



Northern Ireland  
Assembly

Committee for Agriculture and Rural  
Development

# OFFICIAL REPORT (Hansard)

Agricultural Land Use Strategy

8 March 2016



role in the sphere of sustainable agriculture for many years, through his many current and former roles with the likes of Devenish Nutrition, the Oxford Farming Conference, European Commission focus groups and the Sustainable Development Commission. John will lead the presentation to you today. As John will explain, we felt it important to have a good core of farming members on the group. One of those is John Best, who joins us today. John is an arable farmer from County Armagh; he serves as chairman of Food NI and is a former chairman of the UFU's seeds and cereals committee.

It is also vital to have input on sustainable land management from those with a background in environmental advocacy, and we are pleased that Patrick Casement was willing to serve on the group and is with us today. Patrick is a farmer himself and has held a number of positions with the National Trust and the Council for Nature Conservation and the Countryside. He is currently chairman of the Northern Ireland Environment Link and a member of the National Trust's rural enterprise panel.

Finally, I want to record how grateful we are for the commitment shown by all the members on the expert group, each of whom serves in an independent and voluntary capacity. The depth and quality of their deliberations has been striking and has led to a draft strategy that we believe has the potential to positively transform how our agricultural land is managed for the benefit of the land and the environment. Of course, with a new Department taking on responsibility in May for both agriculture and the environment, this work could not be better timed. I will pass to Dr John Gilliland to take you through the emerging recommendations of the expert group.

**Dr John Gilliland:** Chairman and members of the Committee, it is a pleasure to be asked to walk you through our emerging conclusions as such. As John has alluded to, when I was approached by the permanent secretary to put together the expert working group, one of the key things up front that we wanted to achieve was based on the fact that, at the end of the day, managing agricultural land is about farmers, so seven out of the 12 members are active farmers. We felt that it was very important that that was at its core.

The first reason why we wanted to do this now, and we believe it is very pertinent that now is the right time, is that we are about to go into the third year of 'Going for Growth', which is the report from the Agri-Food Strategy Board. It set the vision as such, and one of the challenges that we had was trying to work out its vision targets, which were set on values and not on volume. We are looking at somewhere between a 20% and a 40% increase on the volume of farm produce needed to hit this.

The second reason why we wanted to do this now is that, as you are aware, after this coming election, the Department of Agriculture and the Department of the Environment merge into one Department. We believe that now is the time to put forward a constructive road map for the new Minister and the new Department as they go forward.

In starting this work, one of the first things that we did was a horizon scan to look at what challenges the industry faces over the next five to seven years. Ranking them, the biggest key that we have is profitability at a farm level. Over the last two years, we have seen a dramatic reduction in farm income. If you are to create this volume and expansion of volume, we need to get that right. We also have some big challenges around the likes of the water framework directive and reducing greenhouse gases, and we have market challenges created by our neighbours and their success with a campaign called Origin Green, which is about exporting food onto the international market.

In looking at that horizon scan, we have benchmarked where we are in the industry today. There are many things that we are doing well, but there are things that we could do better. For example, we are a grass-based industry, and one of the key things for profitable grass utilisation is making sure that we can get a good grass yield. At the moment, we can achieve 12 tons of grass per hectare. Some are doing 16, but the Northern Ireland average is only below six. We need to look at improving soil analysis; only 2% of soils are analysed annually. We have an awful lot of land, 30%, in conacre.

Looking at our environmental performance, we see that we have done very well on certain issues. In Northern Ireland, we have reduced our nitrogen balance by 10% and improved efficiency by 12%. On phosphates, we have reduced our balance by 32% but increased our efficiency by 29%. We still have issues. On water quality, 62% of our water bodies are failing good quality status compared with an EU average of 47%. Most of the issues about water quality are driven by phosphate, and we learnt that most of that phosphate is not going through the soil at all but is going overland. How do we stop water, in the extreme weather rainfall that we have had, carrying off phosphate into the watercourses? Our problem with phosphate is that it has a legacy in the water environment for up to 30 years; so, even if we did everything right and changed our behaviour, we would still have this legacy to sort out.

One of our big concerns around the environment is that, if we want to get farmers to change their behaviour, we need a better engagement with the environment regulator and farmers. We have a model in Northern Ireland where it is regulation and enforcement first and advisory second; in Scotland — the same member state — they advise first and regulate and enforce second. That, unfortunately, has led to a culture here where farmers, rather than seeking help, look to not address the issue and do not look for that improvement.

In our emerging conclusions that we are suggesting is that we want to bring transparency to our industry. We see water quality as one of our biggest issues. So, we are saying that we should educate people on our water quality. We are looking to see real-time water monitoring on 60 of our key catchments; ones that are in difficulty or that have a chance of falling out of good quality into poorer quality. The water framework directive does not allow backward movement.

