key to our success over the years is our ability to foster meaningful relationships with everyone from schools and land managers, to academics and governments. The power of plain talking, listening and understanding everyone’s points of view can help establish working partnerships which go on to result in real world change. By celebrating this as one of our strengths and unique selling points, we have established ourselves as small but very effective!

Natural flood management

Rosemary McCloskey

Like other parts of Gloucestershire, the Stroud Valleys suffered extensive flooding during the summer of 2007, which impacted 200 homes. The Environment Agency has since identified the Slad Valley as a rapid response catchment, at risk of destructive flash flooding similar to the event that destroyed parts of Boscastle in Cornwall.

Location:
Stroud



Over the years, communities and authorities have realised that the River Frome and its tributaries are not suited to hard engineered solutions to the issue. This is in part due to the physical nature of the catchment and the distribution of the properties at risk, but also due to the heritage and aesthetic value of the Stroud valleys.

In 2012, the Environment Agency commissioned a report into the feasibility and potential benefits of implementing natural flood management (NFM) (also called rural sustainable drainage) throughout the catchment of the Frome and associated tributaries. Acting on the findings, a formal partnership was formed between Stroud District Council, Gloucestershire County Council, The Environment Agency and the Wye Regional Flood and Coastal Committee to employ a project officer to work

with the community to identify and implement measures across the 250km² Frome catchment.

The project approach

The Stroud Rural Sustainable Drainage project takes a locally driven approach, putting people at the forefront, building relationships between the community and landowners. It has helped strengthen community ties and understanding of NFM, as well as providing the NFM interventions at a low cost using local labour and volunteers.

As of January 2019, the project had worked with 19 land managers to implement 400 plus NFM interventions throughout the catchment. Implementing these many schemes across such a large proportion of the catchment has been possible due to the innovative approach:

- Designed and implemented by local organisations and people using local knowledge and building on natural processes and techniques.
- Co-designed with the landowners and community groups, which has meant much of the emphasis has been on establishing long-term working relationships between these groups.
- Interventions often built by landowners or their contractors, using local materials and building skills and capacity.
- A network of many small-scale interventions spread at strategic locations across the whole catchment, building in greater resilience.
- The interventions designed to be multi-functional to achieve a number of outcomes, for example; introducing large woody material into smaller water courses in woodland areas; creating informal and more formal attenuation in woodland and grassland riparian areas using low bunds and berms, timber flow diversion structures and targeted tree planting to increase infiltration or flow complexity.



Learning from doing

The Stroud Rural Sustainable Drainage Project started as a pilot scheme to work with a range of partners to trial and develop NFM techniques throughout the Frome catchment. The success and positive uptake and response to the project has been down to the extensive partnership working with the community. Although there was an initial consultation report developed at the beginning of the project, which identified key sites and areas to work in, we have largely taken an opportunistic approach to developing schemes in the Frome catchment where it is safe and feasible to do so.

We've learned, over the course of the project, that having a few practical projects on the ground in order to showcase the learning and demonstrate the project objectives is critical in order to build trust and understanding of the methods. It is important to celebrate the wins of an 'every little helps' approach and this encourages landowners to spread the message to their neighbours.

Utilising local contractors and involving landowners themselves in the design and implementation of the measures has been important. A key piece of learning is that NFM techniques are not a one-size-fits-all approach. Every site and every catchment have their own unique characteristics, which is why it is important to be as flexible and adaptable as possible in the planning and implementation of the scheme. Identifying and reducing barriers to participation helps to achieve wins for all involved.

Whilst natural flood management is not a new concept, the evidence base for the methodologies is still being developed. One of the challenges of the Stroud project (and all NFM projects) is to provide evidence of the benefits.

We are working with a range of different organisations to implement a partnership approach to monitoring and researching NFM within the catchment. Establishing a monitoring partnership is not without its challenges including resourcing monitoring activities, standardising methods, sharing data and information, and diverging interests and agendas. It can be challenging to gain comparable data over short timescales for NFM; multi-year approaches must be planned in order to maximise the opportunity to gain valuable data.

Whilst it befalls all flood management authorities, NFM practitioners and landowners/residents to demonstrate the benefits of NFM from a social, environmental and economic perspective; we would include the caveat that gathering the scientific evidence should not mean that projects with smaller budgets, limited resources or other likewise constraints cannot go ahead because of the burden of proof. It is key that we continue to expand knowledge and the practical skills base around developing nature-based solutions. NFM should be about mimicking natural processes and building on what's already there. We would hope to see NFM methods adopted as part of standard land and woodland management practices, and that flood risk management authorities continue to find ways to support the community and local environmental organisations to work with natural processes to reduce flood risk and improve resilience to environmental change.

The success and positive uptake and response to the project has been down to the extensive partnership working with the community.



Trees for timber

John Makepeace

Parnham College was established in 1979 to provide integrated courses in design, making and management for aspiring furniture-makers. In 1983, the college acquired Hooke Park, a 350 acre forest in Dorset, and used the by-products of woodland management for all the structural components for building the new campus, especially forest thinnings from 5-10cms in diameter. The College amalgamated with the Architectural Association in 2002.

We worked with a top flight of foresters, architects, structural engineers, material scientists, and chemists on the design of the buildings at Hooke Park. Many of the conventional barriers to these processes were bridged by the collaborative research programmes which preceded each building. This allowed us to develop the technologies to exploit the best properties of the materials. As no Building Codes existed for the use of forest thinnings, the research findings and the proposed designs had to be approved by the Department of Environment.

Given the unprecedented form of construction, the building costs were hard for quantity surveyors to predict. This was most pronounced on the workshops, where costs substantially exceeded the forecast, leaving me the task of raising funds retrospectively to meet the overrun.

Despite the overruns, the extraordinary quality of the buildings provides a wonderful educational environment. These technologies have now been further developed at the Weald and Downland

Museum and the Savill Gardens building at Windsor. The Duke of Edinburgh even took a personal interest in the initiative at Hooke, and oak from the estate at Windsor was used at Savill Gardens, where they worked with the same structural engineers, Buro Happold.

Students are encouraged to utilise timber from the surrounding forest in their designs, and new experimental buildings are partially built by students. Being based within the woodland, they begin to understand the whole culture of woodland management and how to use materials more intelligently. The woods are a wonderful resource for the students.



I'm currently planning several other initiatives to encourage design and architectural students and practitioners to be more entrepreneurial in developing businesses that make better use of our indigenous forest produce, especially hardwoods. It is all about using land sustainably and for multiple purposes – intelligent forestry.

It would make a huge difference if government legislation recognised and encouraged, not only the planting of trees, but the social, economic and environmental benefits of adding value through local enterprise.

Notes

Thriving Communities

Underinvestment, growing transience and a knowledge economy oriented to the cities have hollowed many villages and small towns of their economic and civic assets. But many rural places are responding, restoring pride and dignity in the countryside. We can help with rebuilding thriving rural communities through a rural strategy and the development of new economic institutions.

Frome: a public value lens

Tobias Phibbs, Food, Farming and Countryside Commission

Public value, one of the guiding principles of the Commission's work, can seem an obscure or technocratic term. Its life as a concept began in academic departments and international civil services. But it has meaning and power beyond Whitehall.

The public value framework encourages mapping economic and social assets, bringing them together to deliver a broader set of objectives than the traditional measures of productivity or growth. This can mean government departments breaking down siloes and working together to meet shared goals. But it can also mean local communities coming together and pooling skills and assets to meet needs and bring community cohesion to their shared home.

The independent-spirited West Country town of Frome in Somerset has done just this. In 2011 local residents created

Independents for Frome, a non-party political grouping to stand in local elections. Later that year they won a majority on the town council, and by 2015 they had every seat on the council – four years on, they still do.

At the heart of their approach is what former Mayor Peter Macfadyen calls flatpack democracy, an attempt to rejuvenate town and parish councils, breaking the sclerosis and divisiveness of party politics and involving the whole community in decision-making.⁷ They have, for example, invested in a local credit union and created a 'share shop' in which people are free to borrow all manner of tools, toys and anything else that local people donate.

The work of Compassionate Frome exemplifies the best of the Frome experience. Supported by the town council, local GP Helen Kingston set up the initiative in keeping with the ethos of flatpack democracy. It is ostensibly a health initiative but its impact goes far beyond just healthcare; it has created a real-life social network that builds on the assets of local people and replenishes community life.

Like asset-based community development, its starting point is not local needs but local assets and social resources. To this end, Compassionate Frome asked residents what social resources they had to offer – whether fixing computers or spending time with isolated people. From this they created a service directory⁸ with an active network of 'Community Connectors' to provide help and manage the directory. They now have 400 groups providing forms of mutual aid from

Location:
Frome, Somerset



help with DIY to mental health support networks, serving the town and its rural hinterland.⁹

This form of social capital may seem like a nice but expendable extra befitting a bohemian West Country town but in fact it has delivered a significant and quantifiable benefit to public health and finances. Since the experiment launched, emergency admissions to the local hospital have dropped by 17% with an associated 21% drop in costs, whereas across the whole of Somerset admissions have risen by 27%, with a 21% increase in costs.¹⁰

Public value is about corralling the assets of people and place to achieve public goods. Frome has done this, breathing new life into small town democracy, and showing that neither productivity nor growth adequately capture what the goal of public policy should be. Frome is a town of nearly 30,000 people – a far larger settlement than most of the places the Commission has engaged with. This scale confers certain advantages, most obviously the

relative ease with which people can gather together in a place. Nonetheless, there is much that people and councils in rural areas could learn from the Frome experiment.

Peter Macfadyen adds that “in May 2019, having adopted the Frome model, Independents won control in five small towns in rural Devon. With a similar total population to Frome’s, they are now looking to work together in a range of areas”. Flatpack2 is also on the way, which will record what has happened in Frome, and other small towns

using the same model, since 2011. It will be available in late summer of this year.



“The Compassionate Frome’ project builds on the many years of investment put into the voluntary sector by councils, significantly increasing grants to organisations and building their capacity to take advantage of training and professional fundraising support. This has enabled a stream of funding into the town, partially replacing what was lost to austerity measures.” - Peter Macfadyen

Notes

Four horizontal lines for taking notes.

Agrivillages

Ashley Dobbs & Jimmy Skinner

An agrivillage is typically around 500 houses with some 350+ acres of land dedicated to ecological farming. They are designed to meet the needs of new food entrepreneurs and those who want to escape the city and lead their lives back on the land.

