



Northern Ireland  
Assembly

Committee for Agriculture, Environment and  
Rural Affairs

# OFFICIAL REPORT (Hansard)

Nature-friendly Farming: Nature Friendly  
Farming Network

29 April 2021

# NORTHERN IRELAND ASSEMBLY

## Committee for Agriculture, Environment and Rural Affairs

### Nature-friendly Farming: Nature Friendly Farming Network

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**Members present for all or part of the proceedings:**

Mr Declan McAleer (Chairperson)  
Mr Philip McGuigan (Deputy Chairperson)  
Ms Clare Bailey  
Mrs Rosemary Barton  
Mr John Blair  
Mr Maurice Bradley  
Mr Harry Harvey  
Mr William Irwin  
Mr Patsy McGlone

**Witnesses:**

Mr Simon Best	Nature Friendly Farming Network
Mr Michael Meharg	Nature Friendly Farming Network
Mr Tim Morrow	Nature Friendly Farming Network
Mr David Sandford	Nature Friendly Farming Network

**The Chairperson (Mr McAleer):** I welcome from the Nature Friendly Farming Network (NFFN), via StarLeaf, Mr Michael Meharg, who is its NI chair, and Mr Tim Morrow, Mr David Sandford, and Mr Simon Best, all of whom are NI steering group members.

I invite the representatives to take 10 minutes to brief the Committee, after which members will ask some questions. You are all very welcome.

**Mr Michael Meharg (Nature Friendly Farming Network):** I am just getting myself organised here. Good morning, Chair and Committee. On behalf of the Nature Friendly Farming Network, I thank you for giving us the opportunity to give evidence on this important subject.

The Nature Friendly Farming Network is a UK-wide group, established in 2017. We are made up of farmers who see our business and economic prosperity inextricably linked to nature and the natural environment. We farm with and for nature and the environment. Although we are based in the North, we have members from across Ireland, all of whom are delivering for nature through their farm businesses. We have a very active local committee, some of whom have joined us this morning. Along with my family, I farm over 600 acres, with suckler cows and beef cattle, most of which we are farming on old area of natural constraint (ANC) land — in which, I know, Chair, you have a very strong interest — within the Lough Neagh catchment and the Belfast hills.

You have already been debating important environmental matters this morning, and there is no doubt that we are currently facing significant societal challenges that must be urgently addressed, from devastating declines in nature and the climate emergency to risks to the long-term productivity and profitability of our sector. Some 75% of Northern Ireland's land is managed as farmland, and so, as farmers, we are key to meeting the challenges that lie ahead of helping guarantee long-term food security and meeting ambitious biodiversity and climate targets. As we begin to head into a new farming system and start to determine how farmers work with nature, address climate change and produce food, there are major opportunities to reshape how you support farmers and deliver those important objectives. NFFN believes that transitioning to nature-friendly farming practices will be crucial in that regard.

What is nature-friendly farming, and how can we deliver at scale? Nature-friendly farming is an umbrella term to describe farming systems and practices that enhance and protect biodiversity and contribute to tackling climate change, along with food production. Not only is nature-friendly farming better for nature but it ensures that our land remains productive so that we can go on producing good food into the future.

Delivering nature-friendly farming at scale will require different interventions for different farming systems across Northern Ireland. For example, in many lowland, arable, mixed and livestock systems, that will mean dedicating around 10% of the farm to habitats that benefit nature. Of course, many farms are already achieving that total without realising the contribution that they are making. In other areas, such as in the uplands or in areas of high nature value (HNV), the landscapes will focus on ensuring that the systems continue to provide their vital function of supporting farmland biodiversity, quality of landscapes and water management.

As well as delivering for nature, a nature-friendly farming system must ensure that the underpinning system is also sustainable. That will include taking measures to ensure that natural resources such as air, water and soil are managed sustainably; undertaking actions to integrate climate mitigation measures; and striving for the business to reduce or eliminate negative impacts on the wider environment.

Nature is often seen as an additional burden to be managed rather than as an integral part of the farm business. It is important that nature underpin profitability. A healthy farm and ecosystem means a healthy bottom line. Nature is good for business and is essential for our future. Farm businesses can benefit economically by adopting more nature-friendly production practices. For example, better business planning can reduce costs, boost nature and increase economic resilience.

Nature-friendly farming systems can also benefit from having diverse income streams, as a result of more diverse farmland landscapes, as well as from producing premium, in-demand products. As consumers rapidly become more aware of the climate and environmental impacts of the foods that they buy, demand for local, nature-friendly products will only but increase. We have seen the benefit of that during lockdown: how folk are turning towards a much more locally sourced food supply.

Many farmers are already playing an incredible role in helping wildlife flourish on their farm. We believe that the policy should better support them for that work, as helping others to transition to nature-friendly farming is part of the standard practice. On our farm, we are in the wider and higher levels of the environmental farming scheme (EFS). We have fenced off rivers in order to improve water quality, reduced grazing pressure on sensitive grasslands and bog sites to help plants and insects, and planted trees as a habitat and for catching carbon for years and generations to come. We have installed a small renewable energy generation facility, from which we sell energy to the grid. We have hares and otters, orchids and ferns, woodlands and hedgerows, and even space for a fairy thorn tree on the farm. That is all done alongside a positive business, however, where our bottom line is very important to us.

NFFN Northern Ireland is calling for policies to help all Northern Ireland farmers produce safe, healthy food at the same time as helping our soils, landscapes, rivers and wildlife to flourish, whilst delivering ambitious action on climate change. We recognise that urgent action is needed to drive rapid change to current farming systems, through a culture of innovation and a flexible and responsive system to support transition.