We want to see a programme on GPS soil analysis, finding out where our hot spots of phosphate are and where our low spots of phosphate are, and to have absolute transparency. We want to see smart precision technology being used. There is a technology called lidar, which is aerial based. It gives you a three dimension of the landscape and tells you accurately where water runs off land. If you know where water runs off land, you can stop the phosphate and sediment going into the water in the first place by planting small rows of trees just in that run-off area.

We want to create a database that has all the information for every farm, so that farmers have access to their soil analysis, their water quality, their topography and the weather, all in one database so that they have the best information to make the decisions on how to go forward.

Key in that is helping some of our most progressive but some of our most intensive farmers. There are roughly 1,200 farms that, regardless of what they can do on land management, will still find themselves on the wrong side of phosphate. We need to have a one-off capital grant scheme to help those farmers in nutrient recycling schemes on farms so that we can export the phosphate out and not land spread it and look at a different way of doing that. In doing the project, we need to make sure that the choreography of how we implement it is key. We need to sort those intensive farmers out, bearing in mind that those 1,200 farmers probably produce 40% of all the food that is processed through our processing industry at the moment. So, it is absolutely important that we get the choreography right and that that is done up front.

In looking to get rid of excess phosphate in soils, it is absolutely pertinent that we educate our farmers to improve their grass utilisation, lifting it from below six tons per hectare per year up to eight tons per hectare per year. By doing that, first of all, we produce more dry matter yield to produce more milk, more beef and more lamb, hitting our output, but we will mine the phosphate back out to the soils again. We need to find a way of getting phosphate out of high indice areas.

We want to tackle and will be making a strong recommendation around conacre. At the moment, the Northern Ireland Rural Valuers Association has a campaign to inform people that conacre now has no tax benefits to landowners. The problem with conacre is that it does not allow the tenant to invest on lime, on hedgerows or on biodiversity. So, you are not getting good environmental performance, and you are not getting good productive performance. We would like to see land taken into five-year leases or longer and supported. On top of that, we want to encourage land mobilisation to get the next generation quicker. In the Republic of Ireland, the Exchequer has worked out that where you bring a young educated person on to a farm, the tax take increases by 14% on average. So, they have used that economic analysis to help land mobilisation and create incentives to shift that across.

At the end of the day, we want the output of this process to be transparent. We want the data to be accessible enough to reassure the environment regulator that we are on a pathway of positive change and our international buyers that the food from Northern Ireland is produced to a quality and environmental standard that is second to none. We believe that the emerging strategy that we have here is bold. We have already started to have conversations with Brussels. The initial feedback is very positive; we are certainly looking to do something that they have not seen the like of before, which is to increase good-quality raw farm produce at the same time as giving compliance on water quality, biodiversity and greenhouse gases and delivering a profitable industry. We commend this piece of work to you, Chairman. It is currently in draft form. It will be handed to the permanent secretary of the Agriculture Department as a draft report to allow us to finish off our deliberations when the new Minister and Department are in place.

**The Chairperson (Mr Irwin):** Thank you very much for your presentation. Given that one of Northern Ireland's biggest assets is grass, which we can grow in abundance, are you not disappointed — I am

— that, under the first tranche of the farm business improvement scheme, no grant aid is available for lime, soil analysis or reseeding? There is a big potential improvement in grass. It is something that we are missing. I have been told that, under the farm business improvement scheme, there is no grant aid in relation to that. I think that that is a mistake. What is your view?

**Dr Gilliland:** I do not know the inner workings of it. My understanding is that there will be support on soil analysis but that there will not be support on lime. We would like a one-off compulsory soil analysis for the whole of Northern Ireland. It needs to be publicly funded. Without that information, how do you know how much lime is where? I am delighted that you, Mr Chairman, have focused on lime and soil analysis. It goes right to the core of our report. Over the last 30 years, we have let our eyes slip off the ball, which is soil. We want a clear communication of the benefits of lime to grassland. We do not believe that the public purse will be allowed to fund a liming scheme, but we will certainly articulate the need for a one-off soil analysis. We would like it to be linked to GPS, because water quality will be measured on GPS, lidar will be on GPS, and our land parcel identification system (LPIS) maps are GPS. At least you can then have everything talking to each other. We would really welcome support on the soil analysis side.

**The Chairperson (Mr Irwin):** You certainly have my support, and I am sure that the Committee is in line with that. It is the biggest asset that we have in Northern Ireland. To me, it seems so obvious that the grassland situation is one that we need to look at. Under the farm business improvement scheme, if there is a will to do something, there is a way. I am disappointed that the Department is not focusing more on that. It is a natural asset that we have. Many of the other proposals under the scheme involve farmers spending a lot of money to invest in buildings and all the rest, which is also important, but, when we have a natural asset, it is important that we take full advantage of it.

