



AGRIDEMO

Case study reports: Ireland CS2



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1. Background

Programme

The Agroforestry: LB (ALB) project originated in the forestry programme of the Department of Agriculture, Food and the Marine (DAFM), and Teagasc. One of the objectives of this programme is to promote the afforestation of Irish farmland. ALB is a small multi-partner project. It is co-ordinated by the Teagasc Forestry Development Officer JC and EC from the Forest Service of the DAFM, in conjunction with part-time farmer LB on his 20-hectare beef farm. In 2011, a forestry company established a pilot agroforestry plantation on the farm. The farmers, other landowners, professional foresters and policymakers who attend the ALB public demonstration events are the other involved actors. ALB has been used to proof agroforestry establishment and management methodologies, and as a feasibility demonstration for farmers, other landowners, professional foresters and policymakers. Agroforestry is a new land use in Ireland. The initial objective of ALB is to test the feasibility of the plantation; the second objective is to utilise it as a demonstration plot; and the tertiary objective is to test management methodologies.

Funding and Governance

In addition to Teagasc, the Forest Service of the DAFM and LB as co-ordinators, ALB is recognised by PLAID and AGRIDEMO.

Teagasc and the Forest Service of the DAFM co-ordinate the public demonstration events but LB facilitates the knowledge transfer process extensively at these events.

Teagasc organises the events (dates and times), and it also formulates the topics that will be covered at the demonstration events. These are determined by the type of audience that is expected; for example, farmers, professional foresters or a mixed group.

The Forest Service of the DAFM provides the background to ALB at the demonstration events as it has overall responsibility for the wider forestry programme. It also responds to the administrative and technical questions.

In addition, the forestry company that established the ALB plantation relates its experience in this regard.

ALB receives no funding, although LB did receive grant-aid towards its establishment and he receives on-going and additional forestry premium.

Actors and Networks

Teagasc, the Forest Service of the DAFM and LB (3 people) co-ordinate and administer ALB. The public demonstration events take place as part of a series of forest walks that are used to promote the wider forestry programme.

Firstly, the events are used to inform farmers and other landowners of the benefits of afforestation. Secondly, they are used to develop relationships with professional foresters so as to maintain conversations around agroforestry management issues and to promote agroforestry. Thirdly, they are used to show policymakers how agroforestry can fit into agricultural planning.

Augmenting this network, LB has been interviewed several times about ALB and it has been profiled on television and radio, and in newspapers and magazines (<https://www.independent.ie/business/farming/potential-of-agroforestry-can-no-longer-be-ignored-34334472.html>).

Outside of these networks, and in the context of research, the coordinators consult with the Agri-Food and Biosciences Institute Loughgall, Northern Ireland. This involves both advice and site inspections.

In addition, in 2017 three secondary school pupils won the Teagasc Special Award at the BT Young Scientist & Technology Exhibition in Dublin for an agroforestry project that they had based on ALB, and on working with Teagasc, the Forest Service of the DAFM and LB (<https://www.irishexaminer.com/farming/news/teagasc-land-award-for-schull-school-students-439470.html>).

How It Works

- The public demonstration events are advertised on different media platforms: television, local radio, online and in local newspapers, as well as through the coordinators' networks of personal contacts (data protection legislation has rendered older databases of interested parties obsolete, however). Local radio and newspapers tend to be the most effective media platforms.
- At the public demonstration events, knowledge transfer is initially top-down in nature (as is to be expected when introducing a new type of farming). Subsequently, open discussions are encouraged.
- Typically, 15–20 people attend the events.
- The advocacy contributions of LB are considered the most important by the other coordinators and by any other advisers in attendance.
- Depending on the specific demonstration event, and the topics that have been formulated for it, events are either targeted at certain cohorts or integrated and generalised.
- A standard forestry plantation adjacent to the ALB plantation is used to illustrate the difference between the two.
- Printed handouts are distributed at the public demonstration events and email addresses are taken (with the permission of the participants) for the distribution of digital material relating to agroforestry.
- Demonstration events are complemented by follow-up meetings with attendees either involved already in agroforestry or diversifying into it.
- The public demonstration events are single elements of continuous dialogues around agroforestry, which are maintained on a one-to-one basis, in group contexts and through media.

Event Farm and Location

LB's beef and agroforestry farm

Event Date: April 2018

2. Method

In line with the Methodological Guidelines, three main data sources are used: a background document and interviews at Programme and Farm level to analyse structural and functional characteristics, and event tools and surveys to analyse event level participation and learning, as follows:

1. A background document for every case study was completed by the AgriDemo-F2F partner who carried out the case study.
2. Interviews with representatives of programme/networks (level 1) and farm level interviews with demonstrators/hosts (Level 1) to reveal how the functional and structural characteristics enable learning. Analysis of these interviews is reported in Sections 3 and 4. Data is sourced from 2 interviews at the programme level and 1 at the farm level. The analysis followed 4 themes: (1) Coordinating effective recruitment of host farmers and participants, (2) Developing and coordinating appropriate interaction approaches, (3) Planning, designing and conducting appropriate demonstration processes, (4) Enabling learning appropriate to purpose, audience, context, (5) Follow-up activities.
3. Event tools and surveys (level 3) to reveal peer to peer learning processes. Event details and analysis is reported in Section 5. Data is sourced from 5 pre and post-demonstration participant surveys, pre and post event surveys with 1 demonstrators, and an event observation tool completed by an observing researcher. This data is mainly used for the analysis of learning processes and learning outcomes related to the specific event and overall comments on the effectiveness of the event. The analysis followed 5 themes: (1) Coordinating effective recruitment of host farmers and participants, (2) Developing and coordinating appropriate interaction approaches, (3) Planning, designing and conducting appropriate demonstration processes, (4) Enabling learning appropriate to purpose, audience, context, (5) Follow-up activities .

Finally, partners reviewed the case study reports to prepare their workshops with different stakeholders related to the case studies. These workshops aimed at validating the data presented in the case study reports. The workshop for Ireland will be held in the beginning of 2019.

3. Structural Characteristics

T1: Programme/network level

1. The main organisations involved in the demonstration activities and their roles

The Afforestation Programme is designed to increase the amount of forestry in Ireland, as the country has got the lowest percentage of forestland in Europe. The Forest Service of the Department of Agriculture, Food and the Marine (DAFM) has the overall responsibility for the wider forestry programme nationally. In the frame of this overall programme, there is the ALB initiative which is a small multi-partner agroforestry project. One of the objectives of this project is to promote the afforestation of Irish farmland. A pilot agroforestry farm has been established in a farmer's farm, with the aim to be a demonstration plot promoting agroforestry. Teagasc, the Forest Service of the DAFM and the demo farmer coordinate and administer the ALB project.

Well it's the forestry programme and is basically designed to increase the amount of forestry in Ireland, it's got the lowest percentage in Europe and we want to rectify that. It's at eleven percent now, we're trying to get it up to seventeen percent, so we're trying to ensure that farmers are encouraged to plant through grant payment and trying to ensure that the estate isn't eroded by felling without replanting, so we coordinate the felling licenses as well which ensures that what is planted remains there - and we also monitor plant health as well and we (the Forest Service) would coordinate policy. In the particular case of the agroforestry demo plot, I mean he's got conventional forestry and he's got agroforestry - most of the attention I suppose in recent years has been on his agroforestry plot and largely it comes down to the local personnel as to how much of that is organised. It's very much maybe a localised thing. (Programme interviewee 1)

So the overall program objective is the forestry programme, its origin is in the Department of Agriculture and Teagasc, one of the aspects of this is the promotion of a forestation that is planting new land. For this demonstration purposes, it is an agroforestry plot. So this agroforestry plot there are a number of objectives to it. The initial objective was a pilot feasibility plot, the secondary objective is a demonstration plot and then the third objective is proving new methodologies and establishing agroforestry plots. (Programme interviewee 2)

Well the, the demonstration plot was set up under the old Afforestation Programme. There's no onus on the owner to use it as a demonstration plot, it's totally voluntary, he gets nothing extra for, for doing it, other than the fact that he gets some media recognition I suppose and he would have the occasional appearance in papers and, and television as well from time to time, which sort of increased his profile I suppose. (Programme interviewee 1)

Well the demonstration farm I suppose is connected, it's part of the Afforestation Programme, so other aspects of the Afforestation Programme would tie in to it, but also we could see that other parts of agriculture could possibly end up being linked in more closely with it post 2020 where organic farming, for example, might be closer linked in with it. (Programme interviewee 1)

The Forest Service of the Department of Agriculture, Food and the Marine (DAFM)

At the very beginning, ALB was a pilot project for agroforestry as there was no other example implemented in an organised way. With DAFM's initiative, the results of the research plots of the Department of Agriculture were used as a model to set up the ALB project farm. Thereafter the state Forest Service inspector of DAFM together with a commercial forestry company representative, approached the host farmer to initiate the project. They set the pilot agroforestry farm and since then the farm is used as a demonstration plot. The Forest Service of the DAFM and Teagasc organise the public demonstration events on the farm, during which agroforestry is always the topic covered, with various aspects of the topic each time presented, depending on the audience. During the demonstration events, the Forest Service of the DAFM provides the background information in relation to the ALB project as it has overall responsibility for the wider forestry programme. DAFM's employee also responds especially to administrative and technical questions emerging during the

event. DAFM's role during the event is intentionally discreet in order to let free discussions and information sharing between attendees. Furthermore, the extent of involvement of DAFM during the event depends also on the type of audience attends. DAFM tends to answer more questions when other stakeholders than farmers attend i.e. Department's staff, forest industry representatives etc. DAFM also use its contacts to "advertise" the demonstration events on the specific farm (personal contacts, phone etc.). DAFM does not request feedback from demo participants in a formal way; it employs a rather informal exchange, with Department colleagues or other already known stakeholders, which they contact either in person or over the phone. A future objective for DAFM is to set up an agroforestry group organisation to reinforce communication and linkages between the agroforestry demo farms. At this moment there are not enough farms to build up a network. DAFM, also edits some kind of follow-up materials concerning agroforestry i.e. leaflets, brochures. These published materials are available to the participants at the demo events.