We must maintain the current levels of agriculture support and redirect farming payments towards mainstreaming nature-friendly farming, whilst ensuring that doing that adds measurable value to the environment and our businesses. NFFN recognises that a shift towards a more nature-friendly approach is not just good for wildlife but key to the long-term survival of the Northern Irish farming

community, delivering broader benefits to the public, including flood protection, water and air quality, carbon storage, and the maintenance of thriving natural landscapes and wildlife.

It is important to make sure that future schemes are practical and accessible to all farmers and continually to monitor and assess environmental performance to ensure that nature-friendly farming and the support available for it are delivering measurable impacts for nature, the environment and the public. Finally, the quality of produce from our industry must reflect the quality of the land that we farm, with market recognition of the value through there being suitable reward for nature-friendly products.

At this point, I will hand over to Simon, who will tell us a little about his enterprise.

**Mr Simon Best (Nature Friendly Farming Network):** Ensuring that we as farmers take a long-term view of sustainability and enhancement of our environment is extremely important. The vast majority of farmers understand that, but agriculture and food supply policies have put the sector under huge pressure to deliver low-cost food.

Our environment is one of our greatest assets, but it has not received enough support politically. When we look at the level of investment in supporting nature-friendly land management, we see that Northern Ireland is investing a fraction of what is needed. That has led to underinvestment, inadequate focus and, in many cases, a lack of understanding on the ground of nature and the environment.

Recognising the value of nature-friendly farming is crucial to that long-term view. On our farm, we have been striving to ensure that sustainability is accounted for in all our operations, through a reduction in inputs, with a key focus on soil health; through ambitions to reduce the climate impact of our operations; and through the creation of sensitive management of a range of habitats on-farm. From those interventions, I have seen considerable increases in soil health, with improvements in soil organic matter and fertility. That will not only make our farm more resilient and productive but help reduce our costs.

Incorporating biodiversity-friendly habitats on around 10% of our farmed land has helped benefit priority species, such as lapwing, reed bunting and linnet, as well as pollinators and mammals. Moreover, doing that has allowed us to market our approach to consumers, who are increasingly demanding that farmers do more for nature and biodiversity.

Monitoring, accounting and analysing are extremely important to me. We need to be able to assess performance continuously to demonstrate to the wider public the value of what we are doing for the environment. All farmers will measure and analyse crop yields but not their output for nature. That must be a mindset change as part of a new system, with return for environment and biodiversity outputs being in line with outputs from other farm enterprises.

On our farm, we undertake regular soil analysis, water-quality monitoring, and bird and habitat surveys. Those are undertaken by a mix of professionals and dedicated volunteers, helping us to collect the necessary data to make informed business decisions and demonstrate return on investment. More recently, we focused on what we can do from a carbon perspective, and we are one of the seven participating farms in the recent accelerating ruminant carbon to zero (ARCZero) project. The outcome of that project will be to establish a verifiable and robust baseline for carbon action that is focused on delivering reductions in greenhouse gas emissions across the business.

Delivering those objectives across Northern Ireland will require significant long-term investment, as well as a long-term direction of travel and defined outcomes and priorities for farming and land management. A commitment to supporting nature-friendly farming will be vital to ensuring that farming is capable of delivering those ambitions, whilst helping to enhance the resilience and sustainability of the sector in the longer term.

I will now hand over to Tim Morrow, who will speak of his experience of environmental biodiversity *[Inaudible owing to poor sound quality]* the supply chain.

**Mr Tim Morrow (Nature Friendly Farming Network):** I farm in the Castlereagh hills, which are looking down on Stormont as we speak. *[Laughter.]* Simon said that current agriculture and food policy has led us down a completely unsustainable path, where value has been placed only on cheap food rather than on the quality of the food or from where it has come. That has led to degraded soils and diminishing wildlife and has made it difficult for farmers to profit from their operations, as they are having to put in more and more inputs to get the same output. We therefore need to shift back to a more sustainable farming system that helps build resilience holistically. The term that people use

nowadays is "regenerative methods", which help build back the organic matter in our soils. The biggest carbon sink on the planet, apart from the sea, is the soil.

Our business works to shortened supply chains that eliminate waste. It farms sustainably and works with the local community to demonstrate the immense value of local, nature-friendly farming. In the past few months, over lockdown, we have started a delivery business. We went to local high-quality producers of all sorts of foods, got them together and started delivering to the local community, and that is exactly what people are looking for: that they know where the food has come from and that it is of high quality. We have found that localised supply chains are far more robust and resilient than the longer, integrated supply chains that often do not provide a fair return to farmers.

Our business is intrinsically linked to the local economy and community. We are committed to reinvesting in the localised supply chain and to improving nature so that others can enjoy it as we do. Government needs to commit to putting nature at the centre of policy, however. There needs to be clear guidance and timescales for farmers or else there will be no chance of making that happen. Transitioning towards a progressive, profitable and sustainable farming sector will require long-term investment, but the rewards will be worth it.

Farming in a nature-friendly way increases our resilience to varying farm costs, extreme weather events and more. In doing this, we are also diversifying, which is all good, because it means that not all our eggs are in one basket. We therefore need a future policy that works to help deliver a nature-friendly food system through capital funding to increase competitiveness, to create and develop shorter supply chains and to trial innovative technologies. There are also opportunities being presented through Northern Ireland's increasingly being recognised as a tourist destination. We hope to open a glamping site tomorrow on the hills of Castlereagh, would you believe? As usual, however, no incentives or help from any grant system were available to help us do that.