**Dr Gilliland:** I will tease out a little bit further the strength of getting knowledge of soil, particularly with lime and your pH. It is the only way in which we are going to sort out soils with high phosphate indices. Once the phosphate is in that soil, the only way in which we can get it back out is to graze it back out again. We have no other way of taking that phosphate out. We are asking for what we call sustainable intensification. To improve our environmental footprint and water quality, we need to get a bigger output of that grass out, not by putting more phosphate on but by putting lime on, getting better grass swards, having more legumes and mixed grass swards and getting that grass utilisation up. Only then will we be able to mine that extra phosphate and sort out our long legacy of phosphate into water.

**Mr Rogers:** I could not agree more about grassland management. I find it strange that we do the soil analysis but then we cannot get any grant aid for the lime. The other point that you touched on was environmental regulation, and you said that Scotland advises and then regulates, whereas, here, we seem to regulate and it just instils a fear in the farming community across the whole area. Do you see opportunities when environment comes under the new Department after the May election?

**Dr Gilliland:** Yes, I do, because one Minister, one permanent secretary and one Department will have to deliver on improving water quality and improving biodiversity and, at the same time, deliver Going for Growth. They have no choice other than to embrace this. At the end of the day, our issue is that nobody wants to see farmers in court. Farmers in court does not solve any issue. We want a positive behavioural change. I have represented the farming industry and am a passionate participant in it. What I really want is to see my fellow peers mentored, and I want us to show what the latest best practice is and how we get there. I have just retired after seven years as a director in the Scottish Agricultural College, which has a fantastic relationship with the Scottish Environment Protection Agency (SEPA). Together, they are an advocate first, and they mentor change. If change does not happen, they deliver enforcement. We are not asking for not enforcing; we are asking that we do our best to create behavioural change first.

**Mr Swann:** Thanks, John. What about the basic payment scheme and the change of land usage? How does that take into account some of your recommendations?

**Dr Gilliland:** We have not actually tackled it from the basic payment scheme, because it is what it is. We have tried to look at what the issues are, and we have looked at biodiversity, water and greenhouse gases. Quite a lot is written into the rural development programme to help us on greenhouse gases. On the areas that are coming through, what we are recommending takes us beyond the basic payment scheme and pillar 1. No region has ever used lidar to focus on water. When you see the technology working and the 3D landscape approach, when it is pouring with rain, you will know exactly where that water runs on your farm. Some of the things will need policy change.

At the moment, there is no support to put in a woody strip on that corridor. With those kinds of things, we will have to say, "Listen, policy will have to be changed to suit that".

In the basic payment scheme, the arable area probably has the best tool, because the serious arable producers are caught by ecological focus areas, and, in an ecological focus area, there is room to do some of the things we want on that. Grassland farmers are not caught by ecological focus areas in the current thinking. You and I know that, when it evolves again, what we have in ecological focus areas may be the thin end of the wedge; it may end up on grassland. That is the one vehicle that the arable men have to implement some of this.

With the business improvement scheme, if we can get soil analysis in there and get discussion groups going, it will be one of the key pilot mechanisms to get behavioural change.

**Mr Patrick Casement:** Could I add to that? John mentioned the idea of putting in strips of woodland or vegetation of one sort or another to soak up some phosphate and prevent it getting into the watercourses, but those could also fulfil several other functions and be multifunctional. They could have a role in reducing floods further downstream and would have biodiversity benefits and shelter benefits. They change the soil porosity generally and carbon sequestration. There are multiple benefits, and we can see a variety of solutions like that that do not address just one problem but can address a whole range of problems and issues together, if they are thought out carefully and properly.

**Mr Swann:** Picking up on John's last point, it is about that generational change of mindset. I know that your paper says that the average age is 58. That is because we stop counting farmers after they get their pension at 65. That age is an awful lot higher. You talked about changing the mindset on conacre. We all thought that the change in the basic farming payment system would change the mindset on conacre. It has not. How do we do that?

**Dr Gilliland:** We need to start with the professionals, because a surprising number of lawyers and accountants in Northern Ireland still believe that landlords are better on conacre than on a five-year lease. That is where the Rural Valuers Association has been pivotal. It has a very good document, which we want to support, and is going around informing the professionals who oversee how farmers behave in that area.

We have to be careful about the arable sector, particularly potatoes and veg, which need annual conacre. Outwith that, there is no reason that grassland cannot go into a five-year lease, and there is no tax advantage for the landlord to stay there.

We are flirting with boldness. If we find that landlords are not prepared to play ball, and if they choose not to listen to us and help bright, innovative people, and if they choose not to manage their own land right for the environment and production, we may have to look at other tools. I am not saying that that is the right thing to do. At the moment, fortunately, agricultural land is not rated, and long may it stay that way. However, if landlords are not prepared to shift conacre land into a productive, active agricultural environment, we may have to look at a negative to try to get landlords to change.

At the end of the day, we want productive land — productive for food and the environment. We do not see the conacre system delivering that at the moment.

**Mr Swann:** Are you talking about enforcement to try to get people —

**Dr Gilliland:** Sometimes the threat of a disincentive works very well.

**Mr Swann:** Disincentive rather than enforcement. Is that the new spin on it?

**Mr Casement:** They are two quite different things.

**Dr Gilliland:** An awful lot of you here have experience of the farming community and landlords. I notice that nobody is disagreeing on the issue of conacre.