{state Forest Service inspector name} initially approached me along with Greenbelt (commercial forestry company) in relation to doing this agroforestry, I had never even heard of the word agroforestry prior to this. So when he ran the idea, when he gave me the idea I ran with it because it suited me because I was a little bit slow in giving over all my ground to forestry and just the idea seemed perfectly suited to me that I could still use the land and have forestry in it at the same time. (Farmer)

With the program itself or the demonstration plot generally what happens is there is myself as the Teagasc representative and there is a colleague of mine {name} from the forestry service, he is an inspector of the forest service. So normally we coordinate these events. Generally many of the public events are done in coordination with the forest service. (Programme interviewee 2)

My own role is pretty much to try and organise these, some of these meetings and to stand in the background basically and let the discussion take place. I would like to see the farmers and landowners interact and people within the industry interact without me really saying a huge amount, other, unless I'm asked.....I said before I would tend to try and sit back a bit in the discussions and let people ask questions directly to Liam and let the conversation develop. (Programme interviewee 1)

{state Forest Service inspector name}, the Forest Service inspector, normally would provide the background to the scheme and because he's in charge of the overall scheme on a nationwide basis he's also able to answer some of the technical questions or administration questions. (Programme interviewee 2)

JM and Loughgall, the research are the Department of Agriculture in the Northern Ireland and there's AFBI, Agriculture and Food Bioscience Institute in, up in Armagh. JM has set up research plots in Loughgall in the Eighties It's well established at this stage and usually with something like this you do research first and then you put it in to practice, in the Republic we, we didn't have any research so we used the research done in the North in order to set up our, our programme in Agroforestry, so we used, used their research. We do not have direct linkages with the Farm Woodland Forum, a largely UK network, although they've had meetings in the North and in Teagasc facilities in the south. They're conditions, climatic and environmental conditions are very similar to ours and that's why they've taken an interest in what, what we are doing and, and vice versa. (Programme interviewee 1)

Well when we were setting up the site initially, I told him, he was the first, he was pioneer in this whole area and would he mind if we occasionally showed it to people and he said no problem at all and that has been the case ever since. (Programme interviewee 1)

Q: How do you target farmers to host demonstrations? R: Well I would say in this case it was lucky more than anything else. The farmer had applied, or had been encouraged by EC the Forest Service's Inspector, to go for the forestry option. He then proved very amenable afterwards. So because it was a feasibility pilot plot he was the only option. As it turned out he was also practically one of the best options we could have come up with. (Programme interviewee 2)

Direct contact, phoning them, talking to them and saying are you coming, and, and if not, and maybe sort of saying the benefits of what it is, directly talking to them, it's, it's a bit of an effort, it is a lot of

an effort, it's a bit like when everybody is busy and taking that amount of time to talk to people, but I think it depends on who you're targeting, if you want to get people who are shaping policy, who are, who are in a good position to develop the business then it's time worth taking. (Programme interviewee 1)

Q: How are demonstration topics selected? R: Well usually when we go out to the agroforestry plot it's already understood and known that we're going to be talking about agroforestry, that's the topic, and around that you've environmental issues, you've got social issues, you've got landscaping issues, you've got forestry issues and you've got carbon sequestration, all sorts of, various different aspects going on, animal husbandry, animal welfare, potential of different crops and animals within the systems, so again, similar to previous questions, the, the, we don't want to stick to formally to an agenda, we kind of let the discussion take place and, and just show them and try and get them to appreciate what the concept is all about. Demonstration topics would vary, I mean again if farmers are there you'd let the farmer talk to the farmer, but yeah, if there are people from the Department or the forest industry, they're going to ask different sorts of questions, questions that perhaps Teagasc and ourselves in the forest service are in a better position to answer. (Programme interviewee 1)

Q: Do you plan and design activities differently for different topics? R: Well in this case I, again it's the audience, they do, if, if you have policy makers and people in the industry you're topics that you would select to discuss would be slightly different to those than if you've a large number of farmers in attendance, they want to know more about the financial side of things, whereas if there's somebody from the Department there they may be looking at maybe the policy side of things and maybe the administrative side of things, how easy is the thing to administer, those are the kind of issues that farmers wouldn't have, wouldn't be kind of, they wouldn't be foremost of their kind of priorities, where it would be for someone in the Department, so that would shape the topic discussed. (Programme interviewee 1)

Q: Do you request feedback from demo participants? R: I don't expect it. I, I, I see it as a very positive thing if they do – it depends on the people who are there, if for example people are from the Department and they're from let's say the organic section and they've come down to see what agroforestry is all about and I don't hear anything from them then I'll be, I'll be kind of amazed, whereas I would be expecting something back from them almost the next day, or even, even on the day itself. if it was somebody who I reckoned I needed to know whether it was, whether it was what they expected, I would phone them while they, while their information was still kind of fresh in their minds. I know people have busy lives and people have, you know, rushing around and people may even have tried to contact you and couldn't contact you and so rather than kind of thinking have they been trying to contact me I would usually pick up the phone and, and try and contact them just in case. (Programme interviewee 1)

Q: Do you - at the programme level - continue to engage participants after the demonstrations? R: very much so, for example, farmers who have established agroforestry plantations further up the Country, they will send me information or comments from time to time, so we stay in touch. I would be hoping that at some stage in the future when enough people are involved in agroforestry we might set up our own organisation, an agroforestry group organisation but at the moment - that would help the communication and the linkages, it would improve that big time - but at the moment, there aren't enough people at the moment to really warrant something like that just yet (Programme interviewee 1).

Q: Are follow-up materials made available to participants after demos? R: Usually, well up to now we've had these brochures that we publish for the agroforestry measure, the GPC 11, Grant Premium Category 11, which is agroforestry, we produced leaflets and sometimes we'd make those available to people, unfortunately they're out of date now with the figures in them are, are no longer up to date, so we'll probably have to have new ones, new copies of that, versions of that made, so that's about all we have at the moment to hand out to participants. We try to distribute them at agricultural shows or

forestry shows or at evenings where there might be a Teagasc event or something like that, but yeah, it would be on the day pretty much. (Programme interviewee 1)

Teagasc

Teagasc engages in the programme through its Forestry Development Officer. Teagasc has more organisational and dispatching responsibilities than DAFM, as it organises the events (dates and times) and it also formulates the topics that will be covered. The topics are determined by the overall program objectives (promote agroforestry), the type of audience that is expected as well as by the work is carried out at that particular time of the year on the plot itself. The host farmer is actually involved at the selection of the aspects of the agroforestry topic they are going to focus each time. The host farmer is the main demonstrator during the event. Teagasc's and DAFM's staff usually make an introduction before the farmer's presentation that gives some triggers for open discussion. Teagasc's role during the event, as DAFM's also, is intentionally discreet in order to let free discussions and information sharing between attendees. They usually enter to the discussions at some particular times when required. The public demonstration events are advertised on different media platforms as well as through Teagasc's databases or personal contacts. Teagasc has already run some surveys to participants in order to find the best way (media) to advertise the event. The host farmer has a direct/close contact with the responsible Teagasc adviser as well as indirectly with Teagasc's researchers. Moreover, Teagasc request feedback from demo participants at the farm walks, mainly through informal discussion. At the more formalized demonstration events, that welcome a large amount of people, feedback is requested in a more formal way (feedback forms). Teagasc use this feedback, to focus on emerging topics or aspects to be covered in future events. As far as the evaluation processes of the demonstration activities is concerned, Teagasc usually focuses on specific stakeholders, mainly companies' representatives, policy makers, researchers or Teagasc's own forestry staff. Teagasc prepare and provide also some kind of follow-up materials to the participants such as handouts and leaflets during the event or through email upon request. Teagasc staff also attends demonstration events as audience.