Finally, ladies and gentlemen, environmental objectives and adequate funding must be incorporated into all aspects of food and agriculture policy. Farming businesses must view the environment and sustainability as a core aspect of their business rather than as something that is nice to do if it is affordable. I am now going to pass you on to David.

**Mr David Sandford (Nature Friendly Farming Network):** Thank you, Tim. I will give our thoughts on a new delivery framework for farm support. Future schemes that incentivise and reward nature-friendly farming practices will be vital in delivering a transition towards nature-friendly farming.

We believe that a future payment scheme that is focused on delivering positive environmental land management should represent the principal means of farm support. In the future, payments for environmental delivery will help provide a stable and reliable income source for farm businesses whilst delivering multiple goods, services and benefits to society. That will represent fair value for money for the taxpayer and provide a robust justification for long-term public investment in farming and land management.

The policy should be holistic, based on the whole-farm operation, including both productive and non-productive areas. The funding allocated to the scheme is critical to its future success. Under the CAP, the rural development programme (RDP) budget has been insufficient to meet environmental needs. Northern Ireland currently has the lowest percentage of farm support for environmental interventions in the United Kingdom. The current EFS is basically well-designed, but the take-up has been low for various reasons, mainly due to the financial capping and the constraints on the wider scheme. A new or similar support scheme could be relaunched as the basic platform for all financial support for farmers going forward.

DAERA currently has an excellent farm mapping tool that could be used to identify and record all farm areas and all the natural assets: bogs and wet areas, woodland, scrub and hedges, as well, of course, as productive fields. That tool could be used to measure and then reward, but only if those areas were managed in a nature-friendly farming way, such as hill or marginal ground, if using regenerative practices; sustainable stocking rates for livestock; growing more cereals, especially spring cereals; soil testing; providing more carbon-capture assets, such as proper hedgerows and woodland; multi-species grass and swards; ammonia mitigation practices; agroforestry; and measuring a farm's progress towards net zero, etc. The possibilities would be endless, within a new support system framework and only limited by the will of government and funding.

If politicians are serious about farmers being part of the solution to climate change and biodiversity loss, we must be given the tools. On my arable farm near Strangford, under the EFS, I have instated

six-metre rough grass margins around my fields, stopping nutrient run-off into the lough and aiding biodiversity. I have planted new hedges and I personally provide winter feed crops for wild birds, all with good results. Under previous planting schemes, I planted broadleaf trees on less productive ground. I have also reduced my crop inputs. My farmland bird count has grown dramatically and, last year, we had two breeding pairs of barn owls, out of probably only 20 pairs left in the whole of Northern Ireland. Before, there were none on my farm in the previous 30 years. They are only there because they like the biodiversity that my farm now provides.

Also, in a recent carbon audit on a Northern Ireland farm, it was estimated that, if nature-friendly farming habitats were increased by even 5%, it would result in the sequestering of an additional 168 tons of CO<sub>2</sub> per year from that one farm. I, and many other farmers, could do far more for the move to net zero if we had properly funded schemes. Recent research demonstrates that meeting the Government's environmental objectives would require an eightfold increase in funding for environmental farm management, but we believe that this could be achieved broadly within the total spend on agricultural support in Northern Ireland.

Many farm businesses are reliant on farm support in its current form, and a transition towards the new system should be planned and managed carefully and include training and knowledge transfer. Moving towards a payment system linked to environmental delivery represents a significant shift from the status quo, meaning that businesses must be fully prepared. Government would set out the direction of travel clearly from the outset, outlining how they intend to phase out current scheme arrangements whilst moving towards a new scheme. Farmers are expecting change, and in a recent farm survey carried out by Northern Ireland Environment Link (NIEL), 63% of farmers were concerned at the lack of policy direction from government. Some 45% were either dissatisfied or very dissatisfied with the current agri-environmental schemes, and 65% wanted increased funding with such schemes. We strongly believe that, with a new scheme, given the right investment and long-term support, farm businesses would be safeguarded; produce healthy, affordable food; restore the environment; and play their part in addressing climate change.

Thank you. I hand back to Michael.

**Mr Meharg:** Thank you very much, guys, and thank you, Chair, for allowing us to speak. I will sum up. We hope that the presentations have shown our vision for the future and some examples of nature-friendly practice. We hope that this can be scaled up and the farming sector can adapt to it. However, we cannot do this alone. We need help to transition from the CAP support we currently receive.

As we have heard, nature is good for business, it is good for my business, and it is vital to our future. There is increasing recognition that the environmental production practices are essential for robust supply chains: in short, to ensure that we have good food on the table. We feel that we have a once-in-a-lifetime, generational opportunity to help farmers to underpin their long-term business sustainability and resilience to market and climate challenges, and their financial viability, which means working in harmony with nature. Farming policy needs to support the industry in rapidly moving to a sustainable output model that enhances natural capital and nature and can address the nature and climate emergencies. We urge the Committee to endorse the proposed motion and to consider how our recommendations can roll out nature-friendly farming at scale across Northern Ireland. Thank you. We are happy to take any questions from the group.

**The Chairperson (Mr McAleer):** Thank you very much. That was a very interesting presentation, and it comes at a very interesting time, too, when we are looking at climate change. I was intrigued listening to all of you, but, Michael, you have 600 sucklers and you are managing your farm in a very nature-friendly manner. Just leading back to our previous presentation on climate change, do you have any assessment of whether or not you are net zero in relation to your emissions?