Agrivillages are places everyone can live and work, benefitting from collective marketing and branding that enables producers and farmers to sell branded products rather than commodities at greater margins. The goal of our agrivillage plans is to build exemplar communities that are: food positive, energy positive, biodiversity positive, and rent positive.

The first of the inHarmony agrivillages will be in Millom, Cumbria, which was a mining town until 50 years ago when the iron ore industry closed.

We’re designing agrivillages as a response to the difficulty of obtaining land. They will help new farm entrants by making it affordable to cultivate innovative and ecologically sound ways that protect and conserve biodiversity and wildlife whilst enhancing the fertility of the soil. The farm plots for renting will range from allotment size to micro-dairy size of 30 to 40 acres. This farmland will eventually be owned by the community. Technological back-up from organic research organisations will play a crucial part in increasing productivity per acre. We’ll address the problem of profitability by forming an umbrella brand

that enables residents to market what they grow as branded products rather than commodities. Creating a home market and shorter supply chains to other markets means that both producers and consumers benefit from reducing transport and other intermediary costs.



Millom will also feature; a multi-university campus encouraging cross-over between science, the arts, entrepreneurship, and horticulture; an eco-hotel; miles of trails; and a freshwater lido. Transport will be via electric cars and a bike pool and will link to the mainline railway station via footpath. 500 homes of different designs and sizes will cater for a diverse population of all ages, which will be available for rental and for purchase.

Although Millom is still in the planning phase and will not be completed for at least another three years, we’ve received a huge amount of support for the project so far – we now have more than half a dozen other projects in the pipeline. We think the idea is really starting to gain traction because people want places where they can lead stimulating, happy and healthy lives. Agrivillages are designed to contrast with typical housing estates, which have failed to grasp the opportunities to advance civilisation and have largely neglected the urgent need to tackle the climate emergency.

But this is not to say there aren’t challenges: ironically, small eco-communities create a larger per capita footprint than ordinary development. Scale is vital – larger eco-developments can meet most of the energy, food, educational, intellectual and entertainment requirements of its residents without the necessity to travel further afield. By design, they encourage neighbourly interaction with lots of meeting places, gardens and shared facilities – addressing the physical and mental health crisis and creating a sense of community.

Why we need regional stakeholder banks

Tony Greenham

The Community Savings Bank Association advocates independent, local banks working for, controlled by, and answerable to their customers, and South West Mutual, serving Cornwall, Devon, Somerset and Dorset, is their first.



The UK's banking industry is still dominated by a handful of giants. Large-scale and standardised 'tick-box' systems can bring great advantages for some banking needs, but for many communities it falls well short. Healthy banking systems, like healthy eco-systems, need diversity.

Most countries outside the UK have a mix of banks including regional banks, local public savings banks and cooperative banks owned by their customers. Europe has 3,135 cooperative banks with 80.5 million members and 209 million customers.¹¹ The USA has 5,700 community banks with total assets of USD 4.7 trillion¹² and Germany has 209 regional commercial banks with total assets of EUR 830 billion¹³, as well as 400 local public savings banks, or 'Sparkassen'. These regional stakeholder banks do the heavy lifting when it comes to lending to smaller businesses, financial inclusion, reinvesting in regions, tackling regional inequalities and supporting local economies during recessions.^{14, 15, 16, 17}

One of the key advantages of smaller scale is the ability to gather additional information about local markets, industries, companies and investors that can improve credit decisions^{18, 19}, allowing them to do more and better lending to smaller business, as well as regionally important and specialist sectors.^{20, 21}

What we're doing at South West Mutual

The Community Savings Bank Association has been established to help create a network of regional community banks for the UK. South West Mutual is one of the early ones, seeking a banking licence for Cornwall, Devon, Somerset, and Dorset. We intend to offer a range of banking services, from current accounts and savings, to mortgages, loans and overdrafts for personal and SME customers. We will offer state of the art online and mobile

banking but, unlike most other banks, we are also committing to maintain a branch network to serve our members' needs.

The bank will be a commercial business seeking long-term profitability, but profits are not the sole reason for its existence. Our mission is to serve our members and to support the broader prosperity of our region. Integral to this is an approach to lending that takes full account of economic, social and environmental factors, including the need for a zero-carbon economy.

This makes us unique, being the only bank with all three of the following characteristics:

- Participation. The bank will be a cooperative. All customers will be members and have a vote. This helps ensure that the Board keeps focused on the interests of members. Too often, executives in distant skyscrapers can lose sight of who they serve.
- Purpose. We exist to promote more environmentally sustainable and widespread inclusive prosperity in the region. We will be financially profitable to serve this purpose.
- Place. Reinvesting in the region. We are dedicated to the region and will use local deposits to fund local lending. Our local knowledge will be part of our competitive advantage.

What does that mean for food and farming sector businesses?

First, food and farming do not loom large in the balance sheets of massive global banks which devote much of their assets to financial trading, commercial property and large corporations. In contrast, small-scale regional banks reflect their local economy and focus on SMEs. And that means that food and farming become a top priority for those banks within more rural regions.

Second, for food and farming businesses adapting to a world where climate change is already affecting them and who want to future-proof their business for a zero-carbon economy, who better as a banking partner than a mission-led bank that is set up to finance the socially-just transition to a net zero-carbon economy?

Exploring land stewardship

Chris Blake

Skyline, managed by The Green Valleys CIC, was a year-long project to explore the feasibility of landscape-scale, community land stewardship in Caerau, Treherbert, and Ynysowen – to create a shared vision for the next 100 years.

Coal and steel created the Valleys communities, which today illustrate a striking paradox – a landscape that has been largely repaired but a society struggling to respond to the loss of industry. Steep-sided valleys have created communities that are both geographically and psychologically isolated – unable to take up economic opportunities along the M4 corridor. The high moorland that surrounds each valley does not support any economic activity that engages the local economy.

But the Valleys communities are also isolated by land ownership – by the red lines of land registry maps as much as by contour lines. Uniquely for post-industrial communities, each Valley town is surrounded by publicly owned land – the forests of Welsh Government Forest Estate, legacy coal boards, and local authorities. None of these landholdings provide any economic benefit to the communities. Where the land is of economic value – from forestry and wind power – it is managed by national and international corporations with no direct economic benefit to the local community.

What would happen if a community had the right to manage the land that surrounds the town, for the long-term? What happens if we transfer to the town the rights to use all publicly owned land – to the skyline? We sought to answer one important question – do communities want to be stewards of their own landscape?

Asking a question that has never been asked before is a difficult challenge. The possibility of community land stewardship had barely been considered. The forest on the sides were managed by the 'Forestry Commission'. It was easy to find people who had lived in the valleys for 50 or 60 years who had never even been in the forest – let alone considered taking control.

To answer this core question, we started with artists to engage communities, to help people speak with their hearts first, their minds second. Our artists enabled so many different activities.

We broke bread together – 100 people met for lunch; we wrote poetry – the local primary school children capturing what they would put, "in my magic box of Treherbert..."; dreamcatchers walked the streets of Aberfan collecting dreams on coloured ribbons. But most of all we remembered. Together we remembered what had been lost. We celebrated memories of place and of community. And then we started to dream, imagining the world 100 years into the future, crystallised in the postcards received from a century hence. A future vision made real. A vision different from both the past and the present. A vision built on the residents' dreams.

Location:
Caerau, Treherbert,
and Ynysowen –
Wales





There were other questions we sought to answer. Are there sustainable business models that would allow communities to break free from a culture of grant dependency? Are communities able to manage the landscape in a way that enhances ecological resilience for the long-term? Can these projects be well-governed for the long-term? The artists wove their spells. The memories and the dreams emerged, and grew, and took root.

A few things struck me powerfully. Firstly, the residents of each valley instinctively balanced all the goals that are so often presented as being in conflict. Yes, they wanted jobs and prosperity – but they also wanted a more resilient environment – “more round trees, less pointy ones”. They wanted access for everyone – for the young to learn and for the physical and mental health of the elderly. Secondly, the elderly had no problem describing with passion their vision for a valley in 50 or 100 years – a future they would never see. Thirdly, the scepticism, hardened over four decades of repeated policy failure, that any changes would make any appreciable difference to their lives. And this, I came to realise, was because in the past what had been offered was

money or development staff – both of which come to an end and leave the place unchanged. Why might Skyline be different? Perhaps because we are offering something that hasn't been offered before. Control.

I realised that above all you go to listen and not to tell. We are enabling and facilitating and not consulting. We are providing a space for dreaming. Working with artists allowed us to have a far more productive conversation than we could have achieved with traditional facilitation practices. Engaging hearts before heads allowed us to build trust more quickly.

Working with artists allowed us to have a far more productive conversation than we could have achieved with traditional facilitation practices.

But perhaps the single most valuable thing we did was to take members of our three communities to Scotland to see community land projects first hand – seeing what other communities had achieved. In each case we worked in partnership with an established and trusted community organisation. This gave us knowledge, insight and a start to conversations. We also found that children were able to express the most compelling vision of the future. Perhaps because they were unencumbered by the history, they provided deep insights into place and its future potential.

But it all takes longer than you think. Nine months and our limited budget was not enough to start a deep conversation with the community. It is all too easy to talk to the small group of people within a community that volunteer for everything – the usual suspects. The enthusiasts, often retired, but open to new ideas. Starting conversations with the unusual suspects is more difficult. It takes time and imagination. I wish now we had the time and the budget to engage more fully across the wider community although I also recognise that not everyone is willing to engage. We found it particularly hard to reach the 30-45 year olds – perhaps because they are busy with work and family responsibilities. Land stewardship, I now realise, is all about control and trust. Giving control to a community to shape their own landscape and through it their destiny. Working to build the trust of the current land owners in communities.

Good Work

From automation to AI, when we think about the changing world of work we tend to picture an urban backdrop. Yet work in the countryside is already being transformed; by technology and the growth of sectors such as tourism and leisure. But it also constrained by poor digital and terrestrial connectivity, and the absence of homes and services that encourage young people to want to live there. To create the jobs we need to build a new, regenerative economy, and meet young people's hopes and expectations for work, it must change again – and fast.

Black Mountain College: a college for the future

Ben Rawlence

Location:
Brecon Beacons
National Park, Wales



Around the world, young people are suing governments for what is coming to be known as ‘intergenerational theft’. Lawsuits allege that governments are not upholding their constitutional duty to protect the rights of future generations.