**Mr McCarthy:** You have not come to me yet. *[Laughter.]* I am on the list somewhere, so be careful what you say.

**Dr Gilliland:** I am waiting for it.

**Mr Swann:** To finish, what feedback or input have you had from the Ulster Grassland Society?

**Dr Gilliland:** I have not had anything yet from the Ulster Grassland Society. This has still to go as a final document to the Department. Saying that, if people want to be walked through emerging conclusions, I am more than happy to make myself available. I presented to the Agri-Food Strategy Board and the Agri-Food and Biosciences Institute (AFBI). I have agreed to go to Agrisearch. The bankers asked me to give them a presentation. If there are organisations or key influencers and opinion-formers that you would like a more detailed briefing given to, please let me know. I am happy to facilitate that.

**Mr McCarthy:** I speak as a landlord — a small landlord — but I am anxious to contribute to the benefit and well-being of Northern Ireland. However, I am a wee bit suspicious. You mentioned conacre at the start. As you continued, I felt a threat coming on. I regard myself as being reasonable, sensible and willing to work to help. Are you saying that the majority of people whom you class as landlords who have land out to conacre are not that way inclined?

**Dr Gilliland:** No, that is certainly not what we are saying. We would like as much of the land in Northern Ireland to be as well-managed as possible, for productive agriculture and the environment. The problem with the 11-month lease that we have in conacre is that it does not give the tenant security to do simple things, such as putting lime on, if he knows that he cannot put lime on. You could have a landlord who says, "Listen, I'm prepared to let you have the land for five years. I'm happy that you put the lime on". We are therefore trying to encourage landlords to allow some more security for the tenant so that liming can be done, hedges can be managed better and whatever else. We want the land to be of better heart.

Not all conacre land is in bad heart. There is some very good conacre land, but a lot of it is sub-purpose and sub-performing, including from an environmental point of view. We want to encourage as many landlords as possible to work with their preferred tenant to get land to be more productive and better-performing for the environment. We believe that that would be better served under a longer lease. That is not to diminish the powers of the landlord. At the moment, there is absolute clarity that, if you keep your land in conacre, you are not any more secure than if you enter into a five-year lease. We would like a better approach to that tenant-landlord relationship so that, at the end of the day, it is the land and us, as Northern Ireland, that benefit, through better environmental services and better productivity.

**Mr McCarthy:** Are you making that proposal available to the farmer who takes the land? The person who takes mine has never asked to take it for five years but has had it for five years and more.

**Dr Gilliland:** Your example is so typical. There is so much conacre that, unless something dramatic happens, is knocked on and knocked on.

**Mr McCarthy:** If a row develops because there is not enough money in it or something like that.  
*[Laughter.]*

**Dr Gilliland:** This is as much an education for the active farmer as it is for the landlord. However, what is very clear to us is that 30% of the productive land in Northern Ireland is underperforming. If we are looking to get a 20% to 40% increase in farm volume over the next seven years, conacre has its role to play in helping us achieve that. When we analyse that, we see that this is about this security for tenants to invest, whether that is in a countryside management scheme, lime or whatever else. It is when they have some security that they will see the return on their investment.

**Mr Casement:** We went to look at the system that is being operated in the Republic of Ireland. It has introduced tax incentives for farmers to enter into long-term lease agreements. They get better incentives the longer the lease. For example, they get a better incentive for a 10- or 15-year lease than they do for a five-year lease. They have control. The Department of Agriculture, Food and the Marine is talking to the Department of Finance, and they have sorted out a system for doing that. Here, unfortunately, we do not have that option, because we do not have control of our fiscal policy. Taxation is a United Kingdom situation, so as much as we, as a group, would like to have recommended tax incentives, I do not think that they are a realistic option. That is why John suggested, in response to Robin Swann's comment, that we may have to work the other way and have a disincentive — more of a stick than a carrot — to encourage this. We all felt very strongly that this is the way in which to go. It is clear that the Republic is absolutely adamant that this is the way in which

to go. The agricultural and financial institutions are unquestionably working towards that now. It is not just a whim of a group of people like us.

**Mr McCarthy:** As long as you are not coming down on the landlord with a big stick, that is the main thing.

**Mr Casement:** No.

**Mr McCarthy:** I wish you well with the report and look forward to reading it.

**Mr Rogers:** I have a very quick point to make on grassland management. I have been spraying weeds for many, many years. I have done targeted spraying, and the grandfather rights have kept me OK. However, many farmers are now concerned, first, that they have to go on a course, which is not that accessible. Secondly, they are concerned about the cost of the course.

I also want to say that, considering the wet winter we have had here with, in some cases, land being flooded for a considerable period, there is a need to reseed that type of land. I want to know your thoughts on those two points.