**Mr Meharg:** Chairman, I must say that I have 600 acres, not 600 sucklers. *[Laughter.]*

**The Chairperson (Mr McAleer):** Oh, I thought you had 600 sucklers.

**Mr Meharg:** The issue is that we were all in a situation where we realised that the climate and biodiversity emergencies are there. We realised that, as farmers, we are one of the areas that has been assessed as having a high output of carbon and a high usage of carbon, but, at the same time, we think that we have great opportunities to work to lower our carbon footprint. I managed to have a student — a lad called Adam Copeland, who was doing an MSc at Queen's last year and looking at sustainability — come to my farm and do an overview of the carbon footprint on the farm. We got him

to look at the various algorithms and assessments that are used to work out net zero and worked out what my carbon footprint was, looking at all the inputs and outputs. The interesting thing was that there seemed to be quite a range of results coming from using different methods.

While we are on our way towards net zero, like every farmer we have opportunities to improve. We have just planted a 1.4 hectare woodland on the farm through the small woodland grant scheme. We have a part of that journey that we still have to go. We are on our way towards net zero — that is what I am trying to achieve on the farm — but, at the same time, we realise that there are challenges ahead with that, and there are other steps that we will have to take. We are doing a lot on our own farm, but I think, like every other farmer, there are opportunities and challenges there. I will pass to Simon, who may have a bit more to add to that, with his ARCZero engagement.

**Mr Best:** Thanks, Michael, I am very happy to do so.

One of the issues that I have had over the past few years has been what our baseline actually is and how we establish it. Recently, in the last few months, I have become part of the ARCZero project, which is a European Innovation Partnership (EIP) project led by Dr John Gilliland as our chair. There are seven farms, and we are mostly concentrating on assessing ruminant carbon. I am a cereal farmer who also has some ruminant livestock, but I am really interested in seeing what our verifiable baseline is. It is a two-year project, and we are looking at everything from soil carbon and organic matter, using LIDAR analysis to assess our whole farm, to run-off and carbon habitat.

To answer the question, I am not sure yet, but I am very confident that, in the next 12 to 18 months, I will have a very good idea of what it is, and that will be verifiable as a baseline for me then to work on and to improve going forward, using some of the systems that I already have in place and, obviously, new systems and technology that might come into the discussion.

**The Chairperson (Mr McAleer):** I think that this is one of the things that all farmers need here in the North, particularly if we are trying to transition towards net zero. Farmers need to be able to establish what their baseline is to begin with. For example, six years ago, the Department developed the BovIS calculator for farmers to try to work that out. I get the sense that there needs to be a robust and clear method for farmers to work out exactly where they are. If they are expected to transition toward net zero, there needs to be an accurate measuring tool to work all that out. That is absolutely crucial.

There is quite a bit of interest in this around the room. At present, the North's agri-food sector provides food for around 10 million people. It employs 100,000 people, which is a huge chunk of the local economy. If we can transition towards nature-friendly farming, can we continue to sustain those jobs as we move ahead?

**Mr Meharg:** That is an important question. There will be challenges ahead for the whole economy. In the past, as farmers, we have seen that our customers are the general public locally. They are our biggest customer. Changes are taking place with regard to the quality of food that customers expect and also to the type of food that they expect. As farmers and businesspeople, we cannot just expect that whatever we produce will be taken up. We have got to supply what the market demands. As society changes towards net zero, there will be changes and challenges to the products that we supply and will have to supply. However, the same volume of food will still have to be there to be consumed by the population. That is one challenge that we will have to look at into the future.

Obviously, we have a marketing side and an export side. Despite the Brexit challenges, we are supplying food to folk outside Ireland and Northern Ireland. There will still be a demand for that. However, we will have to examine closely the way in which we work to produce that food to see whether we can grow more protein crops at home to provide the protein, rather than importing it from other parts of the world that are under pressure, with the high carbon footprint that comes with that. Those are the sorts of challenges that we will have to address.

I will pass to any other members of our group who feel that they would like to add to that. Tim, would you like to add anything?

**Mr Morrow:** Yes. I am a dairy farmer. We have 240 dairy cows up here. We used to farm, I suppose, the way most people did, calving most of the year round and feeding a fairly high amount of meal to the cows. The vast majority of that meal comes from America, Canada, Russia or somewhere. It is certainly not grown here. I did not like that; basically, I did not like the system. We changed over to a New Zealand-style farming system, whereby we calve the cows when the grass starts to grow and we

feed the cows grass, grass and more grass, and very little of anything else. The average amount of meal that is being fed in Northern Ireland is well over two tons per cow now. We are feeding under half a ton per cow. That, in itself, helps my carbon footprint. I still have a profitable business that works. I am not saying that everybody should do what I am doing; I am just giving an example of a different way of being able to farm that has less of a carbon footprint.

I will give another quick example of one policy change that would make a massive difference. David mentioned it earlier: some sort of encouragement for dairy and beef farmers to put in mixed-species swards or herbal leys, as they are also called, which are a mixture of perennial ryegrass, herbs and clover. That one action would at least halve the amount of fertiliser that you need to put on the ground, because it fixes nitrogen itself and grows just as much with half the amount of nitrogen. Not only that, but, when the cows eat the mixed-species swards, they produce 20% less methane. And yet, even with those huge benefits to the environment, there is absolutely no incentive for any farmer to do this. Most dairy farmers reseed 10% of their ground a year, so, if people were actually encouraged to do this, a lot of dairy farmers could reseed their entire farm to mixed species within 15 years, which would halve their fertiliser use and cut methane down by 20%. That is just one policy change. There are so many examples of things that could be done.

**The Chairperson (Mr McAleer):** Funnily, I was going to mention the importance of soil sampling. I have made a note here about clover and the use of lime. I am sorry for hogging this, but I find it very interesting. The one thing I will mention is the issue of fertiliser. What sort of fertiliser do you use? Do you use the protected urea fertiliser? What methods do you typically use?