Here in Wales, we are ahead of the curve. The 2015 Wellbeing of Future Generations Act commits the Welsh Government to put plans in place for the long term, with the well being of the unborn in mind. What the Act means in practice though, is only beginning to be tested. The future, always a battleground for competing visions, has suddenly become a very crowded place. With the looming threat of climate change, the relationship between present action and future consequence has never been more sharply in focus.

Black Mountain College (BMC) was founded with the intention of getting ready for a very different future. De-carbonising our society, economy and culture is an enormous challenge that requires complex systems thinking. The first step on that journey is an imaginative one. We must imagine how things can be different. And we must imagine (and learn) how to live within the ecological limits of the planet. We need creative and adaptive thinking that puts human wellbeing and flourishing in the context of a healthy biosphere. This mission

demands a different kind of educational experience to most global undergraduate courses, one in which immersion in the landscape, in the rural, is integral to learning.

Again, Wales is ahead of the curve, here, with the new Donaldson ‘Successful Futures’ curriculum, which puts creativity, environmental education and project based learning at the heart of its approach. BMC will provide a seamless progression from the Donaldson curriculum into the undergraduate experience with the aim of producing a new kind of graduate. Not one schooled in a particular subject or discipline, but someone trained to listen, to process information, solve problems, to communicate, to collaborate, and to care.

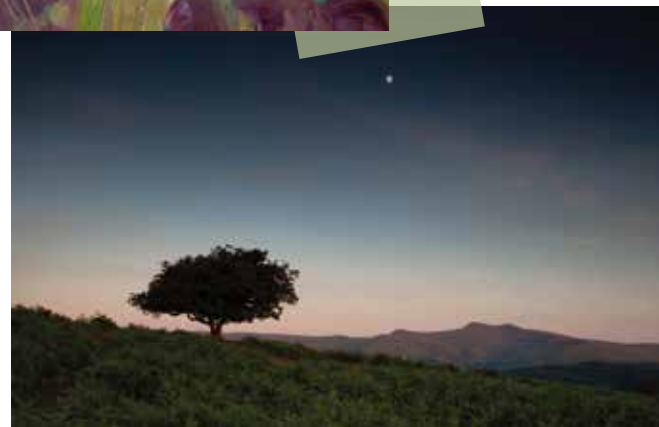
Our first year core curriculum requires all students to study neuroscience, ‘How We Learn’, because understanding both how you individually learn, and how other people do too, is essential if we are to become effective people. The other core unit is ‘Ecology and Morality’ – the hard science of how the earth works and the moral questions for the humans who depend on those systems. In between these two cores are five sensory units designed to hone the skills required to become a lifelong learning, creative and adaptive human: visual arts, sound and music, making and using, theatre and

movement, cooking and growing food. We know from neuroscience that humans process information with all their senses and learn faster when more than one is engaged, and we also know that we learn far more effectively outside. All our classes are capped at 20 and will be taught, in the majority, outside, in the natural classroom of the Brecon Beacons National Park.

At a time when collectively, society seems to have lost its mind in relation to fossil fuels, it is only the natural world that can help us come to our senses again. This is an explicitly rural college – not an agricultural one – a full spectrum appreciation of the human relationship with the natural world, from arts to science, to big data. Second year students will take further core course in modes of inquiry, systems thinking and information technology before specializing in one of three pathways: Land, Arts or Technology. A final year student-led research

project will be based on implementing the Wellbeing of Future Generations Act on the ground in Mid Wales.

We hope that students who go through this rigorous education will



Notes

We hope that students who go through this rigorous education will help the rest of us imagine what the future could be like.

help the rest of us imagine what the future could be like, what, perhaps, it *must* be like, if we are to survive as a species in convivial relationships with each other. And here, most likely, the rural past has much to teach our rural and urban future. Without cheap fossil fuels, without long supply chains, without disposable plastic, without pesticides, fertilisers, doctored seeds and soil-depleting methods, many ancient and rural skills will need to be relearned.

Agroecology, or regenerative agriculture – farming with the grain of nature, building soil carbon, biodiversity, revisiting ancient crop rotations – will be a feature of the undergraduate pathway and vocational courses. And rural skills such as hedge-laying, coppicing, dry-stone walling and low head hydro-power such as the hugely efficient mill wheels, will be part of our further education offering.

These skills, we believe, will not be coming back into fashion as hobbies but as essential elements of a far more sustainable human economy. The story of our relationship with the land and the biosphere holds many lessons for our future, but first we must learn to listen. The National Park and the stunning rural environment of Wales is an essential resource for all of us as we try and turn the ship of humanity away from the impending iceberg – it is classroom, library, museum and laboratory all in one.

Attracting new entrants: the need for good work

Josie Warden, Food, Farming and Countryside Commission

How can we ensure that the next generation are entering the food, farming and agriculture sectors? When a third of all farms are held by persons over the age of 65, with only 3% held by persons below the age of 35, it is clearly an important challenge. Perhaps, however, it is slightly the wrong question. Should we instead be asking how food, farming and agriculture can ensure that they provide the good work that will attract talented and passionate young people?

What is good work?

In a survey carried out by the Commission in which we asked a representative group of over 1,000 young people aged between 16 and 24 about their priorities for future jobs, we see that there are several indicators of good work for this demographic. Perhaps unsurprisingly, good remuneration and reward (88%) and potential for career progression (77%) ranked highly. Ranking similarly highly however, were statements that indicated that they seek a job with purpose. More of them agree that they would be proud to work for a company that protects nature (76%), invests in the local community (76%), helps to tackle climate change (73%), and helps people live healthily (78%), compared to two thirds that agreed it was important to work for companies that were highly profitable.

What can food, farming and agriculture do to attract these youngsters who have a keen sense of social and environmental responsibility? From food production to stewarding the land and helping us to live sustainably within the environment, there is plenty in these sectors to attract young people seeking to make a difference in the world. However, it's possible that these links are not being made, either in the minds of young people or by those promoting careers in the sectors.

Perceptions of careers in food, farming and agriculture

In addition to the national survey, a working group from the Devon locally led inquiry designed their own survey to better understand what 14- and 15-year olds in the county think about careers in food, farming and agriculture. These are important sectors in the county, and attracting the next generation is crucial.

It is surprising to learn that over one in five of them reported that they have no connection at all to food, farming or agriculture. When paired with the information that two thirds of them rank their family as their most important source of career advice, this suggests that there are many students in the county who are currently unlikely to consider a career in the sectors.

When asked to indicate which subjects would most likely lead to their desired careers, the students ranked maths, English and the sciences the highest. However, when asked which subjects would be most useful for careers in food, farming or agriculture they selected animal science, practical and hands-on skills, and environmental science. This suggests that they lack awareness of the true range of careers, and that they may instead have an outdated view of work within the sectors. A lack of awareness risks a perception that the kind of career they want is not available to them within food, farming and agriculture. Indeed, almost a third of the students were neutral about the statement “I think jobs in food and farming offer good, competitive career options”, with another 25% disagreeing to some extent.

This information should help spur on local industry and education institutions to ensure that students have a well-informed perception of the sector and its jobs.

Place

The six million acres that make up the United Kingdom encompass an extraordinary and beautiful collection of landscapes and settlements, replete with political and cultural meaning, both within and between the four nations. Place shapes identity, and identity has become increasingly significant in our political debates.

We wanted to reflect and illuminate these differences throughout our Commission, with locally led inquiries in Cumbria, Lincolnshire and Devon in England, and in Wales, Northern Ireland and Scotland. Each were free to find their own ways of working and pursue those aspects of food, farming and the countryside that felt most pressing to them. The imprints are found throughout the Field Guide for the Future and our final report. In this chapter the inquiries in Northern Ireland, Cumbria and Devon explain their work.

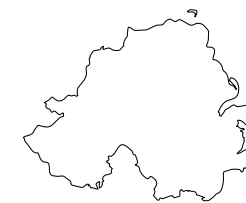
Northern Ireland

Citizens were put at the heart of the inquiry from the outset in Northern Ireland. Views from a wide variety of backgrounds were heard: farmers, shoppers, urban and rural community groups, environmentalists, growers, chefs, traders, young and old. What emerged was a graphic picture of what is wrong with the system, but also the positive steps forward to repair, reconnect and create a better future. We offer a set of outcomes as a framework for what we consider to be the main elements of the needed transition to a sustainable future. These are not intended to be prescriptive but rather are designed to stimulate debate and, together, provide some guidance to towards an agreed future.

Northern Ireland inquiry

John Woods

NI inquiry



The context for the Commission's work in Northern Ireland differs somewhat from the rest of the UK. Ours is a region of small farms with 95% of the land in grass and rough grazing for beef, sheep and dairy. Pro-rata, agriculture employs twice as many people as in Great Britain and our food processing industry employs as many people again. Nearly 80% of what we produce is exported. Our farms are heavily dependent on subsidies: for every pound earned by Northern Ireland farmers, 87 pence comes from CAP payments.

Our border with the Republic of Ireland is porous and, these days, largely invisible. Cross border movements of goods and animals are stitched into the fabric of our economy and many people's lives and livelihoods. The Irish Sea is a significant physical barrier between Northern Ireland and Great Britain with implications for security of food supply and biosecurity. Both the border and the Irish Sea are central to the Brexit controversy. It is difficult to overstate the implications of Brexit for Northern Ireland.

As a devolved jurisdiction we make our own laws on food, farming and environmental issues. We have a record of poor environmental regulation with a catalogue of failures to meet international obligations on biodiversity and carbon emissions. We have a particular challenge in that nearly 30% of our emissions are from agriculture compared with 10% for the rest of the UK.

With no government in place for two and a half years, there has inevitably been a brake on progress in these and many other aspects of life in Northern Ireland. This extends to our emergence from decades of destructive conflict followed by further decades of uneasy peace. Divisions in our society and our attempts to heal them effect just about every aspect of public policy, not least that of food, farming and rural life.

What we have heard from citizens

The Northern Ireland inquiry decided at the outset that it would be citizen led. Evidence of citizens' views was gathered through a series of workshops with people from a wide variety of backgrounds: farmers, shoppers, urban and rural community groups, environmentalists, growers, chefs, traders, young and old.

What emerged was a series of 'disconnects' in the complex system of our food, farming and countryside. While these disconnects paint a graphic picture of what is wrong with the system, we discerned within each negative a positive impulse to repair, reconnect and create a better future.

The disconnect between the efforts required by farmers and their ability to earn a living.