I would view one of the main people as the farmer himself, {farmer's name}. So without him and his element of conversation and knowledge transfer it's not really applicable. Second of all there's myself, normally I organise the event, the date, what times it would be run. And I generally come up with the topics that would be covered on the day. (Programme interviewee 2)

We've had a few people there down from the Forest Service (Department of Agriculture). They'd have had a look at it, and we've had people from the organic side of things looking at it and we've I suppose people from Teagasc (state agency agricultural extension service) as well, from various different areas of Teagasc having a look and seeing, you know, where it possibly could further develop within the industry. (Programme interviewee 1)

With the program itself or the demonstration plot generally what happens is there is myself as the Teagasc representative and there is a colleague of mine {name} from the forestry service, he is an inspector of the forest service. So normally we coordinate these events. Generally many of the public events are done in coordination with the forest service. (Programme interviewee 2)

I think one of the main motivations is to a certain degree goodwill. They like to help us out. And certainly we would probably when I say we, I would say Teagasc and Forest Service would provide a higher level of engagement with them. And they are aware of this and therefore it helps. In terms of the farmer himself I would say social standing, he is very proud and happy of his plantation, and would like to show it to other people. So while he's not getting any economic benefit he is getting a benefit in kind in that he is probably receiving a high level of advice and training. (Programme interviewee 2)

We have carried out a number of surveys as to where people hear of events. Generally local newspapers work best. Local advertising whether it's on radio or local newspapers. And direct contact by letter and text are also very effective. (Programme interviewee 2)

Moderately effective I would think. First of all if you are not in contact with them beforehand it's hard to know what their motivation to come and therefore how do you target them? So this is why we

normally use a multimedia platform in order to contact people. Other than just specific databases or systems that we have in place. (Programme interviewee 2)

Q: How do you identify/select relevant topics that will interest farmers? R: It would depend, certainly I would ask the host is there anything in particular that he's doing at the moment that is of interest or would be of interest to the landowners or other landowners. For example was he cutting silage at the time or was he putting sheep out on the land. So that is very useful because it's a useful hook. Outside of that then normally I would associate the topics in the demonstration outside of the overall agroforestry I would demonstrate work that would be carried out at that particular time of the year on the plot itself. So that it is actual relevant. (Programme interviewee 2)

In general agroforestry and overall forestry itself is a new land use for owners. Private participation and planting and growing crops has only been in the last thirty years, so you know the overall activities would be top down. However I would say that the event itself and once we (Teagasc or DAFM) get beyond the point where we introduce the topic, is mainly down to the host farmer. We want the host farmer to talk about his experiences. The knowledge transfer that's involved certainly it is my opinion that you can put experts up in front but farmers listen to other farmers voices. I think they are the most relevant. As I mentioned before it is more associated with the host farmer. (Programme interviewee 2)

Q: How are demonstration topics selected? R: In this case I would say by both program objectives and participants. There are certain key messages that we want to get across at each of these events. There would be the overall program messages, there would be individual topics that we want to address that are seasonal. And then of course once the discussion starts amongst the group we then tend to move onto different topics. So partly it is driven by the participants and what they are interested in. Generally, the policy is that we give the presentation start the discussion and then try to step back and allow the conversation to develop introducing our own expertise at particular times when required. But it's better to have it as a conversational flow. (Programme interviewee 2)

Q: Do you request feedback from demo participants? R: Part of the reason is that in an informal manner you discuss with a number of people what they thought of it, how they got on, you ask the people that are presenting what they thought of it. But as you are progressing through the event you are asking people is there other topics that you want covered and every event I would do at the end you ask for some feedback what they thought of it and what topics they would like to cover in a subsequent demonstration. That would be for farm walks If it's a more formalised demonstration event with a large group of people we would also carry out a feedback form as well. (Programme interviewee 2)

Q: Do you evaluate the demonstration activities overall? R: Well if it's the companies or policy makers or researchers or Teagasc's own forestry staff then you need to evaluate what they thought of it. And what could be included in it later on. You also require their feedback to better refine the demonstrations. (Programme interviewee 2)

Q: Who are the main people involved in the demonstration activities and what are their roles? R: [...] the actual organising of the demo events is done by Teagasc. (Farmer)

Q: Are participants (farmers, advisers, researchers etc.) involved in the overall development of the demonstrations? R: Absolutely. Not one more than the other. If anything at the very start I was the least involved. Because I knew the least. I would be in touch with Teagasc research by email, mostly and directly with {name}, Forest Service and {name}, Teagasc adviser. (Farmer)

Generally the materials will be handouts. So there'll be information agroforestry or maybe about the topics that we cover on the day such as fertilisers, vegetation control, or maybe shaping. So we would demonstrate the shaping techniques, we would have got the farmers to practice it but we (Teagasc) would also send them a leaflet with pictures of the work that was being done. This would be given to them after the event rather than before because I feel that it's a distraction if you give it to them

beforehand. But we would also on request send or email information to participants as well.
(Programme interviewee 2)

Department of Agriculture in the Northern Ireland and Agri Food and Biosciences Institute (AFBI)

The Agri-Food & Biosciences Institute (AFBI) was created on 1st April 2006 by joining the Science Service of the then Department of Agriculture and Rural Development (DAERA) with the Agricultural Research Institute of Northern Ireland (ARINI). AFBI is a DAERA non-departmental public body. AFBI carries out high technology research and development, statutory, analytical, and diagnostic testing functions for (DAERA) and other Government departments, public bodies and commercial companies (AFBI website).

The specific farm is the oldest demonstration plot concerning agroforestry, so at the beginning it was a pilot farm. With DAFM's initiative, the results of the research plots in Loughgall of AFBI and the Department of Agriculture in the Northern, were used as a model to set up the agroforestry demo farm i.e. same species, same spacing, same specifications. The AFBI research work, has been used because the results had shown an actually workable/functional research plot. So, the AFBI and the Department of Agriculture in the Northern offered the initial set up of the demonstration plot. Secondly, the coordinators sought advices and consultation from the Agri-Food and Biosciences Institute Loughgall, Northern Ireland. AFBI owns a long term experience in agroforestry issues, so they are involved both for advices and frequent site inspections under coordinator's request.

Well the set-up of this particular plot was based on research done up in Loughgall by {researcher name} (Agri Food and Biosciences Institute, Loughgall, Co Armagh) and it's pretty much using the same species, same spacing, same specifications that he had because it worked. {Host farmer name} is the oldest demonstration plot, so it's, it was the first one and we wanted to make sure that it was based on something that actually worked well. (Programme interviewee 1)

{Researcher name} and Loughgall, the research are the Department of Agriculture in the Northern Ireland and there's AFBI, Agriculture and Food Bioscience Institute in, up in Armagh. {Researcher name} has set up research plots in Loughgall in the Eighties It's well established at this stage and usually with something like this you do research first and then you put it in to practice, in the Republic we, we didn't have any research so we used the research done in the North in order to set up our, our programme in Agroforestry, so we used, used their research. (Programme interviewee 1)

The demonstration on the farm itself was part of a series of forest farm walks, which promote the overall afforestation program. So it's set within that. Outside of that networks that we use, the northern Ireland Agricultural Services in the Research, we've sought advice from them, they have a research station in Lough Gall. And we had them come down and look at this site a number of times and sought their advice because they've had experience of agroforestry for the last twenty/twenty-five years. (Programme interviewee 2)

Greenbelt - commercial forestry company

As already mentioned the initial set up of the demonstration plot was based on the model of the AFBI's research plot. With DAFM's initiative in 2011, the forestry company-Greenbelt, established the pilot agroforestry plantation on the farm. Thereafter it seems like the company is involved in demo activities or attend the demo events in order to offer some information on plot's establishment.

(state Forest Service inspector name) initially approached me along with Greenbelt (commercial forestry company) in relation to doing this agroforestry, I had never even heard of the word agroforestry prior to this. So when he ran the idea, when he gave me the idea I ran with it because it suited me because I was a little bit slow in giving over all my ground to forestry and just the idea seemed perfectly suited to me that I could still use the land and have forestry in it at the same time (Farmer)

Well there's three main groups of people, there's myself obviously, {name} from the Department. And the initial people who set up the forestry plantation for me Greenbelt. These are the three main groups involved in this here. (Farmer)

I suppose fourthly you would be looking at the forestry company that initially established it, there has been a lot of learnings from the establishment of it, and they are happy to share those. The other people I suppose that you could also mention are involved, the actual audience themselves. We try to encourage a discussion format rather than I talk to you, you listen format. (Programme interviewee 2)

there'd be {host farmer name} there would be Teagasc, there would be Green Belt, who actually established the site, and these would be the main people involved. (Programme interviewee 1)

2. The main actors involved in the demonstration activities and their roles

Host farmer

The host farmer is involved (always in consultation with Teagasc adviser) in the selection of the aspects of the agroforestry they are going to focus each time. The demo topics are strongly related to the individual activities and farm management which are driven by the farmer and what he is doing with his land at that particular time of the year on the plot itself. While the host farmer's involvement in the development of the individual demonstration activities is quite evident, according to both the Programme interviewees and the Farmer, the host farmer is never involved in the development of the overall demonstration programme, as this is tied to the national forestry programme and the host farmer does not have any official role in it. So, it seems that the host farmer is less involved in organisational issues before the event but he facilitates the knowledge transfer process extensively during the events. He is the leader of the farm walk, he dominates the discussion concerning the what/how/why on his farm; he explains everything and answers most of the questions asked. A lot of that conversation is driven by his own experience. The host farmer keeps close contacts with the coordinators and any important actor concerning demo activities i.e. with Teagasc's research, advisory and forestry services, with Forest Service of the Department of Agriculture, Food and the Marine (DAFM). It seems also that the host farmer request some kind of feedback from demo participants. He is keen to make use of these feedbacks in order to improve his demonstration capabilities in future events. He also offers his feedback, recommendations or suggestions to the coordinators as to how they could improve the scheme.