**Mr Morrow:** We moved over to protected urea in the last year. Before that, we did not realise that there was an issue. Since the research has been done, we have gone on to protected urea for the first outing around the farm. We get the entire farm soil-sampled every year so that we know where we are and what we need. You are absolutely right to mention lime, Chairman. Lime on the ground is crucial. You can put on loads of fertiliser, but it is no use if the soil does not have the right pH level.

**The Chairperson (Mr McAleer):** So it is basically more efficient? It costs very little to sample the soil, and that can save you in the long run, because you are not putting on the wrong fertiliser and overloading it with nitrogen, which is costly and not environmentally friendly.

**Mr Meharg:** I will add to that from a different perspective, Chairman. I farm in areas of natural constraint; a lot of my land is in the uplands. The way that I look at it is that my main inputs are sunshine and rain. That is what I farm. Those are my inputs. I look at the carrying capacity of the land. I do not put any other fertiliser on those upland sites. Some of them are protected under legislation as areas of special scientific interest (ASSIs) to begin with, so that consideration does not come into it. At the same time, those natural swards have a carrying capacity. I put the density and number of cattle onto the land that that land is able to carry and give me production. Too many cattle would spoil the land for that year or the next but, with too few cattle, I would waste the resource that is there, so I try to look at it from the point of view of its natural carrying capacity.

**The Chairperson (Mr McAleer):** Thank you very much, Michael.

**Mr Irwin:** I thank the gentlemen for the presentation. I have had the pleasure of being on Simon Best's farm and seeing nature-friendly farming and how it enhances wildlife at first hand. I very much welcome those who are involved. There is a perception out there that large farms do not play their part in relation to the environment, but I think that you gentlemen have today proved that large farms can actually play their part very well. In general, I think that you all feel that more funding is needed and that more incentives are needed to encourage farmers to sow the proper grasses and do the right things to help the environment. What about tree planting in marginal land? What is your feeling on that?

**Mr Meharg:** I will start off on that. Tree planting is clearly very important. Last year, the Minister announced a target to plant an extra 9,000 hectares of land for carbon sequestration in woodland over the next 10 years. At home, we have already taken advantage of the small woodland grant scheme. We have just planted a woodland. We chose an area on the farm that did not have the best productivity. It was a slightly wetter area; it was a slightly more difficult area. There is good support in place for that. One of our members, Tony Johnston, has a farm woodland business, and his mantra — I am sure that he will be pleased that I am mentioning this — is the right tree in the right place is the way to go forward. There is land in marginal areas that is suitable for tree planting, but there is also land that is not, because of its nature value, so it is important to ensure that, as I say, repeating Tony's



words, the right tree is in the right place, and that is the way forward. David has experience of planting trees on his farm. Would you like to mention something about that, David?

**Mr Sandford:** Yes, I certainly would. That is absolutely right, and Tony's quote is completely correct. It is much easier on farms like Simon's, and perhaps my farm, which are lowland farms, inasmuch as it is fairly obvious that we first plant up the areas that are not as productive. Certainly, if stocking rates really come under the microscope regarding attaining net zero, of course, productive land will probably have to be, and perhaps should be, planted up. At the moment, I have gone as far as planting up less productive ground with broadleaves, but we desperately need a bit more information on which varieties of trees and what sort of tree cover sequester carbon better. Per square metre, hedgerows sequester more carbon than woodlands do, and that is probably because of their dense mass. Unmanaged hedgerows are much better than managed hedgerows. The variety is very important. It makes farming operations a lot easier if you can straighten up a field edge. All of those things come into play. Trees will give a farmer, their family and those coming after them immeasurable pleasure. There is nothing nicer than seeing a nice stand of trees that you have planted yourself on a bit of ground. I started planting here nearly 30 years ago. Everyone says, "Oh, it takes ages for broadleaf trees to grow, but, if you put in conifers, they will pop up quickly and you can sell them". However, I can tell you that, if you put in broadleaves well, the right varieties grow really quickly, and they are a tremendous asset to wildlife and also for sequestering carbon.

**Mr McGuigan:** That was very interesting. A couple of the questions that I wanted to ask are gone. The average age of an Irish farmer is 57. Is your primary goal to try to convert existing farmers to nature-friendly farming, or is it more about setting the groundwork for the next generations of farmers to adopt those methods?

**Mr Meharg:** The future of farming and the future of land management are very important. The Department has good schemes for encouraging young farmers to come into the industry. Sometimes, looking at myself and others, we keep on going and keep on farming a bit too long, and hence the average age is up there. I do not think that we are trying to be evangelical and convert people to anything. What we are really saying is that there is a way that farming as a baseline could and should be, and that policy and support should be used to favour that way forward.

Our agricultural colleges, such as Greenmount and other places, are training the next generation in all of the environmental aspects that are good for their land and their business. As David said in his presentation, knowledge transfer is very important. The business development groups and environmental business development groups have a lot of support. The environmental farming scheme, and especially the higher environmental farming scheme, has been oversubscribed, so there are signs that there is an awful lot of interest. An awful lot of training is going into the next generation that is coming through, and we hope that by showing examples of what can be done — we have happily welcomed many people on to our farms, as have other people within our nature-friendly farming network — we can show little bits of what we do. I do not think that we are doing anything extra special. We are just doing what we are doing and farming in a particular way. That shows that, as business people, we are economically viable through it and that we are making as small an impact on the environment as we can. Simon, would you like to add to that?