Farmers feel they are under constant pressure to be ever more productive. But when they invest in improved productivity they see little or no economic benefit as the value is captured elsewhere in the supply chain.

The disconnect between the provision of public subsidy and benefits to the public.

While there is broad support for the principle of supporting farming through subsidies, people feel that they don't really work. Some believe they are captured by corporate interests higher up the supply chain, that they penalise farmers that work hardest, whilst others say that they should focus on environmental protection. An end to subsidies could

damage rural communities irreparably and lead to land abandonment and the demise of the small family farm.

The disconnect between how land is used and a healthy environment.

Many farmers regret that commercial pressures drive them to destroy habitats. Many people are angered at farming's role in loss of biodiversity, climate change and pollution, whilst some farmers are angry and fearful about current and future regulation. There is frustration that farming and nature are in conflict while nearly everyone believes they can be mutually supportive, but there is a lack of trust between farmers, environmental organisations and government.

The disconnect between the price of food and the value of food.

People were enthusiastic about our high quality local produce and they like the idea of organic and free range. Good food is seen as expensive and we are all caught up in the expectation that food should be cheap, driven by competition between supermarkets. Thus there is a deep disconnect between what people would prefer to do and what they actually do, between what they want and what they are offered.

The disconnect between producers of food and consumers of food.

Farm shops, market stalls and the Belfast Farmers' Market rate highly for many people. They enjoy dealing directly with food producers and the conviviality of the experience. They regret a system that has evolved where they have little knowledge of where food comes from or who produced it.



The disconnect between the food we eat and food that sustains health.

Our health depends on a good diet of healthy food, but for many people it can be unavailable, too expensive or too difficult to prepare. People want to see a stronger focus on the nutritional value of food and, for some, a shift from meat and dairy towards more plant-based diets. The epidemics of obesity and diabetes are seen as being driven by advertising aimed at school children.



The disconnect between the food we produce in Northern Ireland and the food we eat.

Farming has the potential to increase the availability of healthy food but the food system here is skewed towards meat and dairy and most of what we produce is exported. We also import a huge amount of food, even things that could do well locally. There is a very weak connection between the need/demand for healthy food amongst people in Northern Ireland and local supply.

The disconnect between our relationship with food and our mental health.

Food was described as 'social glue', contributing to both our sense of community and our mental health, but people feel this role is greatly undervalued. The production, preparation and eating of food can make an important contribution to mental health. This can be in structured settings such as care farms, community gardening or cooking skills education aimed at those suffering from poor mental health. Or it can be in the everyday business of growing vegetables or preparing wholesome meals to eat with others.

The disconnect between our education system and the food system.

Food education is mainly provided by supermarkets and multinational corporations. The profile of agriculture has largely disappeared from rural schools and many schools fail to properly support the practical cooking elements of Home Economics. People also feel that children are not adequately taught about diet and health. These failures disproportionately affect those from poorer backgrounds.

The disconnect between people and nature.

The countryside is seen as having an important role in contributing to mental and physical health through public access to green spaces, with lack of access identified as an issue. The isolation experienced by many farmers is seen as contributing to poor mental health and associated with more intensive forms of farming.

The physical disconnect between the remaining fragments of our natural/semi-natural habitats.

One of the primary causes of our significant loss of biodiversity has been the fragmentation of habitat caused by agricultural 'improvement' with the loss of connectivity making it difficult or impossible for species to spread and disperse.

Signposts

There is little consensus on what our farming system is for – is it to maximise exports, to care for the environment or to provide food for the nation? Is our food system there to provide nutritious food or to maximise returns on investment? Is the environment a resource to be exploited for maximum return, a provider of ecosystem services or something with more intrinsic value that should be protected regardless of its utility to humankind? Are rural communities best seen as a kind of green suburbia for commuters with bucolic tastes or should they be nurtured to provide a sense of ‘place’ for the people who live there.

To many people the answer to these questions are obvious and to many others they are equally obvious – but not the same. We suggest that a number of guiding concepts may help us navigate our way through this complexity.



Transition

The disconnects described above, together with the global drivers of climate change and biodiversity loss, combine to make a major transition in food, farming and our relationship with the countryside inevitable. This transition will occur whether we like it or not – arguably it is already occurring and not in a benign way. Our collective challenge is to make it a good transition.

Resilience

Resilience is the ability of a system, such as an individual farm, a local economy, a community or an entire country, to withstand shock and then to adapt. These shocks could be the impact of climate change or global economic shifts, for example, but they can also be opportunities to engage in positive and creative ways to improve the overall performance of the system and the wellbeing of those who are part of it.²²

Prosperity

Prosperity is much more than creating wealth; it is also about thriving and flourishing. We think that prosperity is an essential characteristic of a healthy system – ensuring that everyone has the opportunity to do well in accordance with their hopes and expectations.

Inequality

Perhaps the greatest enemy of prosperity is inequality. Food poverty is growing while profound health inequalities are exacerbated by the cheapest food being the most unhealthy. The eradication of such inequalities must be front of mind as we envision the transition before us, ensuring a just transition where benefits are shared and costs are born by those best placed to do so.

Wellbeing

‘Improving wellbeing for all’ is the over-arching purpose of the Northern Ireland’s Programme for Government.²³ Wellbeing is a holistic concept, bringing together social, environmental, economic and democratic outcomes. Wellbeing is about how society is progressing as a whole and goes well beyond relying on GDP as a measure of social progress to focussing on real improvements to people’s lives.²⁴

Stewardship

For historical and cultural reasons landowners in Northern Ireland tend to focus on rights rather than responsibilities. The Land Matters Task Force reported, ‘There is a resistance to change... For example there is no system of public rights of way across land... and very strong opposition to any form of wider public access’ and ‘deep suspicion about any form of landscape protection, with widespread antipathy to the introduction of National Parks...’.²⁵ The concept of stewardship, however, recognises the rights, responsibilities and social contribution of landowners and dovetails with the emerging policy of ‘public money for public goods’.

Fairness

There is a widespread view in the farming community that the operation of the food supply chain is inherently unfair, with the processors, wholesalers and retailers taking the lion’s share of the profit, leaving little or nothing for the producer. The food and farming system must be fair to all.

Democracy and participation

A successful transition must fully involve a wide cross section of society well beyond the usual interest groups. At stake is not only the economic success of the food and farming industries, but also the wellbeing of whole communities, the health of our people, the state of the local environment and the future of the planet. Innovative forms of participation are especially important in the absence of the Assembly at Stormont.

Notes

Governance

Our Programme for Government commits government to work across departments in order to achieve shared outcomes. Such an approach, if implemented, can have a critical enabling role in the kind of systemic change that a benign transition will require. At a more local level cooperation through community planning is another opportunity to reconnect across the system.

Destructive conflict and peace building

Conflict is an inevitable part of life and can function as a motor for change and development in society if handled constructively. Conflict becomes destructive when it leads to a breakdown of communication, damaging social relations and exacerbating tensions that can lead to violence. Peacebuilding, on the other hand, is both the development of human and institutional capacity for resolving conflicts without violence, and the transformation of the conditions that generate destructive conflict.

Systems leadership

A successful transition will depend on leadership from multiple sources and in multiple ways. Such ‘system leaders’ need to be open minded and to see where they may be getting things wrong; to cultivate the ability to see the larger system from other people’s point of view; and the need to shift the focus from problem-solving to co-creating the future, from a focus on deficits to the potential of the positives. Such leaders are potentially everywhere in society and we need to unlock their capacity to provide leadership.²⁶

The way ahead

The challenge for Northern Ireland is to affect a transition to a safe, secure, inclusive food and farming system, a flourishing rural economy and a sustainable and accessible countryside.

The Food, Farming and Countryside Commission's main report identifies the fundamental changes needed: farming systems must change radically to become more sustainable; farming and food systems must work together for human and planetary health; and the nation should choose how to make best use of its land. The citizens who attended our workshops came up with a wide range of potential solutions to the many 'disconnects' they identified.

These changes are explored in the Northern Ireland inquiry's final report (to be published in September 2019). It is clear to us, however, that a benign and just transition will only be achieved in Northern Ireland through fundamentally reconsidering the purpose of the complex system that governs so much of our health, our environment, our economy and our whole way of life.

This will require a significant and sustained intervention to agree a way forward based on a collective vision that commands public confidence. The task of such an intervention is to go beyond the many perceptions and misperceptions that exist, build the trust needed for effective working relationships to be developed and build consensus on practical ways forward.

Since the collapse of Stormont in January 2017, political direction has been absent from government and there are limits to what civil servants can and should do. We believe it is up to civil society organisations to offer the leadership needed to tackle this great challenge. Northern Ireland is a small place and it is possible to bring the key stakeholders from government and wider society together in one room.

We therefore offer the following outcomes as a framework for what we consider to be the main elements of the needed transition to a sustainable future. These are not intended to be prescriptive but rather are designed to stimulate debate and, together with the signposts above, provide some guidance to towards an agreed future.

Notes

Suggested outcomes

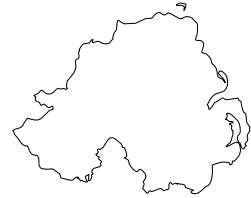
- The efforts and investments made by farmers are rewarded through appropriate farm incomes and all those working in the agriculture and food industries earn a decent living.
- We farm in a way that conserves and enriches our soils, eliminates pollution, restores biodiversity and reduces carbon emissions.
- When public money is spent it is done in a way that contributes to the common good.
- Food of high quality is produced and its value is recognised through the price it commands.
- The food available to people is nutritious and diverse and forms a healthy diet affordable by all.
- Resilience is built through a shift towards satisfying local food demand from local produce.
- Relationships are built between producers and consumers of our food.
- A culture of good food and its social value is nurtured and celebrated.
- Young people understand and appreciate the relationships between farming, food, environment and health.
- The countryside is accessible to all and people are able to reconnect with nature.



Reflections on the process

John Woods

NI inquiry



As the members of the FFCC Northern Ireland inquiry gathered together in a room for the first time, there was an air of excitement but also trepidation and a little doubt. It was exciting to be part of a group tasked with looking at the entire future of our food, farming and countryside as part of a UK wide process. Some trepidation was to be expected given the scale of the challenge, the broad range of interests involved and the demanding context ranging from Brexit to climate disruption and biodiversity collapse. And then there was that nagging doubt about our own role in this. Granted, we were a diverse group of people with a range of social, environmental, farming, food and academic interests but that did not necessarily entitle us to take on such a role.