Q: How do you identify/select relevant topics that will interest farmers? R: Well with the agroforestry plot, with {host farmer name} because it's so relatively new usually it dominates the discussion, what is agroforestry, what, why is it considered in the first place, what are the positives for, or the benefits for the landowner and what are the benefits for the industry and why are we doing it and what, what can be done and how is it established and, and by the time you've covered a lot of these subjects, topics, there's hardly any other time left to discuss any other stuff, but usually the, by the time the farmers discuss maybe some of the practicalities of getting machinery in or out or turning a the headlands and that kind of thing the questions can vary a lot from, from group to group, so it's very hard to predict. (Programme interviewee 1)

It would depend, certainly I would ask the host is there anything in particular that he's doing at the moment that is of interest or would be of interest to the landowners or other landowners. For example was he cutting silage at the time or was he putting sheep out on the land. So that is very useful because it's a useful hook. Outside of that then normally I would associate the topics in the demonstration outside of the overall agroforestry I would demonstrate work that would be carried out at that particular time of the year on the plot itself. So that it is actual relevant. (Programme interviewee 2)

Q: Are participants (farmers, advisers, researchers etc.) involved in the overall development of the demonstrations? R: Absolutely. Not one more than the other. If anything at the very start I was the least involved. Because I knew the least. I would be in touch with Teagasc research by email, mostly and directly with {name} of the Forest Service and {name}, Teagasc adviser. (Farmer)

Well the set-up of this particular plot was based on research done up in Loughgall by Dr. {researcher name} (Agri Food and Biosciences Institute, Loughgall, Co Armagh) and it's pretty much using the same species, same spacing, same specifications that he had because it worked. {Host farmer name} is the oldest demonstration plot in Ireland, so it's, it was the first one and we wanted to make sure that it was based on something that actually worked. (Programme interviewee 1)

I would view one of the main people as the farmer himself, {host farmer's name}. So without him and his element of conversation and knowledge transfer it's not really applicable. (Programme interviewee 2)

Well when we were setting up the site initially, I told him, he was the first, he was pioneer in this whole area and would he mind if we occasionally showed it to people and he said no problem at all and that has been the case ever since. (Programme interviewee 1)

In general agroforestry and overall forestry itself is a new land use for owners. Private participation and planting and growing crops has only been in the last thirty years, so you know the overall activities would be top down. However I would say that the event itself and once we get beyond the point where we introduce the topic, is mainly down to the host farmer. We want the host farmer to talk about his experiences. The knowledge transfer that's involved certainly it is my opinion that you can put experts up in front but farmers listen to other farmers voices. I think they are the most relevant. As I mentioned before it is more associated with the host farmer. (Programme interviewee 2)

Q: Are host farmers involved in the development of the individual demonstration activities? R: Well when I say sometimes, the individual activities are driven by the farmer and what he is doing with his land. So in this case the farmer is, he is cutting silage, he's putting sheep out, so the demonstration activities involved with the crop it is his crop, both the trees themselves and what he is also doing with the land underneath the trees. So of course he's involved in it. (Programme interviewee 2)

Q: Are host farmers involved in the development of the overall demonstration programme? R: Never. Well the overall demonstration program I suppose is tied to the national forestry program. So generally the on farm activities and the demonstration is the farmer involved in that, the overall program no. The farmer would I think feel that that is beyond his/her remit. (Programme interviewee 2)

Q: How are the demo activities on the farm managed? R: That really was dependent on me, and that is the one thing about agroforestry, prior to you starting you need to know what are you going to use the land for. (Farmer)

Q: Are you involved in the overall development of demos at the programme / network level? R: No. No, I'm on my own here, from that point of view. I have spoken at conferences and I have connected with people there but I wouldn't have an official role, no. (Farmer)

Q: How are demonstration topics selected? R: They are selected based on what is going on, on the plot at that particular time. If those trees were a lot bigger we would be talking about thinning them out, or you know what I mean the time of the year. It really does depend on the conditions on the site at the time, doesn't it really? Is there sheep here, is there not. Is there a lot of vegetation around the place? You know, is it time for pruning, is it not? The time of the year and the conditions depend on the topic I would think anyway. A lot of that conversation is driven my own experience and that kind of economics involved and the choice we had, the land use choice I made, these topics I am are particularly keen to cover. (Farmer)

Content is usually on a timeline basis for me. I start off with the historical side of things as to when I decided to do such a thing, how I decided to do such a thing and go from there. I cover the cost of establishment and management to a certain degree. The earning capacity, a certain amount. I don't tend to dwell on that too much myself because, well to be honest, it's a demonstration plot and my rate here is a bit different to what the others would be getting. I tend not to hang around on that one

too much. Mind you I pay for it in a different way (laughing). With the groups from the Department I would make recommendations or suggestions as to how they could improve the scheme. (Farmer)

Do you request feedback on the event day from participants? Yes. I mean if I'm giving a presentation I like to know that people got something out of it. Or didn't get something out of it. And that I can adjust my answers or my attitude or my techniques the next time I have a crowd in. I mean we are all learning, including myself. (Farmer)

Q: Do you continue to engage participants after the demonstrations? Yes. Absolutely, that would lead into the prior questions do I evaluate the demonstration activities overall or do I request feedback. That's pretty much the same thing. I would of course yes. What do the people think, what did you think of it, I would of course. I also feed into a certain amount (small) of the policy work, the scheme details. (Farmer)

Audience/type of participants

There are many different types of participants at the specific agroforestry farm. Farmers, other landowners, professional foresters, Teagasc's forestry staff, people from the organic section of the Department and policymakers attend the ALB public demonstration events. People within the industry and especially forestry companies' representatives also attend. Representatives from Greenbelt, the commercial forestry company, which had made the initial establishment of the plot and offer important information, are present at the demo events. The host's farmer neighbours that use his land and help him during the year also attend at the field days. More rarely some researchers attend the demonstrations. According to one Programme interviewee (Teagasc's adviser), the audience could be seen as an actor involved during the demonstration events. Extensive discussion and experience sharing occurs during the event and important feedback is earned by the coordinators and the host farmer. This feedback is used for several adaptations and improvement of the future demo events.

I suppose fourthly you would be looking at the forestry company that initially established it, there has been a lot of learnings from the establishment of it, and they are happy to share those. The other people I suppose that you could also mention are involved, the actual audience themselves. We try to encourage a discussion format rather than I talk to you, you listen format. (Programme interviewee 2)

I don't expect it. I, I, I see it as a very positive thing if they do – it depends on the people who are there, if for example people are from the Department and they're from let's say the organic section and they've come down to see what agroforestry is all about and I don't hear anything from them then I'll be, I'll be kind of amazed, whereas I would be expecting something back from them almost the next day, or even, even on the day itself. (Programme interviewee 1)

There would be also local neighbours of Liam's who, they would come along, some, some of them would use the land for sheep grazing, others would help him put silage from it and usually from time to time one or two, or all of those, would be present at a, at a field day. I would like to see the farmers and landowners interact and people within the industry interact without me really saying a huge amount, other, unless I'm asked. (Programme interviewee 1)

Q: Who is your intended audience? R: The forest industry and farmers, so what you're trying to do is you're trying to take mystery out of agroforestry in, in this particular case that {host farmer name} got, it's an agroforestry plot, so you're hoping, because it's a relatively new land use to this country a lot of people don't understand it, both foresters and farmers and rally what you're trying to do is bring both of them up to speed as to what it's about. We've had a few people there down from the Forest Service (Department of Agriculture). They'd have had a look at it, and we've had people from the organic side of things looking at it and we've I suppose people from Teagasc (state agency agricultural extension service) as well, from various different areas of Teagasc having a look and seeing, you know, where it possibly could further develop within the industry. (Programme interviewee 1)

There are a number of different people so informing landowners of the potential scheme benefits would be one. Secondly you would have the professional foresters, to discuss management issues as

this is a new land use. And thirdly I suppose because of the feasibility objective we are looking at policy makers as well to show them how agroforestry can fit into whole farm planning. (Programme interviewee 2)

You will have landowners, some landowners who are interested in alternative land uses, but usually these farmers have off farm jobs and aren't usually dependent on, on the farm solely for their income. (Programme interviewee 1)

When I have a group of farmers coming in here to have a look at things I'm much more on a practical level talking to them regarding how I went about something, why I went about something and how that is working out for me. Purely on a practical level because I'm at their level so I can tell them why I done it and how it worked for me. If it worked for me. Whereas if you have a Department official coming in here, a bit more technical, you know they are going to be asking you more about issues regarding technical issues.... But it certainly would be a little bit more technical with the advisers and the Department officials there's no two ways about that. (Farmer)

Potential, obviously the first thing would be they would be land owners. Secondly that they would be farmers, which would be one in the same thing I suppose. And thirdly they have an interest in forestry. I would think one of the intended audience or intended people would be those young farmers who will be there for the lifetime of the plantation. Probably suits those kind of people best. In terms of policy makers, because it is a demonstration plot and the first of them in effect there wasn't any real policy there prior to that. (Farmer)

Q: Who typically attends your demonstrations activities? R: Generally people that are first already involved in forestry on some level or those that are thinking about getting involved in forestry. They would be almost 100% of the type of people that would be there, a mixture of both fulltime farmers and part-time farmers. People that come here from government agencies such as the Department and others, the policy makers, several times a year. (Farmer)

I have on average seven to eight maybe ten visits a year, at least I would think, but in all the various things between officials, between farmers, being Teagasc this sort of thing. Individual researchers, well I'm not really counting individuals I have quite a few of them as well from time to time, its open to everyone. So it varies a lot so I would have, I could have a dozen a year at least. (Farmer)

Industry representatives

Industry representatives can be seen as a distinct category from participants in relation to their involvement at the demo activities. As already mentioned many times they are present as an audience at the demo events. However it seems that sometimes they are present at the event upon request of the farmer attendees and/or the organisers in order to share their knowledge and experience. In that way sometimes they have a more formal role at the demonstrations. Finally, the companies are one of the important actors that coordinators intend to make use of their feedback for the events.