**Dr Gilliland:** I will take the second point first, if you do not mind. On the issue of excessive flooding, given the amount of rain that we have had, what we have seen over a long period is that our land not being able to take as much rain as it used to. One of the things that Patrick mentioned a moment ago is what I call multifunctional technologies. Clover, for example, is a multifunctional technology. It is great for fixing nitrogen. A lot of people do not realise that a sward that has a lot of clover in it can take up to 14 times more water and heavy rain percolating through than a straight ryegrass can. It has a fantastic root structure that opens the soil so that there is less waterlogging. We are trying to get simple technologies that we have known about for a long time back out there.

Spraying then becomes an issue, because the one bugbear with clover is that it is very hard to control weeds and have clover simultaneously. The report has not looked at training on spraying. That is a skill set, and we did not go into skills as such. We have touched on herbicides. Northern Ireland Water has made very clear its concern about pesticides getting into the water in certain areas. There are particular issues with MCPA, which has been used in rush control. Where the report talks about pesticides, it is in that area rather than around how we train operators as such. Our remit did not really reach into training on those key, core competencies, of which spraying is one, of course.

**Mr Rogers:** OK. Thank you.

**Mr Milne:** I will not take long. I find the conversation this afternoon very interesting. I want to pick up particularly on your point about run-off. You said that it would not be a wile big job to establish where run-off occurs. I have always been of the opinion that we should plant trees, or whatever. I read recently that a single tree can take up to 1 ton of pollutants over maybe 20 years. It makes perfect sense to me that we take a serious look at this, and that is what you have done. How, then, do we go about moving it forward? The new Department of Agriculture, Environment and Rural Affairs and its Committee may tie this whole thing down. What is your view?

I am really passionate about this, and there are ways in which to compensate farmers for the loss of single farm payments in such areas through a countryside management scheme, or whatever, in order to protect the greater good and people.

**Dr Gilliland:** One thing that I will say from the outset is that, if farmers lose their single farm payment, new planting will never happen. The trees will never be planted.

**Mr Milne:** That is right.

**Dr Gilliland:** We therefore have to get rid of the perverse outcomes. If doing something right for the environment means that the single farm payment is lost, that is a perverse outcome, and we need to get that sorted out. We will have a section on perverse outcomes.

As regards planting, we have known for quite a long time that woody strips or grass strips will reduce run-off. Until now, the perceived wisdom has been to have the planting parallel to a stream or river. What the research has shown is that you are probably better to have it nearly at right angles but

specifically where overland flows take place. That is completely different thinking from before. The beauty of this Lidar technology is that it can tell you to within about half a metre.

One of our best visits was to Teagasc's agricultural catchment pilots in the Republic of Ireland. Teagasc has six catchments that have been running for six years using automatic water analysis, and it has had really interesting results. A lot of results were somewhat surprising, and some of the pilots did not work as well as others. That is where it started to use this technology. It is seeing that, if you can interrupt the water and slow it down, you can get the sediment and the phosphate out. You are not stopping the water eventually getting there, but you are pulling the sediment and the phosphate out. The trick is that you then need to mine that phosphate back out again. That is why something like woody coppice is very good. If you can cut the coppice every three years and take the wood off, you take the phosphate back off again. Those are the kinds of things that we are saying that we have not been doing until now, but we think that that could really help us get a quick win.

**Mr Casement:** To go back to the flooding issue, under woodland or a strip of trees, the ground is 60 times, or 6,000%, more porous than it is out in the open field. Therefore, there is a real opportunity. John just mentioned that our land is no longer coping with heavy rainfall as well it did, and that is partly due to compaction from heavier machinery. We need to find ways of opening up the soil, and planting trees is absolutely one of the best ways of achieving that.

Even narrow strips provide shelter. There is a very good, farmer-led project in a place called Pontbren in Wales, and through the research done there, it has been discovered that that works, and it has transformed farms and their profitability there.

**Mr Milne:** Thanks very much.

**Mr Anderson:** Thank you, gentlemen, for your presentation. May I go back to conacre?

**Mr Casement:** Absolutely.

**Mr Anderson:** Did you tell us, John, that there is 30% of —

**Dr Gilliland:** The latest figure is 29%.

**Mr Anderson:** Twenty-nine per cent of our land is held in conacre. How much of that land is underperforming? Surely it is not all underperforming.

**Dr Gilliland:** We do not have a handle on how much is underperforming. We are finding that, certainly in soil analysis, the soil is of a lower pH. A lot of it is not being analysed at all, and you are certainly not seeing the investment. When farmers went into the countryside management scheme, they went in with their own land, and conacre land was never included in any of the agrienvironment schemes.

What we are saying is that we would like conacre to participate in those schemes. We would also like conacre to be soil-analysed and for it to have lime on it. We want to create a framework that allows security, whoever will pay for that. It will most likely be the active farmer — not always, but it will most likely be the active farmer. There are some generous landlords, however, who will do it because they believe in the land. I am a landlord as well as an active farmer, so I understand both sides. We want tenants, who will be the ones investing in that improvement, to have some security so that they get the return on their investment.