It was from that largely unspoken element of doubt that the defining feature of the Northern Ireland inquiry emerged. One of our group simply said that whatever else we do, we should ensure that we are citizen-led. Once heard, the point seemed self-evident and shaped the work of the inquiry over the following year. The job, however, was not to find out what citizens think and then merely to report it, but rather to use what citizens would tell us as the raw material for our own deliberations. That way, the agenda would be set by citizens, and the experience and expertise of the inquiry members would be brought to bear to draw some conclusions from what we had heard.

It is easy enough to commit to being citizen-led but putting it into practice is rather more challenging. How to speak to enough people from different backgrounds? What is enough? What kind of diversity should be targeted – gender, age, geographical, urban/rural, age, disability, socio-economic background, and in Northern Ireland, religious/community identity? What can be done on a modest budget? Are there things out there already

happening that we can build on? Who can help us? What creative ways might there be to engage people meaningfully in this exciting piece of work?

Luckily, Northern Ireland is no stranger to creative means of public engagement. The Building Change Trust has developed a toolkit for civic participation with information on a wide range of methodologies from around the world.²⁷ A number of these have been used locally and there are some very experienced and creative practitioners around.

For us the key was the wonderful facilitator we engaged to help us design the process and make the most of it. The result was a series of workshops held across Northern Ireland. Each workshop lasted two hours or so in relaxed surroundings – a pub, a community hall, a wildlife sanctuary – and each had the same format that aimed to maximise discussion and interaction among participants. It was all about getting people to talk and to listen to each other.

It was all about getting people to talk and to listen to each other.

Perhaps the greatest challenge in designing these workshops was how to start – what would be the ‘calling question’? It is not difficult to imagine the agonies that went into crafting a question that would bring people into a discussion on such a huge issue as the entire future of food, farming and the countryside. Either it was too general or too particular, too open or too leading; there did not seem to be such a question. Our inspired facilitator suggested we forget words and use images. And so it was that every workshop started off with participants choosing a single photo from a wide range of strong images of all things food, farming and countryside, and to talk a little about what it

meant to them. That produced some remarkable stories. At the end of each workshop, participants placed the photos on the floor and made connections between them in what proved to be a very informative process.

The theme of connection is one that emerged early on in the inquiry and then reemerged as disconnection and reconnection. In many ways this was the central insight of the whole project: the relationships between how we farm, how we produce food, how we eat food, how we care for our health, how we care for the environment, and how we sustain rural communities form a complex system. ‘Systems thinking’ tells us that the essential characteristic of such complex systems is that no one is in control – if someone was in control the system would not be malfunctioning. We can deal with this complexity by building a vision that is widely shared across society, enabling many types of leadership, recognising our interdependence, and tackling the ‘disconnects’ by focusing on relationships across the system.²⁸

A major part of the challenge is to identify where are the most effective places to intervene in the system: to discover what actions can exert the most leverage to have a benign impact.³⁰ This could include some changes to the ‘rule’, such as how subsidies are paid or changes to how rules are applied such as the way regulation is carried out, or more strategic changes such as how we plan land use. Our inquiry concluded that the vital place to intervene is near the top of this hierarchy of leverage points – ‘redefining the goals of the system’.

The theme of connection is one that emerged early on in the inquiry and then reemerged as disconnection and reconnection. In many ways this was the central insight of the whole project: the relationships between how we farm, how we produce food, how we eat food, how we care for our health, how we care for the environment, and how we sustain rural communities form a complex system.

Notes

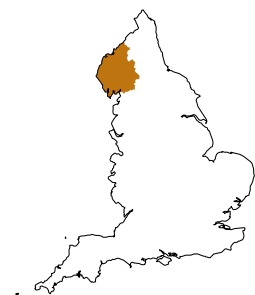
Cumbria

The local inquiry in Cumbria sought to identify where there are gaps in farm support for specific communities or groups, and where investigations, activities and consensus align and diverge. Such an analysis will provide a better steer on how to use future funds to avoid repetition and gaps, as well as to support innovation and make a positive difference in the uplands.

Advice and relationship management for Cumbrian upland farming post-Brexit

Prof. Lois Mansfield, University of Cumbria

Cumbria inquiry



Context for inquiry

The Cumbrian uplands are a product of those that have lived, worked and appreciated them for centuries. They are enjoyed by over 19 million visitors a year. Supporting a resilient, viable hill farming sector will provide not only high-quality food, but a range of public goods and services from which the whole of society benefits. Valuing hill farming values our uplands.

Upland farming businesses in the UK have been, and continue to be, some of the most marginal and fragile in terms of financial sustainability and resilience. However, beyond food production, these farms provide a wide range of public goods and ecosystem services as well as underpinning social and economic activity in sparsely populated, rural areas.

With the UK's exit from the EU imminent, an opportunity has presented itself to reshape farm support in line with developing government policy²⁹. In response, several initiatives and networks have been set up in Cumbria, alongside operating projects to investigate and support the future of upland farming in the county post Brexit. They draw on a long experience of innovation, project

development and programme operation spanning over forty years in the county.

Emphasis has been placed on the shift towards payments for natural capital, public goods and ecosystem services to fit government agendas. These changes would see significant changes in farming practices and the role of farmers within the landscape, but are not the panacea for all ills; funds will be limited, not all businesses will fit the criteria. Nevertheless, those businesses which may fall 'outside' the proposed funding envelope play a crucial role in the greater social and economic fabric of upland Cumbria, its communities, businesses and landscapes through its production of the county's unique cultural capital. The ability to fund parts and not the whole could lead to a mosaic of extensive and intensively farmed landscapes that moves away from that desired by society as a whole, and which will threaten the Government's own vision of uplands:

The upland way of life, the unique food produced, and the great art that these landscapes have inspired attract visitors from around the world.

The complexity presented by contemporary and developing initiatives, the multiple stakeholders and their diverse ways of working make it difficult to ascertain whether these types of farm support will address the fundamental continuation of the upland sector in Cumbria. It is hard to define where they complement each other to create greater synergies

or where they conflict, undermining and eroding any positives achieved. If UK society wishes to benefit from these additional values, which upland farming brings along with its productive capacity for future food security, then it is imperative to continue to provide appropriate support to ensure business viability.

Methodology

This research was conducted through semi-structured interviews in two stages:

- Stage one focused on understanding the current farm support provision made available by the stakeholders interviewed.
- Stage two employed an open dialogue focusing on three key issues for upland farm support to derive the gap analysis:
 - What needs rectifying now?
 - How do farming communities need to change in the future?
 - What activities are organisations considering offering in the future?

In this research the initiatives were explored through the application of a 'capitals' approach. Capital is a term used by economists to explore the assets a business has available either as an input into or, as an output of, that operation. This research reviewed farm support initiatives against the following capitals: natural or environmental; physical; human; financial; social and cultural. This was to ensure that a range of benefit and value was considered, from the way farming produces landscape for tourism to direct employment.



Support provided by existing initiatives

Thirty-three independent initiatives were explored (excluding Basic Payment Scheme) of which twenty-four were specifically designed to support hill farming. With some, the funding just happens to be going into hill farms (e.g. Countryside Stewardship) as it is a national scheme with options suiting the hill farm system, whilst others have focussed parts for hill farms, such as the Westmorland Dales HLF project.

Overall support constitutes money as well as in-kind advice and guidance, the two should go hand in hand. The types of support were varied, covering: maintenance and enhancement of biodiversity; water management; support for cultural landscapes, processes and structures; developing relationships; advocacy; finance and advice.

There is a general pattern that government sponsored schemes focused on natural capital, whereas NGOs and charities look to support the sector more broadly through complex configurations of capital, indicative of more holistic and integrated provision. In fact, the latter groupings are much less interested in natural capital, as in effect, this is already catered for and thus their job, it could be argued, is to support the other capital needs of hill farming which have not been addressed by government policy/funding. It is unlikely this is by design, rather seeing a need/gap and filling it. In other words, these organisations have not set out to specifically plug capital gaps, their approach is a reaction rather than a proactive decision.

Hill farm support is provided by a range of organisations from government agencies, to NGOs to charities. Size of operations varied considerably, some are dominated by farmer membership, others are partnerships and alliances of different land management stakeholder organisations. For example, the Federation of Cumbria Commoners has 700 members and the Farmers Network 1,123. In contrast, the National Trust now has over 5 million members and the Lake District Partnership has over 20 member organisations. Some have many employees, others very few; although this is not necessarily dependant on spend.

It is clear where the bulk of the finance comes from for hill farming, i.e. government schemes, which focus strongly on biodiversity, water management and rural development (read

productivity and growth) – in line with the current European funding regime. A small percentage is used to cover all the other areas which address a range of challenges not tackled by government funding, but essential to building business resilience in hill farming e.g. training vouchers. Consequently, natural capital is the greatest asset supported financially, followed by physical capital. Funding is magnitudes lower for human, social and cultural capital.

Gap analysis of existing support initiatives

The second half of the research conducted a gap analysis of hill farming support going forward. The three questions generated a great deal of discussion, however, the support organisations interviewed for this project demonstrated a remarkable level of consistency in their views.

Firstly, and with respect to gaps which need addressing currently, the following were identified: flaws within systems & processes; lack of advice;

more business support; more Continuing Professional Development (CPD); the negative effects of power relations; and gaps in money and grants.

The second question explored what farming communities needed to change to fit the new agenda coming post-Brexit. This focused on high quality guidance providing appropriate knowledge that can help them make the right decisions for their business, whether it be diversification or even withdrawal from farming altogether.

Finally, interviewees talked about the types of support they are considering developing. Whilst for

some this was almost impossible given the current political vacuum, others spoke in relation to that described in the Agriculture Bill and some forms of Environmental Land Management Schemes and the Shared Prosperity Fund; others accepted there would be a continued need for much of the support they currently provided. The types of support talked about included: the nature of an advisory service; integrated funding; relationship management, and they were looking for the ability of offer localised services fitting local needs.



The geographical spread is varied; from those schemes open to all in Cumbria (e.g. Countryside Stewardship), to those focused on land ownership patterns (e.g. National Trust) or some with very focused geographies (e.g. Westmorland Dales Heritage Lottery Fund). Initiatives vary from one year to twenty, shorter schemes are typically those run by local organisations filling gaps identified to help farm businesses and farm families to develop resilience.