**Mr Best:** I am very happy to do that, Michael. There is a need to move towards more-sustainable measures in order to meet our climate change obligations. People will want to move at a very different pace, and that is fine. We are advocating for support for farmers who want to move to a more nature-friendly way of farming. There are, as far as I am concerned, ways in which that can support the Northern Ireland food production industry.

I have *[Inaudible owing to poor sound quality.]* One is five miles away in White's Oats, where I supply oats into the supply chain right beside me. Three miles away, there is a local pig farmer who is an intensive pig producer. I supply him with wheat and barley, and, hopefully, I will supply protein crops in future. As those come to him from a more nature-friendly farmer, with the biodiversity and carbon footprint-reduction measures that I want to put in place, there is a reduction in his footprint and he can continue to produce. It is farmers like us who need the incentive to support the general climate change ambitions of Northern Ireland in order to allow us to continue to have a steady production base.

**Mr McGuigan:** You come in to speak to us this morning, after we heard from Clare and the team about the Climate Change Bill. There was a lot of discussion about agriculture, and it has been touched on here. Do you, as an organisation, believe that we can reach net zero by 2045 and still maintain and support the agri-food industry?

**Mr Meharg:** Simon, do you want to carry on with the answer to that one?

**Mr Best:** As I said, I still consider myself to be a food producer, and I am passionate about it. I am also looking at ways in which I can significantly reduce my carbon footprint and support Northern Ireland's agri-food industry as part of that. It is clear that we need urgent action rather than continuous debate on what the target date is, whether it is 2045 or 2050. If we do not start the journey now, we will have little chance of getting to either.

To put it simply, I am a crop farmer. I put my crops in the ground in September and October in order to harvest them the following August. If I do not put them in, I will not have the crop. We need a plan to be in place now to help us to get to those targets. I am also a father of young children who are across the narrative of climate change. I am compelled to act as soon and decisively as possible on that front.

As a business, I believe that we need to be ambitious in our targets to ensure that we get progress and action as soon as possible. We need policy to drive those changes. There will be advances in technology that we have not even seen yet, but policy is needed to create the need for that innovation. Around the date, I think that it is about action and plans that will allow us to move and to support the entire industry.

**Mr McGuigan:** Thank you very much.

**Ms Bailey:** Thank you for being with us today. It is great to hear your views and to see you again, Michael. I spent an afternoon on Michael's farm last year. Thank you for that.

We still hear a lot of concern, particularly from the sector but also in general, that moving to nature-friendly farming is expensive and, as you already identified when you were talking to us, it is seen as a bit of a luxury, and there is a sense of, "If you can afford it, all well and good; away you go." Do you feel that moving towards nature-friendly farming is an economic disincentive for most?

Do you feel that there is a potential for increasing employment across the sector, if we move to a green economy in particular?

**Mr Meharg:** Thanks, Clare. I will pass that to David to answer. He can make a start and the rest of us can join in.

**Mr Sandford:** Thank you, Michael, for that question. The issue we have at the moment is that there is, as I said, good and bad in the current EFS. It needs to be looked at, because I know a lot of farmers who were in the old Northern Ireland countryside management scheme but who are not in the EFS, because the capping made it hardly worth their while. I am a bit of a zealot in these things, so I will do whatever I can and can afford to, but I completely understand that I am not a typical farmer in that respect. Farmers have a certain amount of land from which they have to maximise income. They need help, desperately, to get down the road to achieve and start the road to net zero.

The question of employment is a good one. We have not touched on the employment opportunities that will come out of having to achieve net zero and the green recovery. I know of a big manufacturing meat plant, close to me, that works hard on producing plant-based foods at the moment. They are doing a huge amount of research on it. If we can grow the pilot protein crops that Simon grows at the moment, and I, perhaps, could grow in the future, process and sell it locally, it would be a good thing. I do not say that protein crops are the mantra; I do not want to start the whole vegan conversation. However, there are lots of other things happening in the world at the moment.

Green energy is a huge opportunity for people in Northern Ireland and in Britain. We are behind the curve, compared to many European nations such as Holland, on that. Although we have made great inroads, there is still a huge opportunity. We might easily find — I do not want to be scaremongering — that if the livestock numbers in Northern Ireland were reduced, the employment opportunities on the green energy path would outweigh that issue.

**Mr Blair:** I thank all those who presented, and the information they gave therein. I am particularly pleased to hear how all the actions relate to the climate emergency conversation that we had earlier in the meeting. That is very useful. I am not going to ask any further questions around that, although I had intended to.

Is it the case that one of the things we need to secure the future of nature-friendly farming, and increase the capacity of that, is a Northern Ireland-bespoke agriculture Bill? That could be part and parcel of moving forward all those issues. I am keen to hear your views on that. It is a slightly separate issue, but it is relevant.

**Mr Meharg:** Thank you very much, John. It is important to have our own, local, targets and opportunities enshrined in law. For any of the things that we are trying to achieve, whether it is the nature-friendly farming side, the climate side and linking towards a climate target, we must support the ways in which that can be funded and looked at from a local perspective.

We are different here. There is no question of that, and we are slightly remote from the rest of the UK, in terms of what Brexit has brought us and our geography. We have a link to a European member state right on our doorstep, and that will bring opportunities and challenges in the future. Having our own agriculture Bill is crucial to maximising the opportunities that are there for us, as a business, and to ensure that that takes account of the climate emergency and the opportunities for biodiversity.

Throughout this lockdown period, we have seen people re-engage with the countryside. We have seen an almost new-found love of the countryside, with people enjoying being in it and needing to be in a healthy and fresh landscape. It is very important for our well-being, and it will be very important for the quality of the food that we produce along with that. I think that an agriculture Bill would be very important, and, as a nature-friendly farming network, it is something that we would support. I am not sure if any of my colleagues want to add to that.