**Mr Anderson:** You have talked about a minimum five-year lease, but, from what I know about it, there are farmers who take land by conacre year on year, and they invest heavily in that land. Kieran talked about the like of their working in cooperation to ensure that the land is well kept and maintained in all aspects. It is to no one's benefit for the land to fall into bad condition.

I am trying to work out the 30%. There is quite a lot of conacre land out there that is well maintained. Maybe you would like to comment on that.

**Mr John Best:** I take your point. If you speak to any farmer — I take quite a bit of conacre — you will find that there is not the same incentive to take a longer-term view of the management of that land as there would be if it were your own land.

**Mr Anderson:** Is that from the tenant's perspective?

**Mr Best:** From the tenant's perspective, there is not the security. A landlord may pass on — a lot of landlords are of an age — and the next generation will say, "So-and-so down the road will give another £50 an acre for that ground". Tenants therefore do not have security from one year to the next. They know that, all things being equal, they will get it the next year, but there is an if. If you invest in land, you are better to invest in your own land.

**Mr Anderson:** It is that insecurity, John. Is that what you are talking about?

**Mr Best:** Yes. That small area of insecurity.

**Dr Gilliland:** Correct.

**Mr Best:** It is not intentional. It is just a state of mind.

**Mr Anderson:** We are not just talking about who does and who does not pay for it. There may be something good going on at the moment. It is really just that insecurity that needs to be overcome, and that could be achieved in a not too difficult way to get farmers or the owners of the land to buy into this. I know from experience that there are good tenants out there who take conacre year on year. They really look after the land and keep it in good condition. I am not saying that everyone does that, but it is to no one's benefit not to keep the land in good condition, because it will give a poor return if it is not. This may be something that does not need a lot of tinkering to get sorted.

**Dr Gilliland:** At the end of the day, for one thing, it is not about putting any more legislation in place. We are trying to deal with the issue, and the issue is insecurity. If there are broad-minded, visionary landlords who will invest, that is excellent. They may also be prepared to allow tenants to have a loose relationship, whereby, unless they blot their copybook, they can stay for many years. An awful lot of conacre is done in that way. The issue is to overcome that insecurity to make sure that it is not only the active farmer's own land that is limed but his conacre land and that both are looked after to the same standard.

**Mr Best:** To finish, the crux of the issue is that only about 15% of Northern Ireland land has had some soil analysis done. If you take the logic of that, the bigger end will be old land. Although, superficially, a field looks green, its hedges are cut and it looks lovely, the pH level could be five.

**Mr Anderson:** OK.

**Dr Gilliland:** That makes such a difference to the —

**Mr Anderson:** Do you see a point at which there could be built-in flexibility between a tenant and an owner? From your point of view, would it be strictly for a minimum of five years' conacre? If someone is willing to work to bring land to a good condition —

**Mr Casement:** If you are going to go for a longer period, there is no longer any advantage in conacre. It would be better to have a tenancy — a five-year lease — than going into a conacre. The active farmer would have control of the land for 12 months of the year and all the rights over it that he needs to make investment and get the best out of it. The contractual arrangements would be absolutely clear so that everybody knows exactly where they are and there is a legal, binding agreement. It seems to me that that is a better way forward than the relatively loose, informal and often not very tightly bound-up conacre-type arrangement, which, in some cases, staggers on from one year to the next, and, in others, it is let differently each year.

**Mr Anderson:** Do you see any difficulty in getting to that point?

**Mr Casement:** Obviously, we have to change behaviours.

**Dr Gilliland:** It is cultural. There is a Northern Ireland cultural issue on both sides. It is not only landowners but active farmers.

**Mr Casement:** That said, tenancies are beginning to appear now. I know of a couple that are working extremely well, and both parties are very happy with them because they know exactly where they are. There are no grey areas, and there is no blurring. The farmer knows exactly how long he has the land for and what he can and cannot do. The landlord knows that what he wants to be done will be done, because there is a legally binding agreement. It is a huge plus. As I say, in the Republic, this is now gaining huge momentum. Apart from the tax incentive, there is a general feeling that this is the way forward, and everybody is pushing it: the Department, Teagasc and the IFA.

**Mr McMullan:** Thank you for your presentation. Have you presented the young farmers' scheme to the Young Farmers' Clubs? That is maybe where we should start. Your focus is on a change in farming practice. You can put different wee names on it and put it whatever way you want, but it is a change in farming practice here. I do not disagree with much of what you said, but I am a wee bit mystified about some of it. With the young farmers' scheme and the young farmers coming through at Greenmount, is this part of the curriculum in the scheme that they have to do?

**Dr Gilliland:** I have not presented to the Young Farmers' Clubs yet, but their immediate past president is one of our members.