Notes

Recommendations

Two main themes which came up over again, were the provision of a good quality, relevant advisory service and better relationship management. Going forward there are two main recommendations from this local inquiry:

1. The provision of a local advisory service

The research suggests that a well-structured flexible advisory service would be appropriate for hill farming resilience and growth in Cumbria post Brexit. To include:

- Advisory staff who offer integrated advice to a suite of farm businesses on a 1:1 basis to give continuity long term.
- Knowledge provision covering (not exclusively): diversification, business planning, public goods, cultural/social values, environmental management, working with visitors and the public, transition management & change, tourism, innovation and new markets, funding options.
- CPD skills offer: IT, farm accounts, 10-year business planning, ELMS, working with the public, additional qualifications.
- Flexible delivery style suited to farmers using a range of formats to include: facilitation of groups, farm visits, mentoring, 1:1 advice, talks, guest lectures, short training courses which are localised across the county to limit travel times.
- Application of localism: appropriate traditional skills to the area, advisors drawn from local/ regional expertise to engender trust; operates at a sub catchment to generate collaboration and fit the Environmental Land Management Scheme agenda.
- Exit & Entry Management: new entrant publicity & CPD programme, succession planning, brokerage to set up a share farming system, Brexit denial support, cessation of farming opportunity planning.

The need for a good quality relevant advisory service sits well with the broader strategic drivers of the forthcoming Agriculture Act and with those

of the Local Industrial Strategy for Cumbria and the related Cumbria Rural & Visitor Economy Growth Plan (CRVEGP). This plan builds on their initial publication of the Strategic Plan for Cumbria (2014). The CRVEGP states (p7): ‘The crucial role of agriculture in continuing to shape and manage the natural environment of Cumbria also cannot be underestimated, nor the role of farming and farmers in providing critical social glue in our rural areas’.

2. Relationship management

The second area in need of development to support hill farming post-Brexit is in improving relationship management. Tackling each of these areas requires different approaches and support. Part of this process will be to support organisations that provide advocacy for many voices rather than just one. There are seven areas to consider here:

- Visitors and the public – farmer level customer engagement training, better quality interpretation in visitor centres.
- Environmental organisations – training for conservation officers to understand hill farm management, systems and practices.



- The RPA – continuity of case officers, speeding up claims and query responses.
- Landlords – review of agricultural tenancy structures, systems and legislation. Clearer agreements on what each party expects with built in support. Provision of advocacy, arbitration and conciliation services.

- The farm family – farm business planning is made intergenerational using a framework such as the Sustainable Livelihoods Approach.
- The neighbours – developing collaborative working and trust through facilitation for area payments, shared challenges to solve (e.g. natural flood management systems) and community renewables provision.
- Influencers – facilitating understanding of the key influencers, e.g. National Park authorities, WHS, utility companies, charities, journalists and environmental campaigners, and their aims and objectives.

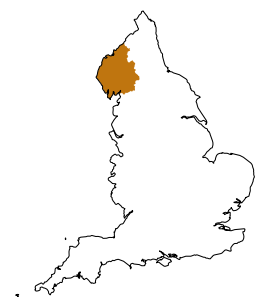
Relationship management is probably one of the most complex and difficult areas to tackle in broader land resource management but is actually one of the most essential. Without compromise, common vision and agreement it is almost impossible to achieve the goals and objectives of any stakeholder which relies on shared property resources.

A detailed report of the Cumbria locally led inquiry is available at www.bit.ly/ffccCumbria.

Reflection on the Cumbria locally led inquiry

Josie Warden, Food, Farming and Countryside Commission

Cumbria inquiry



Cumbria is the third largest county in England, and largely rural. Its population of half a million is dwarfed by tens of millions of visitors each year, many of them heading to the iconic Lake District. Recently inscribed as a UNESCO World Heritage site for its cultural landscape, the area is subject to intense debates about the future of upland farming and the impacts of potential policy changes on local communities, farming and non-farming. And the Lake District is only one part of Cumbria's story. A range of landscapes and challenges are found across the county, from difficulties with transport and affordable housing, to an ageing population, to areas of severe deprivation.

In July 2018 we spoke to local stakeholders across farming, conservation, local government and community engagement, from Barrow-in-Furness to Penrith, to look at the best way to approach the Commission's inquiry in the county.

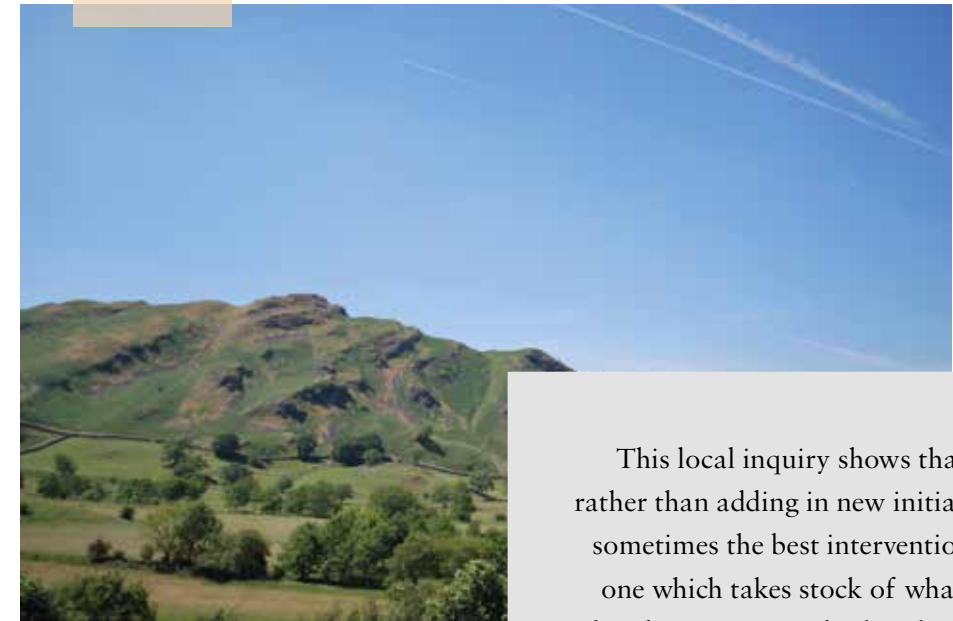
Whilst the Lake District and its uplands do not constitute or reflect the needs of the entire county, we felt that, within the remit of this Commission, the challenges facing farmers and communities within that region of the county exemplify the difficult discussions and decisions which are taking place in the sector at present. As a result, it was

agreed with stakeholders that the uplands would be the focus of the Cumbria work. The Commission's UK bicycle tour, however, visited other parts of the county and explored the issues they are facing.

The future of the uplands

There is significant activity from government, industry and the third sector taking place in the county, particularly centred on the uplands. As a result, many of the organisations we spoke to were feeling overwhelmed by consultation and activities. So much so, that whilst organisations were supportive of the Commission focusing on the county, they had little time to support the work. They told us that rather than convening our own network we should instead work in partnership with existing initiatives. This insight set the direction for the Cumbrian work. What emerged from discussions was the need for an inquiry which made sense of the existing work taking place in the county, rather than something which sought to add another layer to it.

Prof. Lois Mansfield at the University of Cumbria designed and undertook research to answer this challenge. The work which is outlined here highlights the need for more joined up and



This local inquiry shows that, rather than adding in new initiatives, sometimes the best intervention is one which takes stock of what is already going on and asks where the needs and gaps are.

holistic approaches to farm support in the county. In times of change many organisations seek to provide support and resources, but without an overall account of what is taking place, duplication or gaps in support emerge. For farmers and communities this multi-initiative landscape can be complex and hard to navigate. This research identifies two needs which are going unfulfilled by existing farm support initiatives and proposes recommendations for addressing them that will provide helpful background to organisations, both local and national, who wish to support farmers and communities.

This local inquiry shows that, rather than adding in new initiatives, sometimes the best intervention is one which takes stock of what is already going on, and asks where the needs and gaps are. The University, and Prof. Mansfield, were perfectly placed to lead on this work. We hope that it proves useful to local and national organisations who work with farmers and farming communities in the Cumbria uplands.

Notes

Devon

Chaired by Commissioner David Fursdon, the local inquiry in Devon convened a diverse group of stakeholders to shape the research that would enable them both to contribute to the Commission's work, and help make progress on solving their own challenges. Four working groups formed, on the importance of Devon's grasslands; attracting young people into farming; local reactions to the global challenges of climate breakdown and biodiversity loss; and healthy and thriving communities. The results, drawn from the research they commissioned and examples of good practice, present compelling recommendations and responses to the challenges that Devon faces in the present and future.

Devon inquiry

Devon Committee and University of Exeter

Devon inquiry



The largest of the south west counties, Devon is largely rural and has a population of around 780,000 people. It boasts two National Parks, five AONBs and two coastlines. Food, farming and the countryside are critical to the local economy: agriculture employs around 19,000 people directly, to say nothing of the wider network it supports. The majority of farmland is either permanent or temporary grass with smaller proportions of arable and woodland.

The Devon locally led inquiry was chaired by RSA Food, Farming and Countryside Commissioner

and Devonian, David Fursdon. He convened a Committee of stakeholders from farming, conservation, the food industry, education and community development. This Committee shaped the local inquiry and identified four themes to investigate: environment and biodiversity; new entrants to farming; health and thriving communities; Devon's grasslands.

The findings of these working groups are summarised below. For full details of the work and all references, see the separate Devon locally led inquiry report at www.bit.ly/ffccDevon.

Environment and biodiversity: key messages

Given the urgent global challenges that climate breakdown and biodiversity loss present, it was important to the Devon Committee that they reflect on the local impacts, and on opportunities to take proactive and responsible steps in making change.

Climate adaptation and mitigation

Because of its diversity of habitats and land use, Devon is well placed to implement more nature-based solutions to climate breakdown. The key areas for this are the uplands where blanket bog and carbon-rich peatlands need to be protected and brought into favourable condition to secure their embedded carbon; semi-natural grasslands need

to be maintained and restored; riparian corridors need to be widened and taken out of agricultural use; and there needs to be a greater emphasis on soil health. On arable farmland, a move to min- or no-till should be encouraged, alongside new plant varieties, provided this does not lead to an increase in herbicide use.

Agroforestry and silvopasture are viewed as opportunities to support farmers to integrate more trees into their farming business and to promote more woodland creation. Planting the right tree in the right place would have a significant benefit in sequestering more carbon as well as protecting soils and watercourses. It would also deliver a range of

Because of its diversity of habitats and land use, Devon is well placed to implement more nature-based solutions to climate breakdown.

other benefits such as increased biodiversity, diversification of farm income, shelter for livestock and improved animal health.