Well there would be a number of occasions when people have felt that they would like the forestry companies (industry representatives) to be there and to talk about their own experience and that's why we've included forestry companies in these events. I think it's very important that there are different representatives from different organisations and this has been requested as well by farmers. (Programme interviewee 2)

Well if it's the companies or policy makers or researchers or Teagasc's own forestry staff then you need to evaluate what they thought of it. And what could be included in it later on. You also require their feedback to better refine the demonstrations. (Programme interviewee 2)

3. Networks

At the beginning, the specific demo farm has not been connected to any other demo farm. However, currently there are also additional 2-3 agroforestry farms, with which the host farmers has some contacts. The specific farm is not part of any other programme or wider network. Finally, Teagasc make use of different local networks in order to “advertise” the upcoming events such as farmer’s connections or Teagasc’s databases and/or personal contacts.

So generally these demonstrations are advertised in a public network, different media platforms such as radio, local television and websites. And added to that then we try to utilise local networks whether it is the farmers own connections or my forest service colleague keeps a list of people that have expressed an interest in agroforestry. My own personal knowledge. (Programme interviewee 2)

So initially it wasn’t connected to any of them. But since then we have another two or three in West Cork and that’s the only connection I have. Teagasc, Greenbelt and the Forest Service have regularly used the demonstration plot. The gate is open to anyone welcome to anyone that wants to see it because it is a pilot scheme. And there isn’t that m/any, one must be willing to, I mean if it’s a demonstration plot it’s a demonstration plot for whoever needs it for that purpose. (Farmer)

Q: Is your demonstration farm part of a programme or wider network? R: No.No, but I have attended a conference in France under the auspices of the UK-based Farm Woodland Forum. (Farmer)

4. Resources, finances and incentives

There are no economic incentives or compensation or any funding to the host farmer for the demonstration functioning and activities of the farm. The host farmer is involved at demo activities in an entirely voluntary manner. There is some financial aid to the farmer which is linked to the afforestation programme scheme. This financial aid related to the initial pilot on farm forestry establishment and to some additional forestry premium received because it was a pilot farm, but in general there are no financial incentives connected to demonstration events/activities.

Q: What are the funding arrangements for your demo activities? How do these impact on the lifespan of the farm demo? R: Well the, the demonstration plot was set up under the old Afforestation Programme. There’s no onus on the owner to use it as a demonstration plot, it’s totally voluntary, he gets nothing extra for, for doing it, other than the fact that he gets some media recognition I suppose and he would have the occasional appearance in papers and, and television as well from time to time, which sort of increased his profile I suppose. (Programme interviewee 1)

In the case of this demonstration farm there is no funding. We prevail on the goodwill of the landowner himself. Now the owner has been grant aided to establish forestry and at the time because there was a pilot scheme there was a slightly alternative financial arrangement made. But overall in terms of demonstration or using his farm for demonstration no he’s not remunerated for that. (Programme interviewee 2)

No financial incentives but, as a pilot agroforestry plot he received additional forestry premium. So this has been an incentive to be a demonstration area for this farmer and has proven to be rewarding to him. (Programme interviewee 2)

Q: What are the funding arrangements for your demo activities? How do these impact on the lifespan of the farm demo? R: None, outside of the enhanced forestry premiums. Because I was given the higher rate for the longer term I took it on myself to show goodwill. Well if they done that I must play my part. So I was willing in my own head to do whatever was required and asked of me. (Farmer)

5. Goals and objectives

The initial objective of ALB pilot farm was to test the feasibility of the forestry plantation in a real working farm out of AFBI research plots in Loughgall. Thereafter a second objective of ALB project was to utilise the agroforestry farm as a demonstration plot. A further objective is through its continuous working and consulting which occur on farm, to test management methodologies and improve the whole farm system. The demonstration activities are very important for the national goal of the promotion of forestry and agroforestry in Ireland. The agroforestry plot is used by the organisers as a hook to talk about other topics involved with forestry, the demon events are used to inform farmers and other landowners of the economic, social and environmental benefits of afforestation. They are used to develop relationships between interested stakeholders and to maintain conversations around agroforestry management issues. Finally, they are used to show policymakers how agroforestry can fit into agricultural planning.

Well I suppose with the agroforestry there's always a level of engagement because it's something new. And sometime we have used the agroforestry plot as a hook to talk about other topics involved with forestry as well. So novelty is one thing, I think. There would be a certain amount of background knowledge buy land owners in the area about this, there would have been talk about it, particularly as it is an agroforestry plot in the middle of a dairy area which would be unusual and there would be a curiosity there. (Programme interviewee 2)

So the overall program objective is the forestry program, its origin is in the Department of Agriculture and Teagasc, one of the aspects of this is the promotion of a forestation that is planting new land. For this demonstration purposes, it is an agroforestry plot. So this agroforestry plot there are a number of objectives to it. The initial objective was a pilot feasibility plot, the secondary objective is a demonstration plot and then the third objective is proving new methodologies and establishing agroforestry plots. (Programme interviewee 2)

Well in this case with the agroforestry plot we're trying to increase the amount of tree cover in the Country, so it's doing that. We're looking for carbon sequestration, it's doing that, we're looking to provide renewable energy, bio fuels, it's doing that, we're looking, the Department in general is looking for more animal welfare increased and it does that, research suggests they're happy, happier under trees, it also ticks the box for intercepting siltation run off, nutrient run off, increases biodiversity, enhances landscapes, it ticks a huge number of the boxes that the agricultural policy would be aiming for. (Programme interviewee 1)

It's the forestation program and it is promotion by demonstration purposes. What you are trying to do is engage with land owners, so that they might consider afforestation. And then once they get beyond that point of planting how do they go about managing it effectively. (Programme interviewee 2)

6. Timing

The day and timing of a demonstration event are important. A demonstration event should be always related with seasonal factors that could influence the event's attendance. The events should be avoided to take place at daily or seasonal time, that regional farmer workload is hard. As already mentioned the timing of the event and the work is carried out at that particular time of the year on the plot determine the focus on specific aspects of the topic demonstrated.

I think the time of the year can be very important, and the weather. In the autumn it's a case of time is running out and if they haven't had all their silage in or they have jobs to do outdoors and there's a fine day, they're less likely to go to a field day if there's a fine day. Whereas maybe in the middle of the winter or the middle of the summer where they feel, particularly in the middle of the summer where they feel like this, there'll be plenty of opportunities for another fine day then there's a chance that they'll turn up, in the winter it's similar, particularly dairy farmers, maybe after Christmas, a lot of the dairy farmers I know go on holidays in January because it's a quiet time for them, maybe that's the time to attract farmers, but yeah, the timing, the weather is a big factor. (Programme interviewee 1)

For non-farmers, Work, during the week, if people have jobs nine to five and they're living some distance away from the demonstration plot, the amount of time it takes to travel down after work is finished, it's a big disincentive, so geographically the further, the more widespread you have of demonstration plots geographically make a big, big difference. (Programme interviewee 1)

And we try to organise the events so that they are in the evening time, so that you are looking at after 7 o'clock when many of the farm chores are already carried out. But sometimes that doesn't work for them. And similarly if we do it in the daytime we try and moderate the times as well. (Programme interviewee 2)

I'm interested and because {host farmer's name} is interested in showing it off it's, it's easy to do from time to time, but because time is limited some years I mightn't get to organise any then some years I've a couple going, you know, the spring and the autumn, but, as I said, maybe the summer is the better time to try and aim for. (Programme interviewee 1)

They are selected based on what is going on, on the plot at that particular time. If those trees were a lot bigger we would be talking about thinning them out, or you know what I mean the time of the year. It really does depend on the conditions on the site at the time, doesn't it really? Is there sheep here, is there not. Is there a lot of vegetation around the place? You know, is it time for pruning, is it not? The time of the year and the conditions depend on the topic I would think anyway. (Farmer)

I mean it all depends on the activity on the ground as well at the time. Sometimes you've been here and there's been nothing here. More times you come here and there's grass up to your knees and more times you come here and there's sheep here. So it does depend on the time of the year. (Farmer)

T2. Farm (event level)

The host farmer owns a 20-hectare beef and agroforestry farm. He is a pioneer part-time farmer, as the farm is the oldest agroforestry demonstration plot. The farm owns a conventional forestry land adjacent to the ALB plantation - agroforestry plot which is also used for demo activities. These different plots are used to illustrate the difference between them. Teagasc, Greenbelt and the Forest Service have regularly used the agroforestry plot for demonstration events. The demo day usually includes a farm/forest walk and a farmer's presentation that initiates an extensive discussion on multiple aspects of forestry and agroforestry.