**Mr McMullan:** It is not just the Young Farmers' Clubs but those on the schemes at Greenmount.

**Dr Gilliland:** I have had two long internal conversations in CAFRE about how we look not only at the curriculum but at its estate. CAFRE has hosted us several times. Every time the working group met, we went around the country. We not only had a working meeting but we took evidence everywhere we went. We have been round most of the CAFRE campuses, and we also went up to the Glenwherry hill farm. We engaged with CAFRE on all angles, and I have had very constructive engagement on how CAFRE leads by example and puts its own house in order, and then uses that to build into the curriculum. So I have had quite a long engagement with CAFRE.

**Mr McMullan:** We talk about what is happening in England and how well it is doing. We have a different system of farming here compared with England. In England, it is mostly tenant farmers, while, over here, the majority of farms are owner-occupied. It is hard to get them done, but, over the years, the majority of farms have had their soil tested, lime spread and so on. There must be a database for that, because the soil is sent to England for testing. Can you not find out from that?

**Dr Gilliland:** The number of samples sent to the lab is surprisingly poor. Only 2% of soils are analysed annually in Northern Ireland. In years gone by, it was different, but, over the last 15 years, it has changed. Sadly, it is predominantly the grassland sector, because most arable men will analyse their soils far more regularly. There are two parts to this: soil analysis and measuring grass growth. An awful lot of farmers never measure what they get back off in their grass, which is probably why the arable sector is ahead. Arable farmers measure the ton of grain, the ton of spuds or whatever. Only very rarely does a farmer measure grass performance. Through CAFRE, the benchmarking farms are doing so, but they are very much in the minority.

We would like grass yields to be measured, and we would also like to work with machinery manufacturers. Last year, John Deere had a forage harvester that could measure grass yields on the move as it collected grass as silage and plot it, just like John Deere combines do with grain. I know that Claas is also working on it, so we would really like that technology, which is proven technology in the arable world, to be brought into the grass world. We need to focus people on where their fields are productive and not so productive, and we need to find out what is wrong to see whether we can sort those issues out. I do not know whether you have ever seen GPS yield maps; they show hot spots and weak spots, and really focuses on you as a farmer. I did it when I grew grain, and it focused on what was wrong in parts of a field. You spent time looking at it and, if you could, you corrected the problem.

**Mr McMullan:** What about the nitrates directive? Where does that stand in all this?

**Dr Gilliland:** We have had the nitrates directive since 2003 or 2004. The water framework directive supersedes the nitrates directive. The reason why I have laboured the issue of water quality in the water framework directive is this: the Commission currently enforces and inspects the nitrates directive by looking at the member state's action plan and at farmers' nutrient management plans, and it monitors a paper chase. The water framework directive measures water quality on a catchment-by-catchment basis. It measures output, so it is far harder to comply with than the nitrates directive. The

water framework directive will be a considerable challenge to this industry. Given that phosphate remains in the environment for up to 30 years, and even if every farmer knew the right thing to do and did it, the environment regulator will still be chasing us in 20 years' time because our water quality has not improved quickly enough. The key thing that we are trying to do is to create a transparent process whereby we can show the regulator that we have changed our behaviour so that we are not always in court. We are on a train, and the train has left the station. There is a collection of way points that are transparent and can be measured, and soil analysis is vital in that. That is the way that you convince the regulator that we are putting our house in order, yet water quality has not improved as quickly as one would have liked.

**Mr McMullan:** What about the proposed new areas of natural constraint (ANC) and the environmental structures through that?

**Dr Gilliland:** We have looked at the issues but not at land classifications. For us, as you go up from lowland to higher land, most of the water quality issues are in the lowland areas. That is why we have predominantly — not totally — focused on lowland areas, because we really need to get our heads round those areas. Most but not all of the food is produced in those more fertile areas. We have been trying to focus on the issues rather than on geographic bits on a map. What are the issues? They are water quality, biodiversity and a reduction in greenhouse gases. What can you do as a farmer? We have not tackled designations as such, because we do not think that that helps to create behavioural change. We want people to focus on the issues that they have to address.

**Mr McMullan:** You will agree that the lowland — for want of a better word — ground, where most of the food is grown, is different to the higher ground or the proposed ANC ground. There are two scenarios, and you need to separate them. When it rained heavily, it took a day and a half before you got a brown flood in the river in the higher ground — for example, the forestry ground and mountain. Now, with the irrigation on the mountain, you have a flood within two or three hours of a heavy shower of rain, so the irrigation is working too well. The high ground and the low ground need to be separated, because they are like chalk and cheese.

**Dr Gilliland:** We had a very good visit to the CAFRE hill farm at Glenwherry to look at how they are managing land. They had a very good pilot that looked at rush control, grassland management, increasing bird habitats and beef and lamb productivity in those spots. We found that to be extremely useful. Patrick's work through the National Trust has also looked at re-wetting upland and holding water up. Retaining water in high organic soils slows water down, but it also greatly reduces the mineralisation of the carbon and keeps the carbon stocks up. Do you want to comment, Patrick?