The above proposals need to be backed up by action to reduce greenhouse gas emissions through demand-focussed measures as well, such as cutting

food waste, eating more locally produced food and promoting healthy and balanced diets.

Biodiversity loss

Nature is declining globally at rates unprecedented in human history. Devon has not escaped this downward trend; the *Devon Bird Atlas (2016)* showed declines of 60 bird species since the previous Atlas was published in 1988.

Productive farming and biodiversity in Devon can co-exist on the same land. The landscape matrix which has evolved over time has the potential, with some adjustments and the right changes to management practices, to deliver great products and great wildlife in the future. Areas of high-nature value are important, more so when they are connected by nature-rich farmland. For biodiversity, scale matters; landscape-scale partnerships between landowners, supported by a knowledgeable environmental advisor, are key to deliver species recovery. All land, even land that is currently

New entrants to farming: key messages

The new entrants working group explored who will be the future of the food and farming sector in Devon – the development of the next generation. This question is part of the broader conversation of what we want the future of farming and the countryside to look like, and how technology and other forces will therefore be used by the sector. In terms of who will own and operate the farms, attracting new people into the sector is critical, not only in Devon but across the UK. The median age of the farming population in the UK rose to 60 in 2016, with a third of all farms held by persons over the age of 65 and only 3% held by persons below the age of 35. Having a generation ready to take over for outgoing operators, as well as begin vibrant new enterprises within this important primary production sector, is necessary to support

depleted, can be transformed to deliver better biodiversity outcomes; this should be rewarded on its own merits as a public good.

To support local action on biodiversity, the group recommends that Devon's natural assets be mapped to show areas of biodiversity richness. Financial support could then be directed to those landowners who are willing to create wildlife corridors between biodiversity hotspots. This would support the ambition expressed in the *25-Year Plan for the Environment* to create a Nature Recovery Network covering 500,000 hectares of new land that is well-managed for nature. Devon is also well placed to deliver on the recommendations of the Lawton report, *Making Space for Nature*, that called for more, bigger, better and joined-up areas for nature. Whilst encouraging natural processes to take precedence in these areas, food production can still be one of the outcomes.

Advice

Reliable, independent, evidence-based advice is crucial to help farmers and landowners become part of the solution that's needed to address these threats, given the complexity and interconnectedness of climate breakdown mitigation and adaptation and biodiversity resilience. The provision of independent, trusted advice is vital, especially to aid anticipated transitions in farm support.

domestic food security, rural economic vitality, and environmental management.

Engaging new people in the sector

Chaired by the outgoing Principal of South Devon College, Stephen Criddle OBE, the new entrants group in Devon investigated how to encourage local young people to consider a career in the food and farming sector. Despite living in a largely rural county, many Devon youngsters will not have considered a career in the sector, especially those who have no familial links to the industry.

Working with Beth Dooley at the University of Exeter, the working group have designed and administered an attitudinal survey of Year 9 students in the county (14-15 year olds). This

survey is designed to better understand what these young people are seeking from a future career, and their current perceptions of a career in food and farming. From these data the working group are seeking to provide recommendations for better encouraging new entrants to the sector by

Devon's grasslands: key messages

Concerns about diet-related health issues, such as diabetes, and the impact on global warming from methane emissions, has given rise to concerns about meat consumption in our diets. These discussions are important to Devon, as a county with a focus on pasture fed meat and dairy farming. The work of this group intersected with research by the Commission on this subject.

Dairy and livestock farming on pasture is a feature of Devon agriculture. Grassland forms an important part of the county's landscape, supporting the economic benefits of agriculture, the food industry and leisure and tourism. Of Devon's 485,751.5 ha of land under commercial farm holdings (72.4 % of its total land), over 75% are grasslands.

In Devon, where grass is the land's best output, promoting grazing systems makes sense from a strategic land use standpoint.

Given the soils predominantly covering the landscape and topography of Devon, grassland is an effective crop production choice, well-suited to the county. Keeping these soils covered is crucial to prevent runoff, and grasslands' dense rooting and earthworm

populations provide good soil structure and friable stable topsoils. Devon's significantly higher annual and winter rainfall averages (in comparison to areas used predominantly for other types of production, e.g. arable in the South East of England), makes it particularly suitable for pasture cover. High moisture content or, at worst, waterlogged fields mean that the heavy machinery more associated with arable food production should often not be used between mid-October and end of March (depending on the season) due to high risk of soil compaction.

demonstrating how their existing hopes for careers could be met within food and farming.

The survey results are currently being analysed and the full results will be available in the Devon report.

In short, this area of the country has conditions particularly suitable for growing grass rather than other agricultural products. This farming of grassland enables non-human edible foods (i.e. grass) to become human edible through conversion into animal protein.

Flying the flag for grass

A resource unique to Devon is the North Wyke Farm Platform. Housed under Rothamsted Research, a research centre aimed at advancing scientific understanding and technological solutions around agriculture and food. Recent research from North Wyke highlights the existing literature around differences in meat quality based upon the feed profiles of livestock, resulting in significant differences in omega-3 and omega-6 ratios. Particularly when finished on grass and clover, fresh red meat tends to have an omega-6:omega-3 ratio of 2:1, which is drastically lower than the typical Western diet of 12:1 and even lower than the medically recommended 3:1 to avoid risk of cardiovascular disease. Given that red meat is typically low in total fat, dietary risks have been linked to the high proportions of short chain saturated fatty acids (SFA), e.g. C16:0 (palmitic acid), of which there tend to be lower quantities in grass-fed red meat as well. Thus, the message that red meat is bad for you hinges more on the fact that not all red meat is created equal – it depends on the quality of the meat consumed as part of a balanced diet.

The work in Devon aligns with the research that the Commission undertook in; 'Building a deliberative process around the EAT-Lancet report', found in the Health section (p.22). Participants from the Devon group were involved in this research.

Nuance is needed in identifying what contribution to food production a landscape is best suited to make. And in appreciating the different health and environmental impacts from meat and

dairy production under different farming practices and landscape conditions.

In Devon, where grass is the land's best output, promoting grazing systems makes sense from a strategic land-use standpoint. The county's high quality grass provides an excellent basis for producing high quality meat through low intensity farming



Health and thriving communities: key messages

This subgroup which looked at three key issues at the intersection of public health and food and farming.

Health amongst the farming community

People are at the heart of the south west's agricultural system. However, like other regions, the south west suffers from ill health amongst its farming community. Rural disconnectedness and social isolation, financial strain and uncertainty about the future all impact on the health of farmers and their families.

There are several initiatives in Devon, and neighbouring Cornwall, which are working on this important issue including the Farming Community Network (FCN), FarmCornwall, the Derek Mead Clinic, and a planned new initiative, the Farming Health Hub, all of which are doing very important work in the region. More information about these initiatives is available on p.33.

Given the interconnectedness of business health, physical health and mental health, it is critical that support services reflect these relationships and focus on preventative interventions. Significant changes to farming are anticipated and the ramifications on farmer health is a ticking time bomb, especially amongst older generations who are already less likely to seek support, these support services are likely to be increasingly in demand. Farmer support services, offered by organisations such as FCN, will

practices. When seen as part of the UK's food production system, this could support diets which include less but higher quality meat.

There are significant gaps in our knowledge of how to optimally manage grasslands for the multiple functions they provide; thus, on-going research and knowledge exchange is vital.

The Pipers Farm case study in the Health section (p.51) gives an example of Devon farms capitalising on the county's excellent pasture land to produce less, higher quality meat.

become increasingly critical and need to be highly visible to the farming and health communities. In Devon the FCN were invited by the Clinical Commissioning Group to present their services to all lead GPs and Practice Managers, thereby raising their profile. Examples like this could be replicated in other areas of the country.

It is also recommended that organisations working with the farming community, across public, third and private sectors, from vets to agronomists to accountants, should be alert to the increased risk amongst the community and make themselves aware of the support services offered locally, in order that they can signpost support where feasible.

Preparing young people for healthier lives

Outdoor education is important for its role in keeping children fit and healthy and its ability to educate on the provenance of food.

Forthcoming changes to the Ofsted inspection framework look set to provide an opportunity for schools to integrate outdoor learning into their curriculum. Depending on the final draft, creative curricula offered by schools, including an emphasis on outdoor learning /teaching strategies, will be favoured in order to develop a balanced child with not only specific knowledge but the qualities and skills for the future that allow him or her to continue learning. To help schools take up this opportunity:

- Providers of outdoor education should ensure that their services clearly demonstrate a link to the demands of the national curriculum. The NFU's FarmVenture programme is a good example of this.
- Defra and the DfE should align incentives to encourage outdoor learning. This includes ensuring that future funding schemes from Defra allow farmers to claim payments for time spent on providing outdoor learning activities for young people.

However, it can be difficult for schools to decide which provider and activity to go with. Devon has two exemplar organisations which help schools to access outdoor learning education. Sustainable outdoor learning in Devon (SOLID) and Peninsula Research in Outdoor Learning (PRinOL) have different models, but both provide teachers with a range of options via a single contact point. Other areas of the country should look at these models as best practice.

Outdoor learning providers in Devon have found that providing training for teachers is the best route to encouraging the uptake of their services. SOLID's 'one-stop-shop' approach is an effective model of offering training to help teachers identify which of the many learning opportunities are most

suitable for them. This is a model which should be rolled out in other areas.

Sustainable outdoor learning in Devon case study

SOLID is an umbrella organisation for the numerous individual organisations

throughout Devon providing outdoor learning opportunities to children. It aims to bring together all of the expertise in the county and share best practice, promote joint projects, advise local authorities as a leading authority and unified voice, and support teachers. It is the only organisation like this in the country, made up of organisations such as Devon Wildlife Trust, Clinton Devon Estates, the Outdoors Group, RHS Campaign

for School Gardening, Dartmoor National Park, etc. SOLID hosts an annual conference on outdoor learning involving a full day of teacher training and awareness raising by practitioners.

Procurement

The 'buy local' issue has been a prominent feature in public discussion for several years. There is opportunity in Devon for local procurement to support sustainable farming. This requires actions at both national and local level.

At the national level, the group recommends that to influence sustainable food procurement by public institutions, beyond central government and associated organisations, Government Buying Standards compliance and use of the 'Balanced Scorecard' within public service contracts should be mandatory. The need for such improved public value from public spending was reinforced by the Barber Report in 2017. In doing this, existing mechanisms and indications would be strengthened to ensure sustainability is incorporated and maintained within public food procurement for local communities, small businesses, community stakeholders and the environment.