**Mr Sandford:** Michael, I can chip in here. Unless we embrace it with legislation, I think that there is a huge danger of drift and that things will not get done. We have a huge challenge on our hands in even thinking about getting to net zero, and we have to keep our Northern Irish farms economically viable. Although it is great having the words "this is what we need to be doing", you have to have the tools to do it as well. I do not believe that farmers will be given the tools properly, or, perhaps, given the proper tools is a better way of putting it, without legislation to bring all politicians and everybody in Northern Ireland on the one track to achieve our goals. That means that we will get proper funding, we will get a fair crack of the whip and we will get everybody pushing to achieve the goal.

**Mr Blair:** I thank you both.

**Mr McGlone:** Thank you very much, gentlemen, for coming today. As the Chair said, this ties in very nicely with our previous scrutiny of the Climate Change Bill.

I want to ask you one thing. Obviously, with climate change, there are huge implications and factors, societal or otherwise, but, in relation to the production of your food, how do we avoid the situation where, potentially, cheap imports undermine well-produced, absolutely brilliant environmentally produced and environmentally secured produce from your farms? How do we avoid that?

It is grand to say that consumers will vote with their feet and that they will go down the environmentally secure route, but that is if they have the money to do so. If there is much disparity between produce that is brought in commercially from other jurisdictions and your produce, somebody who is, basically, living on the breadline will not really have that security of choice. In other words, how do we ensure that your produce is competitive? We know that it is environmentally well-secured and that what you are doing is absolutely the right thing, but how do we make sure that people buy it and that it is competitively priced?

**Mr Meharg:** Thank you very much for that question. I suppose that it comes down to the fundamentals of economics. There is a saying:

*"You cannot be green if you are in the red".*

That is an important point. Food poverty is a really big issue across north-west Europe, not least in Ireland and Northern Ireland. We have seen that coming to the fore during the lockdown periods. We have to look at the policies that are there to produce food so that the support is there. This is where our colleagues in DAERA will have the opportunity to put funding in place to ensure that our agricultural sector can produce the food that we need.

First and foremost, every one of us here are business men. We run businesses. There is no sense in us pricing ourselves out of a market, then sitting back and saying, "but look at the birds and the

wildlife". We have to be competitive, to work in that and to realise that that is the bottom line for us all. Let us not pretend that we are trying to paint a picture that is all green and jumping with wildlife. We have to work with nature, and we find that working with nature and taking those approaches can sometimes help with the economics of the farm.

There is ongoing research at the moment, in which the term, "sometimes less is more" is being used. I have cut way back on inputs on my farm, and therefore my outputs are of more value to me. That allows me to balance my books in a way that does not increase the cost of the food that I produce. Others will have similar ways of working, but we also have to rely on our politicians and policymakers to make contracts and agreements on world trade that ensure that everybody comes from the same level of input and that we do not import cheap food that is damaging to the environment and the country, or, indeed, that is damaging to the welfare of the people in those countries.

I will open that up to my colleagues, if anybody wants to add to that. Tim?

**Mr Morrow:** Yes, I will add to that. Thanks, Patsy, for a really blooming difficult question. *[Laughter.]*

**Mr McGlone:** *[Inaudible.]* I am not known for that.

**Mr Morrow:** At the end of the day, if we want to trade in an open market, we cannot stop people trading here. There is no way we can affect that. It has to be an open market; that is the way we work. In the dairy market, 85% of our product is exported, because we have such a small population. That means that 85% of what we produce is dried or put into products and sent over the water, so we can hardly complain when things are sent over here.

There are a number of easy strategies that we can all use to lessen our inputs and that would not affect our bottom line at all, except for the better. I am a businessman, and there is no way that I want to do things that lose me money. Earlier, I quoted the mixed-species thing. To me, if you put in mixed swards that are better for wildlife and better for the soil and mean that you only need half the fertiliser, that is just a no-brainer. Fertiliser is made of oil. That is just a no-brainer, so everybody should be doing it. A lot of farmers just need a little bit on incentivisation to take those steps.

Again, we are putting in a lot less meal than most people, and, because of that, we are able to sell our milk to local producers from a vending machine. They can actually see the cows that are in the fields the whole time and getting fed very little except for grass, and they are, therefore, prepared to pay a little bit more for that.

I do not think that we are trying to exclude ourselves from the world market. Our group is a real mixture. Some people in it are organic, but a lot of people who are not, like myself, would be very happy if we could see a way to reduce our fertiliser down to at least half — or further, if we could see a way that would not lose us money.

**Mr McGlone:** Thanks.

**The Chairperson (Mr McAleer):** We need to move on swiftly, folks, because we will be cut off soon. Rosemary. *[Pause.]* We cannot see Rosemary. We will move on —. Sorry, Rosemary, we can hear you now.

**Mrs Barton:** I am going to deviate slightly. You talked about your farming enterprises, and I thank you all for sharing that information with us. It has been very interesting to listen to. What steps are you taking in relation to the necessary machinery that you use on your nature-friendly farms to lower your carbon footprint?