In the particular case of the agroforestry demo plot, I mean he's got conventional forestry and he's got agroforestry – most of the attention I suppose in recent years has been on his agroforestry plot and largely it comes down to the local personnel as to how much of that is organised It's very much maybe a localised thing. (Programme interviewee 1)

According to one of the Programme Interviewees (Teagasc adviser), the demonstrations are a mixture of exemplary and experimental approaches, indicating also that these mixed approaches are more preferable. The other Programme interviewee (Forest Services – DAFM) stated that the demonstrations are experimental indicating also that these experimental approaches are more preferable. On the other hand, the Farmer considers that the demo is mainly exemplary indicating also that the exemplary approach is more preferable. No matter the difference in the characterization of the demo approaches, we can conclude that all interviewees agree that the farm is a pilot/trial farm at this specific moment. It was the first farm implementing an agroforestry management so it is still experimenting on the best practices. At the same time all responsible actors work in order to settle down the best practices through the different management options they implement on farm. So the aim is to show an exemplary farm in the future.

I would say a mixture, there is a bit of a trial and error involved in this plot itself. Simply because it wasn't put in before. And both the farmer and the forestry company and ourselves are trying to make the best example of it, and I would feel that they probably have gone above and beyond what they would normally do with other plots. (Programme interviewee 2)

I suppose experimental. It's a trial, its demonstration plot to try out a system that had been tried in the North and worked but we wanted to see if we could replicate it. I suppose, then the next one would be kind of a mixture, exemplary would mean this is it, we've reached our pinnacle of best practice, but it's too early for us to be able to say that so, you know, it wouldn't be exemplary. We're, we've had problems and we're quite, quite willing to discuss those problems and issues as well as all the good stuff. A mixture would be kind of I suppose the more pragmatic way of looking at because exemplary means there's no flexibility and you're not going to be looking to explore and find out new things. Experimental, you can't be completely experimental all the time, you want to have a kind of a pragmatic and economic focus as well, so you don't want the farmer to be, you know, planting banana trees when you know it's not going to grow, so you want him to grow something that you think has a reasonable chance of success while at the same time knowing you're going to learn stuff from it, you know. (Programme interviewee 2)

It's certainly experimental because it is a trial plot, I'd like to think that it's exemplary, we try to do our best practice here. From that point of view I'm going to say a mixture. (Farmer)

7. Event's participants

According to available data, 9 participants attended the event in April, of which 5 responded to the pre and post demo surveys. Those interviewed were farmers, horticulturalists, forestry consultants and local authorities' people (Pre demonstration survey participant). All participants worked at the local area where the meeting took place. Four out of five of the interviewed participants agreed or strongly agreed that they have actively been involved during the whole demonstration process except one participant who disagreed with that statement (Post participant's survey).

8. Frequency

The demonstration events take place as part of a series of forest walks that are used to promote the wider forestry programme. Every year 7-10 demonstration events are organised on the farm.

I have on average seven to eight maybe ten visits a year, at least I would think, but in all the various things between officials, between farmers, being Teagasc this sort of thing. Individual researchers, well I'm not really counting individuals I have quite a few of them as well from time to time, its open to everyone. So it varies a lot so I would have, I could have a dozen a year at least. (Farmer)

9. Accessibility

The travel time of participants to reach the demo farm, ranged from 20 to 45 minutes, with an average time close to 29 minutes (Pre demonstration survey participant). Four out of five participants rated their travel effort to participate as very little effort. Only one participant rated his travel effort to participate as great effort. This can be justified by the fact that he had the longest travel time (45min) and he was the oldest interviewed participant (81years old).

10. Fees for participation

Participants did not have to pay a fee to attend the demonstration. Moreover, none of the participants had received any financial compensation for its attendance (Post participant's survey).

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

11. Incentives

Both the Farmer and Programme participants revealed how there was no significant body of funding available to farmers hosting. Despite initial funding to set up the plots from the Afforestation Programme, the Programme interviewee noted how “there’s no onus on the owner to use it” and asserted how “it’s totally voluntary”.

None, outside of the enhanced forestry premiums. Because I was given the higher rate for the longer term I took it on myself to show goodwill. Well if they done that I must play my part. So I was willing in my own head to do whatever was required and asked of me. (Farmer)

Well the, the demonstration plot was set up under the old Afforestation Programme. There’s no onus on the owner to use it as a demonstration plot, it’s totally voluntary, he gets nothing extra for, for doing it, other than the fact that he gets some media recognition I suppose and he would have the occasional appearance in papers and, and television as well from time to time, which sort of increased his profile I suppose. (Programme interviewee)

12. Motivations for host farmers

The Farmer cited a number of motivations, including his environmental objectives and a desire to be innovative. He also cited that he wanted to promote agroforestry, which he felt was sometimes overlooked or seen as an option for older or failing farmers.

I have a good few reasons really. But my main reason is, if I put on my forestry hat, every acre of ground that’s planted in Ireland is an acre of ground that is out of the system that is no longer available for planting. So with tighter rules and planning regarding where you can plant and what you can do we must always try and find new and innovative ways of introducing more trees to the country and how we can do it. All the time it seems particularly in this area where as you can see it’s a rather intensive dairy area, forestry was always seen as somebody who is retiring or getting out of farming, or in some way almost failed at farming therefore he’s going to go into forestry. Which is the wrong way to think of it but that’s you know, it’s still in the back of people’s minds. Whereas as you can see this is a much more active hands on, you are still participating, you are still involved in agriculture and I think from that point of view I like to promote that. (Farmer)

According to the Programme interviewee, hosts were largely driven by a desire to show off and demonstrate something they are proud of. He noted how these individuals were naturally keen and enthusiastic. Financial motivations were also a motivation in some cases.

I think very often a farmer will be interested in showing off something he’s proud of, that he has an interest in the thing and that he wants to show it off. There are individuals who are very enthusiastic and they’re ideal because that enthusiasm comes across. I think that’s the main motivator. Obviously if you have some financial incentive it might get, attract more people, but whether they the better people for demonstration purposes is another thing. (Programme interviewee)

13. Motivations for participants

The Farmer saw curiosity as the main motivator for participants, explaining that most haven’t seen an agroforestry system before and are ‘genuinely interested in finding new ways of doing things’. The Farmer also observed that the on-farm, farmer led element was another key motivator. The Programme interviewee,

however, felt that participants were more financially motivated, and attended events with a view to make their business more profitable, adding that those who attended purely out of curiosity tended to be landowners who were not financially dependent on their land.

Hmm...because it's such an unusual activity out of nosiness or something I don't know what, it's just an unusual activity. People are forever seeing green fields, and at this stage people know what a forestry is but they don't know what an agroforestry is. As you can see there isn't that many of them, so a sense of curiosity I think brings a certain amount of them. And people are genuinely interested in finding new ways of doing things. And I think that's what brings them. For farmers, I think so, absolutely, because one of their own is doing it (Farmer)

Financial incentives are usually one of the strongest, if there's some sort of angle that makes their business more profitable one way or another, whether it's income from, from the timber or maybe it's a grant that they hadn't thought about it or hadn't seen or wanted, were curious about, they would be the prime motivators for the majority, I would say, of farmers. You will have landowners, some landowners who are interested in alternative land uses, but usually these farmers have off farm jobs and aren't usually dependent on, on the farm solely for their income. (Programme interviewee)

Participants themselves stated as main motivators to attend the demonstration: To learn about forestry; Early forest management - crop is 8 years old; I have 10 year old nature plantation and am considering trying to rent/buy neighbouring 17 year old nature; 70:30 mix woodland; Knowledge.

14. Target audience

The Farmer's primary focus was on landowners who were also farmers, and had an interest in forestry. Similarly, the Programme interviewee cited foresters and farmers as their target audience, adding that they had had participants from government bodies and Teagasc as well.

Potential, obviously the first thing would be they would be land owners. Secondly that they would be farmers, which would be one in the same thing I suppose. And thirdly they have an interest in forestry. (Farmer)

The forest industry and farmers, so what you're trying to do is you're trying to take mystery out of agroforestry in, in this particular case that LBs got, it's an agroforestry plot, so you're hoping, because it's a relatively new land use to this country a lot of people don't understand it, both foresters and farmers and rally what you're trying to do is bring both of them up to speed as to what it's about. We've had a few people there down from the Forest Service (Department of Agriculture). They'd have had a look at it, and we've had people from the organic side of things looking at it and we've I suppose people from Teagasc (state agency agricultural extension service) as well, from various different areas of Teagasc having a look and seeing, you know, where it possibly could further develop within the industry. (Programme interviewee)

15. Advertising and recruitment

The Programme interviewee took a very hands-on approach to recruitment for the events, involving phoning people directly to check if they were coming, and to explain the benefits of the event. This was acknowledged as an effort on the part of the programme, but was felt to be worthwhile, especially for targeting key governmental and industry stakeholders.

Direct contact, phoning them, talking to them and saying are you coming, and, and if not, and maybe sort of saying the benefits of what it is, directly talking to them, it's, it's a bit of an effort, it is a lot of an effort, it's a bit like when everybody is busy and taking that amount of time to talk to people, but I think it depends on who you're targeting, if you want to get people who are shaping policy, who are, who are in a good position to develop the business then it's time worth taking. (Programme interviewee)

The Farmer's approach was focused much more at the farm level, and appears to have been a case of ensuring that those who have already been recruited were suitably impressed by the event. In terms of recruitment, the Farmer did invite neighbours to the event.

I don't know how to answer that now. Are they targeted? Well I mean everyone that comes in the gate that hasn't been here before we like to put our best foot forward and show them what can be done. And how to go about it. So are they targeted, in that respect they are of course. Because we are always trying to promote what can be done. So are they targeted yes I would think to a certain amount. I would have invited neighbours to come along here at the same time. (Farmer)

T2: Appropriate demonstration and interaction approaches

16. The nature of interaction

The Farmer described the nature of the interaction as 'Entirely top-down'. This was due to the nature of the information in question; agroforestry is relatively new so information will be coming from those few who have an expert understanding of the subject.