**Mr Casement:** I will go back to the idea of multifunctional solutions. Some of the solutions that we are suggesting for the lowlands will work in upland areas in helping with flood relief. One issue that we are struggling with and that we find very difficult is that people in the uplands may make changes and improvements that help people downstream from them, but they themselves do not see the full benefit of it. We struggle a bit with how you transfer the cost or benefit from one group of people to another. It is beyond our remit to address that, but we can draw attention to it. However, you are absolutely right: issues can be addressed in the uplands that will make a huge difference further downstream. Flooding is one of those issues. As John said, for all sorts of reasons, we also need to look at how we retain more water in the uplands not just to prevent flooding but to help with carbon sequestration, because peatland does not sequester carbon unless it is waterlogged. If you drain it or put drains into it, the water will run off rapidly, but it will also tend to oxidise the peat because it dries out. We have to be very aware of that.

**Mr McMullan:** I agree with you about the programmes that are being implemented in the South of Ireland, which are showing the way forward. I think that we should join up more with them. If, for instance, this goes out publicly to the farming industry, you will automatically get a disjoint between upland and lowland ground. As you say — I totally agree — you are struggling with that issue. I do not disagree with your ideas on how to deal with it.

**Mr Casement:** We can only raise the issues. That is all that we can do. We cannot solve it in one go.

**Dr Gilliland:** We had a very good two-day visit south of the border. There is certainly a can-do culture, which is very refreshing — there is no doubt about that. We believe that the strategy, if implemented in full, would leapfrog us over our colleagues south of the border, because the one thing that they have not been as good at is creating the initial database of performance. The core of the

strategy is to create a database of economic and environmental performance, with tools to measure change. So, using new technologies, you bring a transparency that has not been seen before. We believe that, by doing that, we will create a database and a system that we will be able to show to the environmental regulator and the international buyers of our food produce.

It is one thing to produce all this food, but, if we do not create a market that shifts this extra food out of Northern Ireland, all that we have done is to drop the farmers' price. We want to create a foundation here on which a credible brand of Northern Ireland sustainable food can be allowed to be built to rival or to complement Origin Green and what Bord Bia have done. There is no doubt that Origin Green has shifted a lot of food out of the Republic of Ireland onto the international marketplace, and the combination of Minister Coveney and Bord Bia is stunning. If you ever see them on an international platform, you will notice that they are very articulate and switched on. They have managed collectively to shift a lot more Southern Irish produce onto the international market. We need to be able to engage on that. At least what we are proposing here is that we will have a scientifically rigorous process that is practical and transparent and that will allow us to build a brand to match, rival and compete.

**Mr McMullan:** Is that what we are going for — a brand?

**Dr Gilliland:** No, what we want to do is to increase profitability to Northern Ireland.

**Mr McMullan:** Yes.

**Dr Gilliland:** If you are going to produce more food, which is what Going for Growth is about, employ more people and create more turnover in the Northern Ireland economy, the only way that you can do that is to create a market for the surplus food that you are moving out. Part of moving that is that you need to prove to the international food market that you have environmental credentials that are second to none. That allows you to use it to prove to those international buyers of our food that we are credible and on a pathway to improving environmental performance and having safe, nutritious food at the same time.

**Mr McMullan:** Do we not already have that? Do we not have a good name in environmental food?

**Dr Gilliland:** No, we do not have anything that rivals what Origin Green is delivering for the Southern Irish.

**Mr Casement:** We have a rather vague feel-good factor that is not always justified, and we have to be very careful about that because examination of our green credentials might prove that they are wanting. For a start, we have to look at the water quality issue.

**Dr Gilliland:** In fairness, brand building is not the remit of this working group. Its remit is to look at a strategy that delivers positive behavioural change in looking after the environment and delivering safer, more nutritious food. An Agri-Food Strategy Board recommendation set us up, and I believe that you were meeting the board earlier today. One of the board's remits is to look at how you market Northern Ireland produce beyond here, and this is part of its discussions. If the board chooses to go down this route, we will have a robust database and a foundation on which to build a good, credible scheme.

**Mr Casement:** One of the problems with Origin Green is that it was created as a brand, and they have now had to backtrack to find the justification for its being green. It is quite difficult to do that after the event, whereas we are proposing that environmental and sustainable credentials are put in place, and the brand is then created on the back of that. That is the right way to go about it.

**The Chairperson (Mr Irwin):** I have to be in a meeting at 4.30 pm, but I am not pushing you. As a farmer, I am impressed by your presentation. As a tenant and a landowner, I declare an interest. Many of the issues that you touched on are very relevant, and I look forward to your final report. I hope that you can make a difference.

**Dr Gilliland:** Chairman, thank you very much for the opportunity. I put on public record my gratitude to my fellow members of the group, not only to the two who are here but to the other nine who are not. I also thank the Department, which has provided a sound secretariat facility for us. That has been very gratefully received.

**The Chairperson (Mr Irwin):** Thank you very much.