**Mr Morrow:** Maybe I could take that one, Mike.

**Mr Meharg:** OK, Tim.

**Mr Morrow:** I will start and then pass it on. On my farm, we have the cows outside for most of the year. That does not happen by accident, We have had to put in a series of laneways. We have a lane to every field in the farm and, by doing that, we can keep the cows outside for the vast majority of the year. They are out from February, when they start to calve, until midway through November. There are then three months when we need to get them off the fields before they do much damage. By doing

that, we need to make a quarter of the silage that most people need to make. That means that we do not need the machinery to make that silage. All we do is get contractors in for two days a year to do that. When the cows are outside, they are also spreading their own manure, so we have much less slurry to spread. That, again, means that we have much less use of machinery to spread that. Also, if you are putting out half the fertiliser, you need much less machinery to do that. You can adapt your farming system to effect the amount of machinery you need; on my farm, anyway.

**Mrs Barton:** That may be the case on your farm, but what about arable farming and land that needs to be ploughed every year?

**Mr Best:** You are quite right. As an arable farmer, I rely heavily on machinery. To answer your question, I would say that it is not necessarily the machinery that I have but what I do with it. I use tillage techniques that make sure that I preserve soil structure. The organic matter that I am adding back into the soil through organic manures and composts helps to build the resilience in that soil. Yes, to produce crops, I have to till the soil, but I till it in the most efficient and sustainable manner I can when it is needed.

We talked about fertiliser. Just to give an arable view on fertiliser and how I use it, all the fertiliser I use is liquid. I make liquid fertiliser from urea. However, even before I put it on, I analyse the pH of the soil and its nutrient demand. As I am applying it throughout the season, I take leaf and sap analysis from the crop, which means that I am applying fertiliser not only when the crop needs it but according to what the crop needs. So, my fertiliser use has come down considerably over the past number of years as I have become more involved in this and understand more about what we are doing. I have a crop nutritionist who helps me out, and we add micronutrients when needed. That reduction in fertiliser application, through more efficient application when the crop needs it, is already saving me considerably in not only my efficiency and the cost of my inputs but my carbon impact.

**Mrs Barton:** What energy efficiency have you looked at? You have cows to milk, obviously, and you need a lot of electricity for that. You have milk to keep cool etc. You have your homes to run. Are you talking about wind-farm energy? What type of energy are you using?

**Mr Meharg:** That is a very important point. We, in the farming community, with, maybe, a bit more space than a lot of people around us, have an opportunity to invest in the renewable energy side of things. On our farm, we can put up 80 solar panels without planning permission without a three-phase system. I installed those about five years ago, and they have been very beneficial on the farm. This year, we will have paid back the investment that we put into that. We provide energy to the grid, but during daylight hours, we are producing electricity for all our needs on the farm as well. I know that some of my colleagues have taken opportunities there, too. Tim, maybe you could talk about that.

**Mr Morrow:** We put up a 20-kilowatt solar-panel system eight years ago, and it paid for itself in five years, the same as Mike's system. We are now looking to put up a further 16-kilowatt system.

It is a really good question. We are not saying, "Look at us and how well we're doing". However, there are opportunities. Solar panels are less than half the cost that they were 10 years ago. They are very cheap now to install, and are more efficient. You can get a battery pack with solar panels that is intelligent and can store your energy if you need it at night. In our system, we do not need that because cows are outside. There are a lot of new technologies that, I think can change the energy supply of all farms in the country over the next 10 years.

**Mrs Barton:** Thank you.

**The Chairperson (Mr McAleer):** Folks, we need to race on very quickly because we are about to be cut off. Harry, a quick one.

**Mr Harvey:** I have a quick question, gentlemen. I have enjoyed listening to you. How can we encourage wild flowers and more bee-friendly planting?

**Mr Meharg:** Thank you very much. Pollinators are crucial to our farming and our environment. The point that you raise is very important. A pollinator plan for Ireland has been launched. That includes beelines across Northern Ireland, and planting of wild flowers is encouraged in it.

In the early days of the environmental farming scheme, there was a tree-enhanced boundary option. Farmers who took that up could plant trees that produced nectar-giving flowers and berries in the autumn. Unfortunately, that was so popular in its first year that it was removed from the scheme for the second, third and fourth years. I encourage the Department to look at that as it is reviewing its policy. It seemed to be a very good way of encouraging pollinators and bees on the farm.

With regard to wild flowers, it is equally important that there are opportunities in the arable system to include grass margins and field margins. Planting trees such as willow produces fantastic amounts of pollen early in the year. Some people do not like to have ivy on their farm, but it is a very important species because it flowers late in the year, in September and October, and gives late pollen to the bees and pollinators.

Lots of things can be done to encourage pollinators — bees and insects — on farms, and wild flowers are part of that.

**Mr Harvey:** Thank you.

**Mr M Bradley:** I apologise for stepping out of the meeting. I had to go to another meeting. I apologise to the two gentlemen for missing most of their presentation. As a country boy, I am very interested in any method that increases pollination species, insects and bird life and that re-establishes habitats. I appreciate everything that you have brought to the table today, and I will be in touch to catch up on some of that. Thank you very much.

**Mr Irwin:** Thank you again. In reducing emissions and setting targets for doing that, do you accept that it is wise to set targets that are achievable and do not damage the agriculture sector overall?

**Mr Meharg:** William, we are farmers. We are all in business, and that has to be part of it, of course. That has to be looked at alongside the change in policy and the support structure of funding that allows us to make those moves and, at the same time, gives us good support to do that. A lot of what we are talking about is for society; it is for the public good. The support that goes into farming can support us as we make those transitions. You are right that it is important that that happens.

**Mr Irwin:** Thank you.

**The Chairperson (Mr McAleer):** Thank you very much. That was extremely interesting, gentlemen. We look forward to seeing you again. I am sorry that we have to move on quickly before the broadcasting cuts us off. Thank you.

**Mr Meharg:** Thank you very much.

**Mr Best:** Thank you.

**Mr Sandford:** Thank you.