Conversely, the Programme interviewee described the nature of the interaction as 'Mostly bottom-up'.

17. Involving farmers in the learning process and the demonstration programme

The Programme interviewee commented on the logistical difficulties of involving the host farmer in individual demonstrations. Often the Farmer has something they would like to show at the event, but fitting this in with both what is best for the demonstration and what is best from a farm management perspective is a challenge.

It's an interesting question in that we've never really sat down with him and sort of said, on a field day or demonstration day, is there something we can show them - now he has said to me I'm cutting silage, do you want to take a couple of photographs - now the thing is it would be fascinating for, for a group of people to see that happening, but to, to actually time it when the weather is fine and when you get farmers out they're probably wanting to cut the silage as well at the same time, so it's a tricky one, and so, the only thing is you could, what you could do is maybe have a small area where you could cut silage, you know, on the day, but you'd have to, he'd be kind of keen and sure to bring in his silage in one go rather than keep the machines around, so it's a tricky one. (Programme interviewee)

The host farmer was not directly involved in the network programme, although it was clear that the programme learned from the farmer and from the demonstration plot, and allowed this learning to feed into the network.

Not directly. He, indirectly he, what we've learned from his demonstration plot we've taken away and we've used it to upgrade and to modify our previous specifications in order to adjust them in such a way that makes them more robust because that's the lessons we've learnt from his experience. Well usually when we have a, go out to the agroforestry plot it's already understood and known that we're going to be talking about agroforestry, that's the topic, and around that you've environmental issues, you've got social issues, you've got landscaping issues, you've got forestry issues and you've got carbon sequestration, all sorts of, various different aspects going on, animal husbandry, animal welfare, potential of different crops and animals within the systems, so again, similar to previous questions, the, the, we don't want to stick to formally to an agenda, we kind of let the discussion take place and, and just show them and try and get them to appreciate what the concept is all about. (Programme interviewee)

18. Focus

The Farmer described the network as 'in between' whole farm and single focused, while the Programme interviewee described it as 'whole farm'.

19. Design

The Farmer described the network as 'exemplary', rather than experimental. The Farmer expressed a preference for exemplary practices as these are a better reflection of what is actually occurring on the plot.

Conversely, the Programme Interviewee described the network as 'experimental', and expressed a preference to this approach as it gave a greater opportunity for learning. The Programme interviewee emphasised that experimentation should not come at the cost of a pragmatic and economic focus.

Experimental, you can't be completely experimental all the time, you want to have a kind of a pragmatic and economic focus as well, so you don't want the farmer to be, you know, planting banana trees when you know it's not going to grow, so you want him to grow something that you think has a reasonable chance of success while at the same time knowing you're going to learn stuff from it, you know. (Programme interviewee)

20. Ideal group size

Both Farmer and Programme interviewee expressed a preference for a smallish group. For the Farmer, this meant 15-20 people, and was preferable because it was enough to ensure audience participation and a wide range of experiences, without being unmanageably large. For the Programme interviewee, the ideal size was 20-30 people; this was considered small enough to organise easily and to maintain a level of intimacy.

Small groups are fine, but very small groups are no good then because you need questions coming from the audience and participation and the smaller group the less participation there is to be honest with you. But you don't need it to be completely unmanageable as well. A dozen to fifteen maybe twenty would be a lovely group to be dealing with. Because fifteen / twenty people brings a wide experience of people you know, who can add to the discussion. Because I learn as well. (Farmer)

I think if you've a smallish group, and when I say smallish, about thirty people, twenty to thirty people, it's, it's easier to get, it's easier for people to hear, it's easier for people to ask questions, it becomes more intimate and it, it's easier to organise and to, to coordinate. If the numbers get too big then some people, there'll be discussions going on in the background and there'll be little groups of people drifting off in various different directions and not really listening to what's going on, whereas it's harder to do that if there's a small group, you know, the people tend to listen more closely. (Programme interviewee)

T3: Enabling learning appropriate to purpose, audience, context

21. Facilitating interaction and learning: structure, content and techniques

The Farmer was clear that the easiest way to engage the audience was to deliver the presentation on site, so as to show people directly what is being done and why. In regards to content, the Farmer preferred to present developments chronologically.

I've always found its best to be on the site when I talk, because it's easier for me to explain. You could almost say with a visual aid (laughing) you know what I mean, it's easier to talk about things when we are here and show them what I'm doing and why I'm doing something you know. So I find that's the easiest. (Farmer)

Content is usually on a timeline basis for me. I start off with the historical side of things as to when I decided to do such a thing, how I decided to do such a thing and go from there. (Programme interviewee)

The Farmer mentioned leaflets that were available to participants, but suggested they were provided by the network/programme.

The leaflets and that not provided by myself. (Farmer)

22. Taking into account variation in learning

Both Farmer and Programme interviewee felt that they took into account variations in learning, although for both this was predominantly in relation to prior knowledge and experience of the audience. Even so, there appeared to be considerable effort to tailor the content of the presentation to suit the interests and knowledge of the audience.

Without a shadow of a doubt. Because you have like you were asking me earlier on what kind of clients come in are they mostly foresters, now a lot of them are foresters but bar the one or two or three most of them are not agroforestry. So you know some of them will, you know a lot of them will have forestry but they won't have any idea about this. And then of course you have some foresters that come in that are very, very knowledgeable and they would have started off agroforestry who would be well knowledgeable on it as well. So yeah there's a variety in experience and knowledge. My answers really does depend on the question the audience ask me. (Farmer)

Yeah, again the audience is there, it's foresters, they'll have a large knowledge about trees, extensive knowledge about trees, so you, you find that you don't have to really talk to them too much about the ins and outs of forestry, but farmers, you know, if, if it's largely a farming community, they mightn't know a whole lot about trees and you're trying to tell them how trees work and how you envisage trees are going to contribute to their farm in such a system, so it really would depend on the knowledge base of the people you've got, if you have a mixture you have to make sure that you don't forget one and concentrate on the other. (Programme interviewee)

T4: Effective follow-up activities

23. Follow-up activities and materials

The Farmer did try to engage with participants after the event in order to gather feedback and opinions about the day, and mentioned that occasionally these comments feed into bits of policy work that he contributes to.

Absolutely, that would lead into the prior questions do I evaluate the demonstration activities overall or do I request feedback. That's pretty much the same thing. I would of course yes. What do the people think, what did you think of it, I would of course. I also feed into a certain amount (small) of the policy work, the scheme details. (Farmer)

The Programme interviewee appeared to stay in touch personally with several participants who have gone on to establish their own agroforestry plantations. This was with a view to set up an agroforestry network once there were enough to warrant such an organisation.

Very much so, for example, farmers who have established agroforestry plantations further up the Country, they will send me information or comments from time to time, so we stay in touch. I would be hoping that at some stage in the future when enough people are involved in agroforestry we might set up our own organisation, an agroforestry group organisation but at the moment - that would help the communication and the linkages, it would improve that big time - but at the moment, there aren't

enough people at the moment to really warrant something like that just yet. (Programme interviewee)

The Farmer was not involved in providing supplementary material, but the Programme interviewee detailed several brochures that are produced for participants. These provide information on grant schemes and the agroforestry measure. These materials are also distributed at other events, such as agricultural or forestry shows.

Again that's not my side of things, Teagasc provide more of that than I do. (Farmer)

Usually, well up to now we've had these brochures that we publish for the agroforestry measure, the GPC 11, Grant Premium Category 11, which is agroforestry, we produced leaflets and sometimes we'd make those available to people, unfortunately they're out of date now with the figures in them are, are no longer up to date, so we'll probably have to have new ones, new copies of that, versions of that made, so that's about all we have at the moment to hand out to participants. We try to distribute them at agricultural shows or forestry shows or at evenings where there might be a Teagasc event or something like that, but yeah, it would be on the day pretty much. (Programme interviewee)

24. Assessing impact

The Farmer cited the occasional time he was able to discuss the impact of an event with participants, although it appears this was on a relatively informal and sporadic basis. The Programme Interviewee, on the other hand, described the use of indicators to assess impact, such as the submission of an application to the agroforestry scheme.

The very odd time, I mean we are still you know agroforestry is in its infancy. On the odd occasion a number of people that have attended these demonstrations have come back to talk to me again. So the few that have I have helped yes in West Cork. (Farmer)

Very often people will say that they're interested and they will go off and they might even submit an application form to enter the agroforestry scheme. This is the clearest indicator that they've listened and that they are going ahead with what they see as something that has potential for them, that's the clearest indicator that we've had. (Programme interviewee)

Both Farmer and Programme interviewee responded negatively to the question of assessing impact amongst the wider farming community. The Farmer was of the opinion that it would be difficult, nearing on impossible, to do this, although he did mention the rare occasion when he has been contacted by someone who heard about the event a previous attendee. The Programme interviewee, on the other hand, appeared to have several examples of members of the wider farming community hearing about the events and contacting the programme for further information. While there were some examples of the event having an impact on the wider community, there was clearly no framework for assessing this impact.