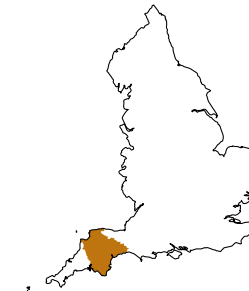
At the local level, and in order for local producers to facilitate such procurement, the group recommends that farmers in Devon should work collaboratively to offer sustainable food services to local procurement offices, e.g. schools and hospitals. Examples of such collaboration already exists in services which supply the public, such as Community Supported Agriculture (CSA) businesses which have burgeoned in response to customers being willing to pay money upfront for the farmers' seeds, inputs, and operating costs for the season to have a guaranteed supply of fresh local produce.

In a final recommendation the group noted that public spaces in Devon, and beyond, should be utilised to raise awareness and increase social interaction around food. A best practice example, which could be replicated in Devon, is the Lambeth GPs group who have raised garden beds at all their surgery locations. These are tended by patients and have been supported by the Clinical Commissioning Group.

Reflections on the inquiry

Josie Warden, Food, Farming and Countryside Commission

Devon inquiry



In looking to convene a locally led inquiry in Devon we approached Commissioner David Fursdon to advise on the best approach. David generously offered to chair the work and convened a Committee of people from a range of organisations, from health to farming to community development, including some members from neighbouring Cornwall. Together this Committee identified key challenges for the county which they have explored in working groups, inviting additional input from other stakeholders.

Each working group has functioned differently, some choosing to conduct primary research, others collating input from their networks through roundtable meetings. Beth Dooley and Prof. Matt Lobley from the University of Exeter partnered on the inquiry to provide research skills and expert advice to the Committee and working groups. Their hard work and local support has been invaluable.

The enthusiasm from the Committee has been inspiring, and the range of skills and experiences they brought to bear are a testament to the quality of the south west's agricultural sector and its civil society. Navigating limited resources and other time commitments as individuals, they have generated a body of information and recommendations which illuminates the challenges and opportunities facing Devon, and its regional neighbours.

We were keen that the Committee decide themselves what they wished to explore within the realm of food, farming and countryside in Devon. They are the best judges of what is important locally and what interests they think will gain traction. The themes they landed on translate across to the issues that the main Commission has focussed on, and the insights gathered have been influential in the work of the Commission.

The Commission believed that providing an opportunity and space for local stakeholders to fill with their own ideas and insights would tap into local needs in a way that national work cannot do. Holding those spaces open and trusting that the right thing emerges can feel nerve-wracking at the start, as each party looks to the other for direction. Asking for people to volunteer their time is tricky. It is not always easy to balance expectations and aspirations with the resources that are available, nor to balance the energy and interests of a large group with different individual interests. But the quality and breadth of the work that has emerged from Devon amply evidences the importance of national commissions taking this approach. We hope that their insights and recommendations continue to inspire action in Devon, Cornwall and further afield.

A detailed report of the Devon locally led inquiry is available at www.bit.ly/ffccDevon.

Notes

Learning in Action

From the importance of peer-to-peer relationships in achieving ongoing engagement and change, to the usefulness of sharing the difficulties of trying something new, there is much to be learned from the voices in this book.

The Field Guide for the Future is a glimpse of all the extraordinary, innovative and brave things happening on farms, in businesses and in communities all around the UK. These stories have helped shape the RSA Food, Farming and Countryside Commission's practical framework for change in our final report – Our Future in the Land.

Sometimes the distance between policy and practice can seem a long one.

Everywhere we went we found people enacting an approach to their work and in their communities in unassuming, straightforward and pragmatic ways.

Learning in Action

In the practical framework for change in 'Our Future in the Land' we talk about the leadership needed to work on the critical issues in front of us, a new approach which:

- Acknowledges with humility that leaders in the past have not had all the answers – or else we would not be facing the challenges we do.
- Is genuinely curious, inquiring and open about where possible solutions might come from – not advocating more of the same.
- Collaborates with other leaders wherever they are – from the grassroots to established positions, young people and elders.
- Appreciates the importance of diversity, inviting people with different perspectives into respectful dialogue, keeping the concerns of the whole system in view.
- Focusses squarely on the actions needed, sticking with the challenge of working through real tensions and dilemmas.
- Learns fast, in cycles of action, reflection, learning, and adaptation.

We also talk about supporting and resourcing the practical actions for change. Whilst people often have the personal qualities to lead, they do not necessarily have the resources to help them – the tools, the finances, the technologies, the support. Nonetheless, people are getting on and doing things.

So what do they need, and how can we help?

People need connection – for inspiration, for support, for challenge, for information.

Using social media for new ways of meeting...

"I wouldn't have been begun to make any of these changes [to no-till farming] if I hadn't been on Twitter. It was the platform that put me in touch with the people who were doing this around the world. Twitter and YouTube were initially the two biggest learning tools, and since then I've started reading books". (George Hosier, Wexcombe Manor Farm: p.14).

Social media has proved an invaluable resource for many of the people featured in this field guide – providing inspiration and connections to movements trying new things; helping producers connect with customers and other opportunities; and reducing feelings of isolation. Where, in cities, social media often feels like noise, for those living sparsely in the countryside, those opportunities to connect to similar voices have great value. Oli Baker at Mora Farm says, "Social media, particularly Instagram, has become a useful tool for the small farm movement, connecting an otherwise lonely and often isolating profession".

...as well as valuing peer to peer relationships and meeting face to face...

"But perhaps the single most valuable thing we did was to take members of our three communities to Scotland to see community land projects first hand – seeing what other communities had achieved." (Chris Blake, Skyline: p.71).

Whilst social media is offering opportunities, Dr Iain Gould of the Lincolnshire inquiry reminds us that, "Providing a hot lunch in a welcoming environment is a simple step which creates a friendly and convivial ambience for informal discussion and networking". The value of talking to people and developing

relationships has recurred as an effective tool for change. The power of sharing challenges and concerns is belied by the simplicity of bringing people together – enhancing wellbeing, learning and building energy and engagement.

Peer-to-peer relationships too, as simple as visiting others to see what they have achieved, are not to be underrated. On the simple step of talking to people, Harriet Bell of Old Parsonage Farm says, “People often worry that it’s not a productive enough use of their time but in my experience, it often results in unexpected but very beneficial outcomes”.

...and new and diverse voices bring fresh insights and new possibilities...

‘The Commission believed that providing an opportunity and space for local stakeholders to fill with their own ideas and insights would tap into local needs in a way that national work cannot do. Holding those spaces open and trusting that the right thing emerges can feel nerve-racking at the start, as each party looks to the other for direction.’ (Josie Warden, Devon inquiry: p.97).

There is a rich abundance of voices – all speaking from different places and from different experiences – as well as numerous examples of how diversity of voices can enrich the formation, operation and adaptation of initiatives and practice. The Northern Ireland and Devon inquiries had their agendas shaped by local stakeholders, and found their inquiries improved because of this. For the Skyline project, which took an inclusive approach to land stewardship, the practice of listening rather than telling allowed them to build a sense of trust and hopefulness in the possible.

... helping to see and work with the whole system...

“Part of the reason is that Teesdale is dominated by big landed estates, so there’s a lot of relatively impoverished tenant hill farmers. You don’t have lots of assets as a tenant, just your livestock. Perhaps that had something to do with it. In my time in farming one of the big changes has been that the support payment has moved from the tenant’s asset, which was their livestock, to the landlord’s asset, which is the land. It’s called decoupling”. (Richard Betton, Waters Meeting Farm: p.11).

Change is complicated and problems are interconnected: Richard Betton highlights that the precariousness of being a tenant farmer without assets is an essential factor for understanding the wellbeing of farmers. Whether protecting the wellbeing of tenant farmers, or getting an urban food growing project off the ground, understanding the system is important.

For Stephen Balfour in Aberdeen, taking a ‘whole systems approach’ to urban growing means engaging a variety of sectors along the supply chain. Faced with changing a system, shared principles can be useful tools for creating purpose across sectors: part of the cross-sector partnership in Aberdeen is operating with shared principles of ‘equality, cooperation, collaboration and partnership, mutuality and reciprocity, recognising that everyone has something to offer’.

...taking risks...

“I realised that the problem is the whole economics of it. Food is expected to be cheap and you cannot grow quality food cheaply. We don’t really get enough

money for the food we produce. And we take no government subsidy. It’s more trouble than it’s worth for what we would get. We absolutely do make a living. We just work very hard at making it”. (Liz Findlay, Nantclyd Farm: p.13).

This field guide is a testament to leadership that comes out of people being brave enough to try something different. We’ve seen multiple examples of people going against incentives – farmers putting social and natural value capital first and recognising the delicate trade-offs that often need to be made. These are inspiring stories of people doing things differently, and policy should make what they are doing easy, and more to the point, it should be working in the same way.

...experimenting, and sharing what doesn’t work.

“We learned a lot during our 2012 trial [of keeping calves and their mothers together], and so changed the layout in the farm shed to make overnight separation easier and started again in 2016. We’ve continued to make tweaks to the system and are now confident that we have a system that is better for animal welfare, better for the people working here and better for the environment”. (Wilma and David Finlay, The Ethical Dairy: p.52).

You can’t innovate without failure, and the voices in the field guide admit to their share of it. With an ethos of doing it yourself, often there is also often a commitment to sharing what doesn’t work. Being the first to do something means that you can serve as an example to those that follow, and adopting later means that you can take benefit and confidence from this sharing.

Some of the things we’ve talked about in our final report might seem policy orientated, but can also help us think and act in new ways:

Pursuing goals	Are we focussed on what really matters for us, our communities and the planet?
Managing inputs	Do we have the information we need from all parts of the system – including the contradictory and contested?
Engaging citizens and users	Are people engaged in the task? Have we included the voices of those who will live with the impacts – the distant and future generations? And those who give a voice to the needs of the natural world?
Developing systems capacity	Is our ‘whole system’ aligned to achieve our goal – have we the resources and support we need – financial, technical, mentoring?

A fair and just transition towards a more sustainable future needs more than just soft resources. We’ve shaped our recommendations in our report to help provide more of what’s needed for change to happen at scale and at pace – a vision for a sustainable future, supported with the tools, the resources and the will to make it happen.

Our future is in our hands.

References

Page 33: Generating a healthy future for Lincolnshire's soils

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