It's very hard to assess somebody that hasn't been here. I don't know how to answer that question. If you are not here, they don't know. How can they know? It's a very straight forward question in that point of view. It's almost a non-question if you like. I have found that people have contacted me because a friend of theirs had been at a demonstration event. Rarely, but it has happened maybe twice. (Farmer)

Sometimes people would have heard about the agroforestry demo site, either maybe an article in the paper, maybe a television programme, maybe a Teagasc adviser talking to them, maybe the forest inspector talking to them, maybe a forest company, a forester talking to them and that they want further information. They, they would, sometimes they would contact the Forest Services' admin HQ

in Wexford and they would then forward my number to them and then they would contact me for further information. (Programme interviewee)

5. Event analysis: effective peer learning characteristics

Event details

The group consisted of about 9 participants, of which 5 filled in the pre and post survey. Everyone who filled in the pre survey stated they worked in the local area.

	n° survey participants	Chinese medicine practitioner & developing retreat centre on 60 acre farm	Foreman, local authority	Forestry consultant	Horticulturalist	Retired farmer
<i>occupations</i>	5	1	1	1	1	1
<i>gender</i>	5					
male			1	1	1	1
female	1	1				
<i>age</i>	5					
18-30	1				1	
31-40						
41-50	2	1	1			
51-60				1		
60+	2					1

T1: Learning processes

25. Communication initiation by participants

It was a small group of 9 so this encouraged engagement. However, a low knowledge base and unfamiliarity with other participants may have limited some. Between 10% and 50% of the participants had no problem sharing their knowledge and/or experiences related to the topic. There was some time for questions, about 40 percent, and some (5-10) questions were asked.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I had the feeling that I could share my own knowledge as relevant information.	1/5	0	1/5	3/5	0
I asked at least one question during the demonstration .	4/5 yes				
I shared my own point of view at least once during the demonstration.	4/5 yes				
I felt encouraged to ask questions during the demonstration.	0	0	1/5	4/5	0
When there were any discussions, I felt comfortable sharing my opinion.	1/5	0	1/5	3/5	0

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I asked participants to share some of their own background knowledge during the demo.	0	0	0	1	0
I encouraged the participants to formulate their own point of view during the demonstration.	0	0	1	0	0
I encouraged the participants to formulate questions during the demonstration.	0	0	1	0	0

26. Interactive knowledge creation

Hands-on opportunities and other multi-sensorial experiences

Attendees were offered the opportunity to shape the trees with a secateurs, engaging motor skills, requiring critical assessment, etc. As it was an outdoor event, it placed the agroforestry scheme within an overall landscape context, and allowing direct visual comparison with nearby forestry & farming enterprises.

There was one hands-on activity demonstrated or possible to be carried out by participants. Assessing tree form and demonstrating the need for shaping of the trees. Attendees were offered the opportunity to shape the trees with a secateurs, engaging motor skills, requiring critical assessment, etc. Their subsequent work was then lightly critiqued.

Discussion opportunities and negotiating conflicting points of view

There was a facilitator there, a Teagasc forestry development officer. He introduced the farm owner and other forestry experts and outlined the structure of the demo. He chaired the discussion and initially demonstrated management techniques. He aided attendees in practicing above mentioned techniques and drew out all participants' opinions/ experiences. Open discussions between a few participants were stimulated and took up about 10% of the time. Issues related to the permanency of the change to forestry were discussed. Shared critical points of view were clarified/rephrased so more people could understand.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, there were interesting discussions during the demonstration.	0	1/5	2/5	2/5	0
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) tried to reach a consensus between them.	0	0	1/4	2/4	1/4

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, there were interesting discussions during the demonstration.	0	0	1	0	0
If participants didn't agree with each other during discussions , somebody (me or somebody else) tried to reach consensus between them.	0	1	0	0	0

27. Engagement during the event

Some participants were very familiar with each other, more had never met before. This meant participants acted more distant than open. The demonstrator acts open and friendly, but not as close friends with the participants.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I felt actively involved during the whole demonstration process.	0	1/5	3/5	1/5	0
I felt like the demonstration increased my ability to rely on myself as a farmer.	0	0	2/5	2/5	1/5
I could relate well to other participants (because they have an agricultural background similar to mine).	1/5	0	1/5	3/5	0
A lot of the other participants are part of the same farmer network as me.	1/5	0	0	3/5	1/5
I felt like I could trust the knowledge of (most of) the other participants.	0	0	2/5	3/5	0
The demonstration felt like an informal activity to me.	0	0	2/5	3/5	0
I thought the host farm was comparable enough to my own farm.	1/5	0	3/5	0	1/5
I had the feeling the demonstrator was like one of us.	0	0	2/5	3/5	0
I had the feeling I could trust the demonstrators knowledge.	0	0	1/5	4/5	0
I got along very well with the demonstrator.	0	0	1/5	4/5	0

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
Were participants (farmers, advisers, researchers etc.) involved in the overall development of this demonstration?	No				
Most of the participants were well known to me.	0	1	0	0	0
A lot of the participants are part of the same network as me.	0	1	0	0	0
The demonstration felt like an informal activity to me.	0	0	0	1	0
I think the host farm was well suited for this demo.	0	0	1	0	0
I got along well with the participants.	0	0	1	0	0

T2: Learning outcomes

According to the observing researcher, greater engagement through hands-on- work should have been organised. Skills were in that sense not sufficiently addressed and put into practice to foster maximum uptake by participants. Common methods or ways of thinking on farming were questioned, but alternatives were not addressed. Generalized statements by attendees were challenged and they were asked to explain further. Common methods or ways of thinking on learning were not addressed.

	participant answers				
What would you ideally like to learn today?	About forestry; What to do about the emerging deer problem; About appropriate management for older woodland, hedgerow management, coppicing skills or at least to find out where I can learn				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The demonstration met my expectations regarding what I wanted to learn.	1/5	0	1/5	3/5	0
The demonstration exceeded my expectations.	0	0	2/5	3/5	0
I felt surprised at some point(s) during the demonstration.	0	0	0	4/4	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	0	2/5	3/5	0
I have the feeling I learned something new (knowledge, skill, practice, etc.).	0	0	2/5	3/5	0
I thought about how I could implement some of the ideas and practices on my own farm.	0	0	0	4/5	1/5
I reflected on my own point of view at some point during the demonstration.	0	0	1/5	4/5	0
I learnt about the principles underlying a practice.	0	0	3/5	2/5	0
I thought about how we learn something new on demonstrations (e.g.: teaching methods).	1/3	0	2/3	0	0
I thought about why I want to learn about the topic(s) of this demonstration.	0	1/5	4/5	0	0

	demonstrator answers				
what do you intend for the participants to learn today?	That they would have basic knowledge of the scheme itself, that they would be able to compare it with other farming enterprises, if they actually had forestry themselves they would also know what activities need to be carried out in say the spring period for example.				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think participants have learnt what I intended them to learn.	0	1	0	0	0
I tried to surprise participants with uncommon/new knowledge/new skill.	0	1	0	0	0
I felt surprised at some point(s) myself during the demonstration (e.g. by a question or discussion).	0	0	1	0	0
I obtained a clearer understanding of the topic(s) myself.	0	0	1	0	0
I have the feeling I learned something new during this demo (from participants, discussion...).	0	0	1	0	0
I reflected on my own point of view myself at some point during the demo.	0	0	1	0	0
I encouraged participants to reflect on their own point of view during this demo.	0	0	1	0	0
I encouraged participants to reflect on their own situation sometime during this demo.	0	0	1	0	0
I encouraged participants to reflect on how we learn something new on demonstrations.	0	0	1	0	0
I encouraged participants to reflect on why we are trying to learn about the topic of this demonstration	0	1	0	0	0

T3: Overall comments on the effectiveness of the event

Participants:

With an average of 4,6 on 5, participants rated the event overall as very effective. 5 on 5 participants who answered the question would recommend the demonstration.

As main effective characteristics of the demo participants mentioned: Learned more; Getting advice on what I can do to my own plantation in the future; Eugene was a delight to listen to in particular and hear his passion for trees and habitat came across; The Demonstration and discussion

None of the participants had any suggestions for improvement.

Demonstrator:

As main effective characteristics of the demo, the demonstrator said: 'The landowner was the most important part. The forest service inspector, the other demonstrator is highly invested in it, a representative of the company that established it was there to talk about it and how they established it and some of the issues that arose but I would say in the main it's down to the landowner. He's particularly well-informed. He's comfortable speaking publicly and he's quite engaged so he does make a considerable difference, and he's very open. He will talk money which is not what a lot of farmers are willing to do. They like to talk about other people's money but not their own.'

As suggestion for improvement the demonstrator mentioned: 'It's a little difficult, I mean being able to track the people afterwards would be very useful but this GDPR thing is going to be a problem. A clear pathway, how do you engage with people and get them to sign up? We've got sheets now that everyone who is at our demos if they're willing they can sign them and we'll contact them later. I think his farm is useful because it's set in a pastoral setting and there's other forestry and farming enterprises nearby. They can visually compare, they can see it straight in front of them and I think if there was a number of demonstration farms where this kind of integrated approach was on view it would work a lot better. Our normal forestry approach is looking at forests but we want to show it as a compliment to farming rather than competition. It is an integrated thing.'

General summary:

The demonstration was good but could have been better. A more deliberate approach by the organiser would have been more beneficial.

The main strong aspects of the demonstration included: The well informed and engaging landowner; The highly invested Forest Service demonstrator and the experienced Teagasc facilitator.

Main improvements included: Greater hands- on experience by attendees and greater attendance.